



APPLICATIONS FOR FINANCIAL ASSISTANCE

To The

Texas Water Development Board (TWDB)

Request For Funding Projects:

**WHCRWA – City of Houston Treatment Expansion
(NEWPP)**



Submitted By:

West Harris County Regional Water Authority

Prepared by:

DANNENBAUM
ENGINEERING CORPORATION

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CONTENTS

VOLUME 1

APPLICATIONS FOR FINANCIAL ASSISTANCE
To The
Texas Water Development Board (TWDB)

APPLICATION

WHCRWA – City of Houston Treatment Expansion (NEWPP)

PART A. GENERAL INFORMATION

A6. Consulting Contracts

PART B. LEGAL

B16 Series 2017 SWIFT Bonds - Draft Private Placement Memo

B17 Resolution (TWDB-0201A)

B18 Application Affidavit (TWDB-0201)

B19 Certificate of Secretary (TWDB-201B)

B25 Water Conservation Plan Annual Report

PART C. FINANCIAL

C 39 Five Year Asset County Taxes

C40 Overlapping Tax Rate

C45 Proforma

**C46 Five Year Comparative System Operating Statement
Unaudited Year-to-Date Statement Budget Comparison**

**C47 Annual Audit and Management Letter
Annual Financial Report – December 31, 2015**

**C49 Outstanding Debt Schedule
Water System Revenue Bonds, Series 2006, 2007, 2009, 2012, 2013, 2014**

C52 Service Provider Contracts

CONTENTS

PART D. PROJECT INFORMATION

- D56 Project Map**
 - WHCRWA Program Overview Map**
 - Contact City of Houston For Additional Information**

 - D57 Census Tract**
 - 2012 - Population and Water Demand Projections**

 - D58 Project Schedules**
 - NEWPP Expansion Project Baseline Schedule**
 - Contact City of Houston For Additional Information**

 - D59 Current and Future Populations and**
 - Projected Water Use (See D57)**
 - 2012 Population and Water Demand Projections**
 - List of Entities**

 - D60 Project Cost Estimate Budget (TWDB-1201)**
 - WHCRWA – City of Houston Treatment Expansion (NEWPP)**

 - D61 Water Project Information Form (WRD-253d)**
 - WHCRWA – City of Houston Treatment Expansion (NEWPP)**

 - D63 If Applicant Has Property Rights and Permits**
 - WRD-208A (Surface Water)**

 - D65 Contact City of Houston**

 - D67 Contact City of Houston**
-

CONTENTS

PART E. STATE WATER IMPLEMENTATION FUND FOR TEXAS

E71 Provide Drafts of the Following Documents

- a. Draft Bond Ordinance
Draft – Ninth Supplemental Indenture of Trust Between
WHCRWA and Regions Bank, as Trustee**
- b. Private Placement Memorandum**

**PART F. ECONOMICALLY DISTRESSED AREAS PROGRAM
Not Applicable**

**PART G. CWSRF/DWSRF APPLICANTS ONLY
Not Applicable**

**PART H. GREEN PROJECTS
Not Applicable**

PART I. Check List for Attachments

**APPLICATION FOR FINANCIAL ASSISTANCE
FOR WATER AND WASTEWATER INFRASTRUCTURE PROJECTS**

This application is comprehensive, covering all loan and grant assistance applications for water and wastewater infrastructure financing through the various Texas Water Development Board (TWDB) programs. The format of the application is intended to expedite the review process for both the applicant and TWDB staff. This application can be used by political subdivisions, including water supply corporations.

Please submit one double-sided original and one indexed, electronic copy, via electronic storage media such as CD or flash drive using MS Word, Excel and/or Adobe Acrobat.

Please submit your application to:

Texas Water Development Board
Water Supply and Infrastructure-Regional Water Planning and Development
P O Box 13231
1700 N. Congress Avenue, 5th Floor
Austin, Texas 78711-3231
(78701 for courier deliveries)

A complete application consists of all of the applicable information and forms requested in this document. When preparing this application please review the Application and all Guidance and Forms, listed at the end.

For more information, please contact your Regional Project Implementation Team at:

http://www.twdb.texas.gov/financial/programs/swift/regional_project_teams.asp

Thank you.

TWDB Use Only

Name of Applicant: _____

Date application received: _____

Date administratively complete: _____

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Contents

Part A: General Information..... 3
Part B: Legal Information..... 7
Part C: Financial Information 10
Part D: Project Information 17
Part E: State Water Implementation Fund for Texas (SWIFT) Applicants Only:..... 22
Part F: Economically Distressed Programs (EDAP) Applicants Only: 23
Part G: CWSRF/DWSRF Applicants Only 24
Part H: Documentation of "Green" Projects and Project Components..... 26
Part I: Summary of attachments to application 27
Part J: Guidance and Forms..... 29

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Part A: General Information

1. The legal authority under which the applicant was created and operates.
 - a) TYPE A GENERAL-LAW MUNICIPALITY (Texas Local Gov't Code Sec. 5.001)
 - b) TYPE B GENERAL-LAW MUNICIPALITY (Texas Local Gov't Code Sec. 5.002)
 - c) TYPE C GENERAL-LAW MUNICIPALITY (Texas Local Gov't Code Sec. 5.003)
 - d) HOME-RULE MUNICIPALITY (Texas Local Gov't Code Sec. 5.004)
 - e) SPECIAL-LAW MUNICIPALITY (Texas Local Gov't Code Sec. 5.005)
 - f) NONPROFIT ORGANIZATION (Business Organization Code Chapter 22)
 - g) NONPROFIT WATER SUPPLY OR SEWER SERVICE CORP. (Texas Water Code Chapter 67)
 - h) ALL DISTRICTS (Texas Water Code Chapter 49)
 - i) OTHER (attach)

Comment: The WHCRWA was created by the 77th Legislature, with passage of House Bill No. 1842 in May 2001, as amended (the "Act"), to accomplish the provisions provided in Article XVI, Section 59 of the Texas Constitution.

2. Applicant Name and Contact Information:

Name:	West Harris County Regional Water Authority (WHCRWA) c/o Allen Boone Humphries Robinson, LLP
County:	Harris
Physical Address:	3200 Southwest Freeway, Suite 2600 Houston, Texas 77027
Mailing Address:	3200 Southwest Freeway, Suite 2600 Houston, Texas 77027
Phone:	713-860-6414
Fax:	713-860-6614
Website:	www.whcrwa.com

2. Brief description of the project: **WHCRWA for COH Treatment Expansion (NEWPP)**.
The City of Houston (COH) IS EXPANDING THE EXISTING 80 MGD Northeast Water Purification Plant (NEWPP) to accommodate Houston water customers including four Regional Water Authorities, one of which is WHCRWA. The new expansion will be built in 4-80MGD modules for a total potable water capacity of 320MGD. Further details are available in the City of Houston pro-rata share, of the project. The WHCRWA is responsible for approximately 26% of the overall costs based on water demand allocation.

4. Applicant's Officers and Members:

<u>Name</u>	<u>Office Held</u>
Bruce G. Parker	President
Larry A. Wepler	Vice President
Douglas (Cam) Postle	Secretary
Gary Struzick	Assistant Vice President
Eric Hansen	Assistant Secretary
Mark Janneck	Director
Michael Thornhill	Director
Karla Cannon	Director
Dennis Gorden	Director

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

5. Applicant's **primary contact person** for day-to-day project implementation.

Name:	Melinda Silva
Title:	Deputy Program Manager, West Harris County Regional Water Authority c/o Dannenbaum Engineering Corporation
Address:	3100 West Alabama, Houston, Texas 77098
Phone:	713.527.6427
Fax:	713.527.6338
Email:	Melinda.silva@dannenbaum.com

6. Applicant's Consultants (Attach copies of all draft and/or executed contracts for consultant services to be used by the Applicant in applying for financial assistance or constructing the proposed project.):

a) Applicant Engineer N/A

Firm Name:	Dannenbaum Engineering Corporation
Contact:	Wayne G. Ahrens, P.E.
Address:	3100 West Alabama, Houston, Texas 77098
Phone:	713-527-6378
Fax:	713-527-6338
Email:	Wayne.ahrens@dannenbaum.com
Firm Name:	Dannenbaum Engineering Corporation
Contact:	Melinda Silva, P.E.
Address:	3100 West Alabama, Houston, Texas 77098
Phone:	713-527-6427
Fax:	713-527-6338
Email:	Melinda.silva@dannenbaum.com

b) Bond Counsel N/A

Firm Name:	Allen Boone Humphries Robinson, LLP
Contact:	James A. Boone
Address:	3200 Southwest Freeway, Suite 2600, Houston, Texas 77027
Phone:	713-860-6404
Fax:	713-860-6604
Email:	jboone@abhr.com

Firm Name:	Allen Boone Humphries Robinson, LLP
Contact:	Alex E. Garcia
Address:	3200 Southwest Freeway, Suite 2600, Houston, Texas 77027
Phone:	713-860-6414
Fax:	713-860-6604
Email:	agarcia@abhr.com

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Firm Name:	Allen Boone Humphries Robinson, LLP
Contact:	Alia Vinson
Address:	3200 Southwest Freeway, Suite 2600, Houston, Texas 77027
Phone:	713-860-6449
Fax:	713-860-6649
Email:	jboone@abhr.com

c) Financial Advisor N/A

Firm Name:	FirstSouthwest Company
Contact:	Terrell Palmer
Address:	1021 Main Street, Suite 2200, Houston, Texas 77002
Phone:	713-654-8651
Fax:	713-651-9361
Email:	Terrell.palmer@firstsw.com

Firm Name:	Robert W. Baird & Co.
Contact:	Ryan Nesmith
Address:	700 Milan Street, Suite 1300, Houston, Texas 77002
Phone:	832-871-5293
Fax:	
Email:	rnesmith@rwbaird.com

Firm Name:	Robert W. Baird & Co.
Contact:	Jan Bartholomew
Address:	700 Milan Street, Suite 1300, Houston, Texas 77002
Phone:	832-871-5295
Fax:	
Email:	j.bartholomew@rwbaird.com

d) Certified Public Accountant (or other appropriate rep) N/A

Firm Name:	Myrtle Cruz, Inc.
Contact:	Mary Jarmon
Address:	3401 Louisiana Street, Suite 400, Houston, Texas 77002-9552
Phone:	713-759-1368
Fax:	713-758-1264
Email:	Mary_jarmon@macruz.com

e) Legal Counsel (if other than Bond Counsel) **SAME** N/A

Firm Name:	
Contact:	
Address:	
Phone:	

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Fax:	
Email:	

f) Any other consultant representing the Applicant before the Board N/A

Firm Name:	Munsch Hardt Kopf & Harr, P.C.
Contact:	Tom R. Barber
Address:	700 Milam Street, Suite 2700, Houston, Texas 77002-2806
Phone:	713-222-4081
Fax:	
Email:	hoarber@munsch.com

7. List the counties within the Applicant's service area. Harris and Fort Bend

8. Identify the Applicant's total service area population: in 2016 total population is estimated to be 513,915.

9. Applicant is requesting funding from which programs? Check all that apply.

	PROGRAM	AMOUNT REQUESTED
a) <input type="checkbox"/>	Drinking Water State Revolving Fund (DWSRF)	\$ _____
b) <input type="checkbox"/>	Clean Water State Revolving Fund (CWSRF)	\$ _____
c) <input type="checkbox"/>	Texas Water Development Fund (Defund)	\$ _____
d) <input type="checkbox"/>	State Participation	\$ _____
e) <input type="checkbox"/>	Rural Water Assistance Fund (RWF)	\$ _____
f) <input checked="" type="checkbox"/>	State Water Implementation Fund for Texas (SWIFT)	\$ 50,000,000
g) <input type="checkbox"/>	Economically Distressed Areas Program (EDAP)	\$ _____
h) <input type="checkbox"/>	If other please explain: _____	\$ _____

10. Other Funding Sources: Provide a list of any other funding source(s) being utilized to complete the project, including Applicant's local contribution, if any, or commitments applied for and/or received from any other funding agency for this project or any aspect of this project. **Provide commitment letters if available. Additional funding sources must be included within the Project Budget (TWDB-1201).**

Funding Source	Type of Funds (Loan/Grant)	Amount (\$)	Date Applied for Funding	Anticipated or Funding Secured Date
Local		\$76,550,000		Various
TWDB	SWIFT LOAN #51023	306,200,000	Feb. 2015	May 2015
Total Funding from All Sources		\$382,750,000		

Comments: _____

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

11. Applicant is requesting funding for which phase(s)? Check all that apply.

- Planning
- Acquisition
- Design
- Construction

12. Is Applicant requesting funding to refinance existing debt?

- Yes If yes, attach a copy of the document securing the debt to be refinanced.
- Attached document**
- No

Part B: Legal Information

13. Cite the legal authority under which the Applicant can issue the proposed debt including the authority to make a proposed pledge of revenues. Pursuant to the WHCRWA's Act (House Bill No. 1842, 77th Legislature), the WHCRWA is authorized and has the power to issue, sell and deliver revenue (including junior lien revenue) bonds for the purpose, among others, of financing construction and acquisition of water treatment and conveyance facilities.

14. What type of pledge will be used to repay the proposed debt?

- Systems Revenue
- Taxes
- Combination of systems revenues and taxes
- Other (Contract Revenue, etc.)

15. Provide the full legal name of the security for the proposed debt issue(s). West Harris County Regional Water Authority Water System Junior Lien Revenue Bonds Series

16. Describe the pledge being offered and any existing rate covenants.

The proposed debt issue (the "Bonds") is being issued pursuant to an Indenture of Trust, dated as of August 1, 2003 and a proposed Thirteenth Supplemental Indenture of Trust (collectively, the "Indenture"), both between the WHCRWA and Regions Bank, as trustee (the "Trustee"). The bonds are being issued as "Junior Lien Bonds" under the Indenture. Under the Indenture, Parity Bonds, Parity Notes and Parity Obligations are secured by a lien on Pledged Revenues that is senior and superior to the lien on Pledged Revenues securing the Junior Lien Bonds, Junior Lien Notes and Junior Lien Obligations. The Bonds (together with the outstanding bonds and any future Parity Bonds, Parity Notes and Parity Obligations or future Junior Lien Bonds, Junior Lien Notes and Junior Lien Obligations) are limited obligations of the WHCRWA payable solely from and to the extent of its Pledged Revenues and Pledged Funds pledged for that purpose under the Indenture. Pledged Revenues consist of Net Revenues (hereinafter described) and amounts transferred from the WHCRWA's Coverage Fund to its Revenue Fund. Net Revenues consist primarily of collections of groundwater pumpage fees/user fees ("GRP Fees") imposed by the WHCRWA and water sale revenues ("Water Revenues") remaining after payment of the WHCRWA's maintenance and operating expenses. The Bonds are obligations solely of the WHCRWA and are not obligations of the State of Texas, the City of Houston, Harris County, Fort

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Bend County, any of the Retail Utilities, Contract Retail Utilities, Private Well Owners, or any entity other than the WHCRWA. The Bonds do not constitute a general obligation of the WHCRWA and are not payable from funds raised or to be raised by ad valorem or other property taxes. The WHCRWA has no property taxing power. Attached is the Series 2017 SWIFT Bonds – Draft Private Placement Memo.

17. Attach the resolution from the governing body requesting financial assistance.
TWDB-0201A (<http://www.twdb.texas.gov/financial/instructions/>)
 Attached Resolution
18. Attach the Application Affidavit
TWDB-0201 (<http://www.twdb.texas.gov/financial/instructions/>)
 Attached Applicant Affidavit
19. Attach the Certificate of Secretary
TWDB-201B (<http://www.twdb.texas.gov/financial/instructions/>)
 Attached Certificate of Secretary
20. Is the applicant a Water Supply Corporation (WSC)?
 Yes If yes, attach each of the following:
 Articles of Incorporation
 Certificate of Incorporation from the Texas Secretary of State evidencing that the current Articles of Incorporation are on file with the Secretary
 By-laws and any amendments
 Certificate of Status from the Texas Secretary of State (i.e. Certificate of Existence)
 Certificate of Account Status from the Texas Comptroller of Public Accounts (certifies that the WSC is exempt from the franchise tax and that the WSC is in good standing).
 No
21. Is the applicant proposing to issue revenue bonds?
 Yes If yes, attach copies of the most recent resolution/ordinance(s) authorizing any outstanding parity debt. This is essential to insure outstanding bond covenants are consistent with covenants that might be required for TWDB financing.
 Attached resolution/ordinance(s)
 No
22. Does the applicant possess a Certificate of Convenience and Necessity (CCN)?
 Yes If yes, attach a copy of the CCN and service area map showing the areas the applicant is allowed to provide water or wastewater services.
 Attached CCN and service area map
 No If no, indicate the status of the CCN. _____
 N/A
23. Has the applicant been the subject of any enforcement action by the Texas Commission on Environmental Quality (TCEQ), the Environmental Protection Agency (EPA), or any other entity within the past three years?

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

- Yes If yes, attach a brief description of every enforcement action within the past three years and action(s) to address requirements.
 Attached
- No

24. Are any facilities to be constructed or the area to be served within the service area of a municipality or other public utility?

- Yes If yes, has the applicant obtained an affidavit stating that the utility does not object to the construction and operation of the services and facilities in its service area?
 If yes, attach a copy of the affidavit.
 Attached affidavit
 If no, provide an explanation as to why not. The WHCRWA has a contract with the City of Houston for these facilities.
- No

25. If the assistance requested is more than \$500,000 a Water Conservation Plan (WCP) is required. The WCP cannot be more than **FIVE** years old and must have been adopted by the applicant. Has the applicant adopted a Board-approved WCP? (Check one and attach requested information, if any.)

- Yes Enter date of Applicant's WCP adoption: Revised March 2016
- No If no, attach a copy of a draft Water Conservation Plan and Drought Contingency Plan prepared in accordance with the TWDB WCP Checklist (<http://www.twdb.state.tx.us/financial/instructions/doc/TWDB-1968.pdf>)
 Attached Draft WCP and Drought Contingency Plan
 Attached Utility Profile TWDB-1965
<http://www.twdb.state.tx.us/financial/instructions/doc/TWDB-1965.pdf>
- N/A (Request is \$500,000 or less per Water Code §§ 15.106(c), 17.125(c), 17.277(c), and 17.857(c))

Note: If the applicant will utilize the project financed by the TWDB to furnish services to another entity that in turn will furnish services to the ultimate consumer, the requirements for the WCP may be met through contractual agreements between the applicant and the other entity providing for establishment of a water conservation plan. The provision requiring a WCP shall be included in the contract at the earliest of: the original execution, renewal or substantial amendment of that contract, or by other appropriate measures.

26. Does the applicant provide retail water services?

- Yes If yes, has the applicant already submitted to the TWDB the annual water use survey of groundwater and surface water for the last **THREE** years?
 Yes
 No If no, please download survey forms and attach a copy of the completed water use surveys to the application.
<http://www.twdb.texas.gov/waterplanning/waterusesurvey/index.asp>
 Attached Water Use Survey
- No

27. Is the applicant a retail public utility that provides potable water?

- Yes If yes, has the applicant already submitted the most recently required water loss audit to the TWDB?
 Yes
 No If no, and if applying for a water supply project, please

Please label each attachment with the number of the pertinent application section (i.e. "Part D5") complete the online TWDB Water Audit worksheet found at <http://www.twdb.texas.gov/conservation/resources/waterloss-resources.asp> and attach a copy to the application.

No Attached TWDB Water Audit worksheet

28. Does the Applicant provide wastewater services?

Yes
 No

Part C: Financial Information

Regional or wholesale providers, complete questions 29-31.
Retail providers, complete questions 32-34.

29. List top **TEN** customers of the system by annual usage in gallons and percentage of total usage, including whether any are in bankruptcy.

Customer Name	Annual Usage (gal)	Percent of Usage	Bankruptcy (Y/N)
HC Mud 165	746,571,000	3.4713	N
City of Katy	692,876,000	3.2216	N
HC MUD 418	469,472,000	2.5091	N
HC MUD 71	539,631,000	2.4650	N
HC MUD 106	530,144,000	2.1829	N
HC MUD 433	437,880,000	2.1574	N
HC MUD 196	408,057,000	2.0798	N
Mission Bend MUD 2	464,000,000	2.0360	N
Nottingham Country MUD	447,310,000	1.8973	N
HC MUD 157	393,448,000	1.8294	N

Comments: _____

30. List the top TEN customers of the system by gross revenues and percent of total revenues, including whether any are in bankruptcy

Customer Name	Annual Revenue(\$)	Percent of Revenue	Bankruptcy (Y/N)
HC MUD 165	1,679,784.75	3.2507	N
City of Katy	1,558,971.00	3.0169	N
HC MUD 418	1,225,409.20	2.3714	N
HC MUD 71	1,214,169.75	2.3496	N
HC MUD 106	1,192,824.00	2.3083	N
HC MUD 433	1,158,080.40	2.2411	N
HC MUD 196	1,063,391.05	2.0578	N

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Mission Bend MUD 2	1,044,000.00	2.0203	N
Nottingham Country MUD	1,006,447.50	1.9476	N
HC MUD 157	885,258.00	1.7131	N

31. Provide a summary of the wholesale contracts with customers

Contract Type	Minimum annual amount	Usage fee per 1,000 gallons	Annual Operations and Maintenance	Annual Capital Costs	Annual Debt Service	Other
Addicks Utility District	149.9	2.65	0	0	0	
Barker Cypress Utility District	285.3	2.65	0	0	0	
HC MUD 70	210.4	2.65	0	0	0	
HC MUD 130	201.2	2.65	0	0	0	
HC MUD 162	124.0	2.65	0	0	0	
HC MUD 166	179.7	2.65	0	0	0	
HC MUD 188	210.2	2.65	0	0	0	
HC MUD 276	91.0	2.65	0	0	0	
HC MUD 418	423.0	2.65	0	0	0	
HC MUD 433	432.1	2.65	0	0	0	
HC MUD 500	204.2	2.65	0	0	0	
HC UD 6	327.2	2.65	0	0	0	

Comments: WHCRWA provides surface water to some entities under a contract. The usage fee is the current surface water rate which may increase at the discretion of the Board. The contracts are written for an amount of water in gallons per day which was translated into an annual amount. Therefore this is not a minimum amount and the contracts are not take or pay amounts.

32. List top **TEN** customers of the water and/or wastewater system by annual revenue with corresponding usage and percentage of total use, including whether any are in bankruptcy.

a. **WATER**

Customer Name	Annual Usage (gal)	Percent of Total Water Revenue	Bankruptcy (Y/N)

NOT APPLICABLE

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

37. Does the applicant have taxing authority?

- Yes
 No

38. Provide the last five-years of data showing total taxable assessed valuation including net ad valorem taxes levied, corresponding tax rate (detailing debt service and general purposes), and tax collection rate.

Fiscal Year Ending	Net Taxable Assessed Value (\$)	Tax Rate	General Fund	Interest & Sinking Fund	Tax Levy \$	Percentage Current Collections	Percentage Total Collections
20							
20							
20							
20							
20							

Comments: _____

39. Attach the last five-years of tax assessed values delineated by Classification (Residential, Commercial and Industrial). **If applicant does not have taxing authority, provide the assessed values of the county.**

- a) **2010 attached**
 b) **2011 attached**
 c) **2012 attached**
 d) **2013 attached**
 e) **2014 attached**

40. Attach the direct and overlapping tax rate table:

- Attached tax rate table**

41. Provide the current top **TEN** taxpayers showing percentage of ownership to total assessed valuation. State if any are in bankruptcy and explain anticipated prospective impacts in the Comments blank, below. If any of these have changed in the past three years, please provide information on the changes to the top ten.

Taxpayer Name	Assessed Value	Percent of Total	Bankruptcy (Y/N)

Comments: **NOT APPLICABLE**

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

42. Provide the maximum tax rate permitted by law per \$100 of property value. **NOT APPLICABLE**
WHCRWA does not have taxing authority.

43. Does the applicant collect sales tax?

Yes Provide the sales tax collection history for the past five years.

Fiscal Year Ending	Total Collections
20	
20	
20	
20	
20	

No WHCRWA does not have authority to levy a sales tax.

44. Indicate the tax status of the proposed loan?

Tax-Exempt
 Taxable

45. Proforma (**Select one of the four listed below**) Please be sure the proforma reflects the schedule requested, including multi-phased funding options.

a. System revenues are anticipated to be used to repay the proposed debt. Attach a proforma indicating the following information for each year the debt is outstanding:

- projected gross revenues
- operating and maintenance expenditures
- outstanding and proposed debt service requirements
- net revenues available for debt service and coverage of current and proposed debt paid from revenues

b. Taxes are anticipated to be used to repay the proposed debt. Attach a pro forma indicating the following information for each year the debt is outstanding:

- outstanding and proposed debt service requirements
- the tax rate necessary to repay current and proposed debt paid from taxes
- list the assumed collection rate and tax base used to prepare the schedule

c. Combination of system revenues and taxes to be used to repay the proposed debt. Attach a pro forma indicating the following information for each year the debt is outstanding:

- projected gross revenues, operating and maintenance expenditures, net revenues available for debt service
- outstanding and proposed debt service requirements
- the tax rate necessary to pay the current and proposed debt
- list the assumed collection rate and tax base used to prepare the schedule

d. Another type of pledge will be used to repay the proposed debt. Attach a pro forma with information for each year the debt is outstanding, which includes projected revenues, annual expenditures, outstanding debt requirements, and revenues available for debt service.

Attached

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

46. Attach a **FIVE** year comparative system operating statement (not condensed) including audited prior years and an unaudited year-to-date statement. Unaudited year-to-date statement must reflect the financial status for a period not exceeding the latest six months.

Attached Operating Statement.

47. Attach **ONE** copy of an annual audit of financial statements, including the management letter, for the preceding fiscal year prepared by a certified public accountant or firm of accountants and, if the last annual audit was more than 6 months ago, then, provide interim financial information.

Attached Annual Audit

Attached Management Letter

If applicable, attached interim financial information

48. Does the applicant have any outstanding debt? (Check all that apply)

Yes, General obligation debt

Yes, Revenue debt

Yes, Authorized but unissued debt

No

49. Attach a listing of total outstanding debt and identify the debt holder. Segregate by type (General Obligation or Revenue) and present a consolidated schedule for each, showing total annual requirements. Note any authorized but unissued debt.

a. General Obligation Debt:

Yes

Attached schedule. The schedule should also identify the debt holder.

No

b. Revenue:

Yes

Attached schedule. The schedule should also identify the debt holder.

No

c. Authorized by Unissued Debt:

Yes

Attached schedule. The schedule should also identify the debt holder.

No

50. List the ten largest employers of the Applicant's service area:

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Name	Number of Employees
Memorial Hermann Health System	19,500
The University of Texas MD Anderson Cancer Center	19,290
United Airlines	17,000
Exxon Mobil Corporation	13,191
Houston Methodist	13,000
Shell Oil Company	13,000
Kroger Company	12,000
National Oilwell Varco	10,000
Schlumberger Limited	10,000
BP America, Inc.	9,537

Source: Greater Houston Partnership March 26, 2014.

Comments (example, any anticipated changes to the tax base, employers etc.) _____

51. Provide any current bond ratings with date received.

	Standard & Poor's	Date Received	Moody's	Date Received	Fitch	Date Received
Water System Revenue Bonds – Senior Lien	AA-	11/07/2016	A1	11/17/2015	A+	11/04/2016
Water System Revenue Bonds – Junior Lien	NA	NA	NA	NA	NA	NA

52. Is the project intended to allow the applicant to provide or receive water or sewer services to or from another entity?

Yes. If yes, the applicant must attach, at a minimum, the proposed agreement, contract, or other documentation establishing the service relationship, with the final and binding agreements provided prior to loan closing.

Attached – COH Water Supply Contract, with First Supplement, with First Amendment to the First Supplement and Second Supplement;

No.

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Part D: Project Information

53. Description of Project Need (for example, is the project needed to address a current compliance issue, avoid potential compliance issues, extend service, expand capacity, etc.):

For WHCRWA, the project is needed to provide surface water to meet the Harris Galveston Subsidence District regulatory plan for conversion from groundwater to surface or alternate water. For additional information see the City of Houston application.

54. Description of Project, including a bulleted list of project elements/components, and alternatives considered (including existing facilities): **Contact the City of Houston**

A complete preliminary engineering feasibility data must include:

- a. A description and purpose of the project, including existing facilities.
- Note: CWSRF and DWSRF must address issues scored in Intended Use Plan submittal

Attached

- b. **If project is for Construction only, then attach** the appropriate Engineering Feasibility Report:

a) **Water** (TWDB-0555 at

<http://www.twdb.texas.gov/financial/instructions/doc/TWDB-0555.pdf>)

Attached

b) **Wastewater** (TWDB-0556 at

<http://www.twdb.texas.gov/financial/instructions/doc/TWDB-0556.pdf>)

Attached

- c. DWSRF applicants must complete a Projected Draw Schedule (TWDB-1202 at <http://www.twdb.texas.gov/financial/instructions/doc/TWDB-1202.xls>)

55. Water Made Available (For projects requesting a construction component):

- a. *Total project is 358,400 acre-feet/year at \$1,460,512,000 per City of Houston Water presentation regarding final Basis of Design Report although additional cost increases are expected but have not been provided to the stakeholders as of the application date. The WHCRWA is responsible for approximately 26% or \$379,733,120.*

- o The **increase** in the total annual volume of water supply that will be made available to the recipient(s) by the proposed project.
- o Water Plan project examples: new groundwater wells, reservoir development, pipelines to sources.

a. *New Conservation savings _____ (acre-feet/year) _____ (\$) capital cost*

- o Annual volume of anticipated water savings resulting from implementation of the proposed conservation project including water loss) and other conservation activities,
- o Water Plan project examples: municipal conservation, advanced Water Conservation, on-farm conservation, brush control, irrigation conservation.

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

- b. *New Reuse supply* _____ (*acre-feet/year*) _____ (*\$*) *capital cost*
- o Increase in the annual volume of (direct or indirect) reuse water supply that will be made available to the recipient(s) by the proposed project.
 - o Water Plan project examples: direct reuse, non-potable reuse, recycled water programs.
- c. *Maintenance of Current Supply* _____ (*acre-feet/year*) _____ (*\$*) *capital cost*
- o Volume of recipients' current supplies that will be maintained by implementing the proposed project
 - o Water Plan project examples: None. Not a water plan project. (Examples of these type projects: treatment rehabilitation, system storage facilities, system upgrades).

56. Project Location:

Attach a map of the service area and drawings as necessary to locate and describe the project. The map should show the project footprint and major project components.

Attached: Contact City of Houston

57. Attach the Census tract numbers in which the applicant's service area is within. The Census tracts within your area may be found at:

<http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

Please follow these steps:

- Select Advanced Search.
- Select the Geographies button located below Topics (left side of page).
- On the top of the window select the Name tab.
- In the text box, type "All Census Tracts within____" (Fill in the blank with the name of a County Subdivision or a Place.) Select "Go".
- If your town is a County Subdivision, select the geography labeled "All Census Tracts (or parts) within City, County, State" from the Geography Results. If your town is a place select the geography labeled "All Census Tracts (or parts) full-or-partially within City, State" from the Geography Results.
- Close the Geographies Search window.
- Use the Topics on the left side of the page to further refine your search or to select a table(s) from your search results.

Attached Census tracts --- See 2012 Population & Water Demand Study attached, Specifically Exhibits 3 and 4

58. Project Schedule:

- a) Requested loan closing date.
October/November 2017
- b) Estimated date to submit environmental planning documents.
Contact City of Houston
- c) Estimated date to submit engineering planning documents.
Contact City of Houston
- d) Estimated date for completion of design.

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Contact City of Houston

- e) Estimated Construction start date for first contract.

Contact City of Houston

- f) Estimated Construction end date for last contract.

Contact City of Houston

59. **Attach** a copy of current and future populations and projected water use or wastewater flows. Include entities to be served.

Attached, SEE 2012 Population and Water Demand Study and List of Entities

60. Attach the most current itemized project cost estimate (include all costs and funding sources). Utilize the budget format provided (TWDB-1201 at <http://www.twdb.texas.gov/financial/instructions/>). If applying for pre-construction costs only (i.e., P, A, D) then itemize only the relevant portions in the attached budget template

Attached

61. Attach the appropriate Project Information Form:

Wastewater: Attached a completed Wastewater Project Information Form WRD-253a <http://www.twdb.texas.gov/financial/instructions/index.asp>

Water: Attached a completed Water Project Information Form WRD-253d <http://www.twdb.texas.gov/financial/instructions/index.asp>

62. If the project is for Construction only, wastewater projects that involve the construction of a new plant or the expansion of an existing plant and/or associated facilities, attach evidence that an application for a new Texas Pollution Discharge Elimination System Permit or amendment to an existing permit related to the proposed project has been filed with the Texas Commission on Environmental Quality (TCEQ). Final permit authorization must be obtained from the TCEQ before funds can be released for construction activities.

Attached

No. Provide explanation: **NOT APPLICABLE**

63. If this project will result in: (a) an increase by the applicant in the use of groundwater, (b) drilling a new water well, or (c) an increase by the applicant in use of surface water, then the applicant must demonstrate that it has acquired – by contract, ownership or lease – the necessary property rights, groundwater permits, and/or surface water rights sufficient for the project before funds can be released for construction.

- a) Does the applicant currently own all the property rights, groundwater permits and surface water rights needed for this project?

Yes If yes, please attach the completed, appropriate form.

1. WRD 208A (<http://www.twdb.texas.gov/financial/instructions/index.asp>) (Surface Water)

Attached

2. WRD 208B (<http://www.twdb.texas.gov/financial/instructions/index.asp>) (Groundwater)

Attached

No

N/A

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

- b) If all property rights, groundwater permits, and surface water rights, needed for this project have not yet been acquired, identify the rights and/or permits that will need to be acquired and provide the anticipated date by which the applicant expects to have acquired such rights and/or permits.

Type of Permit Water Right	Entity from which the permit or right must be acquired	Acquired by lease or full ownership	Expected acquisition date	Permit / Water Right ID No.

NOT APPLICABLE

- c) List any major permits not identified elsewhere that are necessary for completion of project. Also, list any more necessary minor permits that may involve particular difficulty due to the nature of the proposed project.

Permit	Issuing Entity	Permit Acquired (Y/N)
See City of Houston Original Application		

NOT APPLICABLE

64. Has the applicant obtained all necessary land and easements for the project?

Yes. If yes, attach the site certificate (ED-101 at <http://www.twdb.texas.gov/financial/instructions/index.asp>)
 Attached

- No. If no, **fill out the table below** and describe the land or easements that will need to be acquired, provide the anticipated date by which the applicant expects to have the land or easements, and indicate if funding from TWDB is to be used for the acquisition.

Description of Land or Easement Permit	Entity from which the permit or right must be acquired	Acquired by lease or full ownership	Expected acquisition date	To Be Funded by TWDB (Yes/No)

NOT APPLICABLE

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

65. Has a Categorical Exclusion (CE), Determination of No Effect (DNE), Finding of No Significant Impact (FONSI), Record of Decision (ROD), or any other environmental determination been issued for this project?
- Yes
 - Attach a copy of the finding.
 - No – **Contact City of Houston**
66. Is the project potentially eligible for a Categorical Exclusion (CE)/ Determination of No Effect (DNE) because it involves only minor rehabilitation or the functional replacement of existing equipment?
- Yes
 - No
67. Are there potentially adverse environmental or social impacts that may require mitigation or extensive regulatory agency or public coordination (e.g. known impacts to properties eligible for listing on the National Register of Historic Places; potentially significant public controversy; need for an individual permit from the U.S. Army Corps of Engineers)?
- Yes
 - If yes, attach additional information
 - No **Contact City of Houston**

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Part E: State Water Implementation Fund for Texas (SWIFT) Applicants Only:

68. Identify the type of SWIFT funding (If more than one funding option is being requested indicate the amount of funding for each):

- | | | |
|-------------------------------------|---------------------|--------------|
| <input type="checkbox"/> | Deferred | \$ |
| <input checked="" type="checkbox"/> | Low Interest Loan | \$50,000,000 |
| <input type="checkbox"/> | Board Participation | \$ |

69. For multi-year funding request or phased commitments, provide a schedule reflecting the closing dates for each loan requested.

Attached

70. **Notice to SWIFT Applicants:** Texas Water Code Sec. 15.435(h) requires all recipients of financial assistance from the SWIFT to acknowledge any applicable legal obligations in federal law, related to contracting with disadvantaged business enterprises, and state law, related to contracting with historically underutilized businesses. Checking the boxes below serves as this acknowledgement.

As an applicant for financial assistance from SWIFT, I acknowledge that this project must comply with any applicable legal obligations in federal law related to contracting with disadvantaged business enterprises.

As an applicant for financial assistance from SWIFT, I acknowledge that this project must comply with applicable legal obligations in state law (Texas Government Code Chapter 2161 and Texas Administrative Code Chapter 20, Subchapter B) related to contracting with historically underutilized businesses.

71. Provide drafts of the following documents:

a. Proposed Bond Ordinance

Attached

b. Private Placement Memorandum

Attached

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Part F: Economically Distressed Programs (EDAP) Applicants Only: NOT APPLICABLE

In accordance with TWDB Rules (31 TAC Chapter 363), an application for EDAP will **not** be considered until the County has adopted and is enforcing the Model Subdivision Rules (MSRs) Texas Water Code § 16.343. If the proposed project is within a municipality or its extraterritorial jurisdiction (ETJ), or if the applicant is a municipality, the municipality must also have adopted and be enforcing MSRs.

72. Describe procedures for collecting monthly customer bills (include procedures for collection of delinquent accounts)

73. Is financing being requested for a **wastewater** project?
 Yes If yes, does the applicant have the required resolution/ordinance establishing a mandatory hookup policy?
 Yes. If yes, attach a copy of the resolution/ordinance.
 Attached
 No. If no, explain _____
 No
74. Required documentation for the project area for Preliminary EDAP Eligibility (31 TAC Chapter 363)
 Attached documentation of inadequacy of water and/or wastewater services.
 Attached documentation regarding the financial resources of the residential users in the EDAP area. Census data or documentation regarding median household income should be provided.
 Attached documentation demonstrating existence of a residence in the project area prior to **June 1, 2005**. This could include tax records of residence, dated aerial maps, or, other documentation demonstrating existence of a residence.
75. Has the Department of State Health Services issued a determination stating a public health nuisance exists in the project area?
 Yes If yes, attach a copy of the determination.
 Attached
 No If no determination exists, attach documentation demonstrating a public health nuisance exists in the project area. (*Photographs may be submitted, but they **must** be labeled with location and date when taken. If the soil types are mentioned in the project area as an issue, include soil profile maps*) This documentation will be used by TWDB staff to request a determination from the Department of State Health Services
 Attached
76. Is this project providing new service?
 Yes If yes, attach plats of the affected subdivisions.
 Attached
 No
77. Attach an EDAP Facility Engineering Plan/Scope of Services report that complies with the requirements of WRD-023A. <http://www.twdb.texas.gov/financial/instructions/index.asp>
 Attached

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Part G: CWSRF/DWSRF Applicants Only: NOT APPLICABLE

Only applicants applying for funding from the CWSRF and DWSRF Programs must complete this section.

Pursuant to Federal Funding Accountability and Transparency Act (FFATA) the applicant is required to obtain a DUNS number that will represent a universal identifier for all federal funding assistance. DUNS numbers can be obtained from Dun and Bradstreet at <http://fedgov.dnb.com/webform/>

78. Applicant's Data Universal Number System (DUNS) Number:
DUNS _____

Pursuant to Federal Funding Accountability and Transparency Act (FFATA) the applicant is required to register with System for Award Management (SAM) and maintain current registration at all times during which the Board loan agreement is active or under consideration by the Board. Register at: <https://sam.gov>.

79. The applicant has registered and will maintain current SAM registration at all times during which a federal subaward is active or under consideration by the Board.
 Yes
 No

80. Federal Awards information:
 1. Did applicant receive over 80% of their revenue from Federal Awards last year?
 Yes
 No
 2. Did applicant receive over \$25 million in Federal Awards last year?
 Yes
 No
 3. Public does not have access to executive compensation information via SEC or IRS reports?
 Yes
 No

81. If applicant checked **YES** to **ALL** three boxes in 3 above, applicant is required to disclose the name and compensation of the five most highly compensated officers.

Officer's Name	Officer's Compensation (\$)

82. Complete form WRD 213 (<http://www.twdb.texas.gov/financial/instructions/index.asp>) - Certification Regarding Lobbying
Attached Yes
 No
 N/A

83. If applying for CWSRF Equivalency or DWSRF, **attach** the Certification Regarding Debarment,

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Suspension and Other Responsibility. SRF-404
(<http://www.twdb.texas.gov/financial/instructions/doc/SRF-404.pdf>)

Attached Yes
 No
 N/A

84. If applying for CWSRF Equivalency or DWSRF, **attach** the Assurances – Construction Programs. EPA-424D (<http://www.twdb.texas.gov/financial/doc/EPA-424D.pdf>)

Attached Yes
 No
 N/A

85. The applicant must comply with the Davis-Bacon Act regarding prevailing wage rates. The applicant acknowledges that they are aware of, and will abide by, the Davis-Bacon Act requirements.

Yes
 No

Further information on the Davis-Bacon requirement is available through the TWDB Guidance document, DB-0156 (<http://www.twdb.texas.gov/financial/instructions/index.asp>)

All project costs funded by the TWDB through CWSRF Equivalency or DWSRF must comply with the federal Disadvantaged Business Enterprise (DBE) program rules and requirements. The federal DBE program requires a good faith effort to contract with DBE's for all procurements including: professional and non-professional consulting services, equipment, supplies and construction to be funded by federal equivalency dollars. Guidance and forms are found at:

TWDB-0210 (<http://www.twdb.texas.gov/financial/instructions/doc/TWDB-0210.pdf>)

86. **At a minimum, you must complete and attach** the Applicant Affirmative Steps Certification and Goals. This form is required to obtain a financial assistance commitment.

TWDB-0215 (<http://www.twdb.texas.gov/financial/instructions/doc/TWDB-0215.pdf>)

Attached Yes
 No

87. If you have already solicited contractors, complete and attach the Affirmative Steps Solicitation Report. This form is required prior to loan closing and release of any funds; therefore, if this question is not applicable at this time, select N/A.

TWDB-216 (<http://www.twdb.texas.gov/financial/instructions/doc/TWDB-0216.pdf>)

Attached Yes
 No
 N/A

88. If you have awarded contracts to contractors, complete and attach the Loan/Grant Participation Summary. This form must be submitted for review prior to loan closing and release of funds. This form is required prior to loan closing and release of any funds; therefore, if this question is not applicable at this time, select N/A.

TWDB-0373 (<http://www.twdb.texas.gov/financial/doc/TWDB-0373.pdf>)

Attached Yes
 No
 N/A

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

89. All Contractors that have been awarded will need to complete and attach the Prime Contractor Affirmative Steps Certification and Goals This form is required prior to loan closing and release of any funds; therefore, if this question is not applicable at this time, select N/A.

TWDB-217 (<http://www.twdb.texas.gov/financial/instructions/doc/TWDB-0217.pdf>)

Attached Yes
 No
 N/A

90. **All CWSRF applicants** must be a Designated Management Agency (DMA) for wastewater collection and treatment. Please complete and attach DMA resolutions. WRD-210 (<http://www.twdb.texas.gov/financial/doc/WRD-210.pdf>) is an example of this type of resolution.

Attached
 N/A

Part H: Documentation of "Green" Projects and Project Components: NOT APPLICABLE
CWSRF and DWSRF Applicants Only

All SRF applicants must complete this section if green benefits are all or part of the project (more than an incidental benefit). Project is defined as the entire project or a stand-alone component of the project. This section is required so that the TWDB may determine whether the project qualifies as "green" pursuant to Environmental Protection Agency (EPA) Guidance.

A project (or project component) is "green" if the primary purpose qualifies under EPA Guidance as one of the following:

- a. Green Infrastructure,
- b. Water Efficiency-related,
- c. Energy Efficiency-related, or
- d. Environmentally Innovative.

You must use the Green Project Reserve guidance to complete this section. Current guidance may be found at: **Green Project Reserve: Guidance for determining project eligibility**

TWDB-0161 (<http://www.twdb.texas.gov/financial/instructions/doc/TWDB-0161.pdf>)

91. Does your project or a component of your project qualify as Green, per EPA guidance?

Yes
 No

If Yes, Please complete the remainder of Section G.

92. Type of Green Project

Water Efficiency Energy Efficiency Green Infrastructure Environmentally Innovative

93. The correct worksheets must be completed.

Green Project Reserve: CWSRF Green Project Worksheets

TWDB-0162 (<http://www.twdb.texas.gov/financial/instructions/doc/TWDB-0162.pdf>)

Attached Yes
 No
 N/A

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Green Project Reserve: DWSRF Green Project Worksheets

TWDB-0163 (<http://www.twdb.texas.gov/financial/instructions/doc/TWDB-0163.pdf>)

- Attached**
- Yes
 - No
 - N/A

TWDB will make the final determination whether your project (or project component) meets federal criteria as "green". You may be required to submit a **business case, utilizing the Green guidance**

Part I: Summary of attachments to application

Following is a list of the documents that may be necessary in order to process this application. While not all of the listed information below may be required for all projects, an applicant should review the application carefully because incomplete applications will not be processed until all of this information has been provided. In addition, please make sure your entity system name appears on every attachment. **Label each attachment with the number of the pertinent application section (i.e. "Part B5")**.

Check list for your convenience

Part A

- No. 6
- No. 12

General Information

- Draft or executed consulting contracts (engineering, financial advisor, bond counsel)
- Existing security document for refinancing

Part B

- No. 17
- No. 18
- No. 19
- No. 20

Legal

- Resolution (TWDB-0201A)
- Application Affidavit (TWDB-0201)
- Certificate of Secretary (TWDB-201B)
- Water Supply Corporations
 - Articles of Incorporation
 - Certificate of incorporation from the Texas Secretary of State
 - By-laws and any amendments
 - Certificate of status from the Texas Secretary of State
 - Certificate of account status from Texas Comptroller

- No. 21
- No. 22
- No. 23
- No. 24
- No. 25
- No. 26

- Resolution/ordinance authorizing the issuance of parity debt
- Certificate of Convenience & Necessity
- Enforcement Actions
- Affidavit of No Objection
- Two copies of the Water Conservation Plan (TWDB-1968 and TWDB-1965)
- Water use surveys

- No. 27

- Water Loss Audit
 - <http://www.twdb.texas.gov/waterplanning/waterusesurvey/index.asp>
 - <http://www.twdb.texas.gov/conservation/resources/waterloss-resources.asp>

Part C

- No. 39
- No. 40
- No. 45
- No. 46
- No. 47
- No. 49
- No. 52

Financial

- Assessed Values by Classifications
- Direct and Overlapping Tax Table
- Proforma for each year of debt outstanding
- Five year comparative system operating statement.
- Annual audit and management letter
- Outstanding debt schedule
- Service provider contracts

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Part D

Project Information

- No. 54a Preliminary Engineering Feasibility Data (PEFD)
- No. 54b Engineering Feasibility Report
 - Water (TWDB-0555)
 - Wastewater (TWDB-0556)
- No. 54c Project Draw Schedule (TWDB-1202)
- No. 56 Project Map
- No. 57 Census Tract(s)
- No. 58 Project Schedule
- No. 59 Current and future populations and projected water use or wastewater flows
- No. 60 Project Cost Estimate Budget (TWDB-1201)
- No. 61 Wastewater Project Information Form (WRD-253a)
Water Project Information Form (WRD-253d)
- No. 62 Texas Pollution Discharge Elimination System Permit
- No. 63 If applicant has property rights and permits
 - a. WRD-208A (Surface Water)
 - b. WRD-208B (Groundwater)
- No. 63c Additional Permits
- No. 64 Site certificate, evidencing land ownership for the project. (ED-101)
- No. 65 Categorical Exclusion (CE), Finding of No Significant Impact (FONSI), Record of Decision or any other supporting document
- No. 67 Social or environmental issues

Part E

State Water Implementation Fund for Texas

- No. 69 Multi-year/phased commitment schedule
- No. 71a Draft Bond Ordinance
- No. 71b Private Placement Memorandum

Part F

Economically Distressed Areas Program

- No. 73 Resolution/ordinance establishing a mandatory hookup policy
- No. 74 EDAP applicants
 - Inadequacy documentation
 - Financial resources documentation
 - Existence of residences prior to 06/01/2005
- No. 75 Public health nuisance
- No. 76 Plats
- No. 77 EDAP Planning Phase – Facility Engineering Plan/Scope of Services (WRD-023A)

Part G

CWSRF/DWSRF Applicants Only NOT APPLICABLE

- No. 82 Lobbying Activities (WRD-213)
- No. 83 Certification Regarding Debarment, Suspension and Other Responsibility Requirements. (SRF-404)
- No. 84 Assurances – Construction Programs (EPA-424D)
Disadvantaged Business Requirements Guidance (TWDB-0210)

Please label each attachment with the number of the pertinent application section (i.e. “Part D5”)

- No. 86 Affirmative Steps Certification and Goals (TWDB-0215)
- No. 87 Affirmative Steps Solicitation Report (TWDB-216)
- No. 88 Loan/ Grant Participation Summary (TWDB-0373)
- No. 89 Prime Contractor Affirmative Steps Certification and Goals (TWDB-217)
- No. 90 Designated Management Agency (WRD-210)

Part H Green Projects NOT APPLICABLE
Guidance (TWDB-0161)

- No. 93 CWSRF Green Project Worksheets (TWDB-0162)
DWSRF Green Project Worksheets (TWDB-0163)

Part J: Guidance and Forms

Part A General Information
CWSRF – 31 TAC 375
DWSRF – 31 TAC 371
EDAP and SWIFT - 31 TAC 363
For more information visit, <http://www.twdb.texas.gov/about/rules/index.asp>.

Part D Project Information
[State Programs - 31 TAC 363](#)
[Drinking Water State Revolving Fund - 31 TAC 371](#)
[Clean Water State Revolving Fund / Equivalency - 31 TAC 375](#)
[Clean Water State Revolving Fund / Non-Equivalency - 31 TAC 375](#)

Guidelines for Environmental Assessment, Clean Water Non-Equivalency (ED-001A)
Clean Water EID Instructions (SRF-099)
Guidelines for Environmental Assessment, State Participation, Defund, RWAF and WIF,
(ED-001B)
Guidelines for Environmental Assessment, EDAP (ED-001C)
Drinking Water EID Instructions (DW-001)

Part H Green Projects and Project Components
Green Project Reserve: Guidance for determining project eligibility
(TWDB-0161)

Part A

Allen Boone Humphries Robinson LLP

ALLEN BOONE HUMPHRIES ROBINSON LLP

ATTORNEYS AT LAW

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SUITE 2600
HOUSTON, TEXAS 77027
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abhr.com

Direct Line: (713) 860-6404
Direct Fax: (713) 860-6604

jboone@abhr.com

James A. Boone
Partner

October 13, 2010

West Harris County Regional Water Authority
c/o Board of Directors

Re: West Harris County Regional Water Authority (the "Authority") Water System Revenue Bonds, Series 2011 Issued to the Texas Water Development Board (the "Bonds")

Dear Board of Directors:

Allen Boone Humphries Robinson LLP ("ABHR") has agreed that in lieu of the bond counsel fee set forth in the September 14, 2005, letter agreement between the Authority and ABHR ("Original Agreement"), ABHR's total fee for services as bond counsel in connection with the issuance and sale of the Bonds shall be a flat-fee of \$120,000 plus charges for the actual expenses involved, to be paid from the proceeds of the sale of the Bonds. The above fee and expenses shall only be due if the Bonds are actually issued, sold and delivered. All provisions of the Original Agreement remain in full force and effect, except that this letter agreement controls over any inconsistent provision of the Original Agreement. If the foregoing correctly reflects the Authority's understanding and agreement regarding this matter, please execute below.

Sincerely,

By:
James A. Boone

AGREED TO AND ACCEPTED BY:

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

By:
Name: BRUCE PARKER
Title: PRESIDENT

ALLEN BOONE HUMPHRIES ROBINSON LLP

ATTORNEYS AT LAW

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3200 SOUTHWEST FREEWAY
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jboone@abhllp.com

James A. Boone
Partner

September 14, 2005

Board of Directors
West Harris County Regional Water Authority

Dear Board of Directors:

We appreciate the opportunity to represent the West Harris County Regional Water Authority as general counsel and bond counsel. Our experience has been that it is mutually beneficial to set forth the role and responsibilities of both our law firm and the client. That is the purpose of both this letter and the separate Standard Terms of Engagement for Legal Services that is enclosed with this letter. This engagement letter replaces our engagement letter dated August 20, 2003.

Client

The client for this engagement is the West Harris County Regional Water Authority (the "Authority"). This engagement does not create an attorney-client relationship with any related persons or entities, such as parents, subsidiaries, affiliates, employees, officers, directors, shareholders, or partners.

Scope of Engagement-General Representation of Authority

We will serve as general counsel for the Authority. Our work in connection with this representation will include, but will not be limited to, preparing documents and agenda items for the meetings of the Board of Directors of the Authority, reviewing minutes of those meetings, preparing various resolutions and orders to be adopted by the Board of Directors of the Authority, calling and canvassing director appointment elections, preparation of various legal notices required to be given, and maintaining files and records of the Authority required by the Public Information Act. We also will represent the Authority, when authorized by the Board of Directors, in contract

negotiation and preparation, application for permits, and other legal services that the Authority may require from time to time.

Scope of Engagement-Bond Counsel Services

We will perform services as bond counsel in connection with the authorization, issuance and sale of bonds to be issued by the Authority to acquire and construct Authority facilities and finance Authority costs and projects, as may be authorized and issued hereafter for such purposes (the "Bonds"). Our services as counsel will include the preparation and review of legal notices, resolutions and orders for adoption by the Board, instruments required to obtain necessary approvals of the Attorney General of the State of Texas, and all other legal documents relating to the authorization and issuance of the Bonds and registration thereof with the Comptroller of Public Accounts of the State of Texas. In addition, in our capacity as bond counsel, we will review a transcript of certified proceedings pertaining to the Bonds, which we will help to prepare, and, where appropriate, will render our opinion that the Bonds are valid and binding obligations of the Authority and that the interest on the Bonds is exempt from federal income taxation under then existing statutes, regulations, published rulings and court decisions.

It is our understanding that the Authority will employ a recognized investment banking firm to serve as financial advisor to the Authority and that said firm will be responsible for advising the Authority concerning the sale of the Bonds and will assist the Authority in the preparation of an Official Notice of Sale and an Official Statement (the "Offering Documents") in connection with each issue of the Bonds offered for sale to the public.

In our capacity as bond counsel, we will review those portions of the Offering Documents which describe the Authority's legal authority for issuance of the Bonds to determine whether such description conforms to and fairly summarizes relevant provisions of Texas law. We also will review those portions of the Offering Documents describing the resolution of the Board authorizing the Bonds to determine whether such description fairly summarizes the provisions of said resolution. In addition, if requested, we will review such other portions of the Offering Documents as describe matters of law and legal relationships of the Authority about which we have knowledge. We will not, however, undertake to independently verify any of the factual information contained in the Offering Documents, nor will we conduct any investigation of the affairs of the Authority for the purpose of passing on the accuracy or completeness of the Offering Documents. Since our role in connection with the Offering Documents will be of an advisory rather than an investigatory nature, said documents will contain a statement describing our services as outlined above and stating that our limited participation may not be relied upon as an assumption of

responsibility for, or an expression of opinion of any kind with regard to, the accuracy or completeness of the information contained therein.

Unless specifically requested by the Authority pursuant to terms and conditions to be set forth in a separate engagement letter, we will not be responsible for advising the Authority concerning the provisions of the various securities laws, including the Securities Act of 1933 and the Securities Exchange Act of 1934, and the securities laws of the various states in which the Bonds may be sold.

Scope of Engagement - Continuing Disclosure Services

Additionally, we will provide legal services in connection with the obligation of the Authority to provide continuing disclosure pursuant to Securities and Exchange Commission Rule 15c2-12, as such rule may be amended from time to time, with respect to any bonds issued by the Authority. In connection with this engagement, we will advise the Authority of its continuing disclosure obligations, prepare resolutions to be adopted by the Board of Directors of the Authority in connection with the Authority's continuing disclosure obligation, and prepare the Authority's continuing disclosure filings with the assistance of the Authority's bookkeeper, auditor, financial advisor, operator, engineer and other Authority consultants.

General Understandings

We understand and agree that this is not an exclusive agreement, and you are free to retain any other counsel of your choosing. We recognize that we shall be disqualified from representing any other client with interests materially and directly adverse to yours (i) in any matter which is substantially related to our representation of you and (ii) with respect to any matter where there is a reasonable probability that confidential information you furnished to us could be used to your disadvantage. You understand and agree that, with those exceptions, we are free to represent other clients, including clients whose interests may conflict with yours in litigation, business transactions, or other legal matters. You agree that our representing you in this matter will not prevent or disqualify us from representing clients adverse to you in other matters and that you consent in advance to our undertaking such adverse representations.

This engagement and our attorney-client relationship will be terminated when we have completed the services in the matters covered by this engagement letter and any written supplements to this engagement letter. If you later retain us to perform further or additional services, our attorney-client relationship will be established by another engagement letter.

Cooperation

To enable us to render effectively the legal services contemplated, the Authority has agreed to disclose fully and accurately all facts and keep us informed of all developments relating to our representation. We necessarily must rely on the accuracy and completeness of the facts and information you and your agents provide to us. To the extent it is necessary for the Authority's representatives to attend meetings in connection with this matter, we will attempt to schedule them so that the convenience of those representatives can be served.

Fees

Fees related to matters other than bond counsel services (*i.e.*, fees for serving as general counsel and for continuing disclosure services) are based on hourly rates and will be based on the time spent by the lawyers and paralegal personnel who work on the matter. Billing rates for our attorneys vary according to the experience of the individuals. In an effort to reduce overall legal costs, we utilize paralegal and administrative assistant personnel whenever appropriate. Any service performed by special project assistants or support staff will be billed at an hourly rate consistent with the rates charged similar districts for similar services. All time and expenses will be billed on a monthly basis.

In lieu of listing the Firm individuals that may work for the Authority (as was done in Exhibit "A" to our August 20, 2003 engagement, which listing from time to time did not include all applicable individuals), our monthly bills will hereafter reflect all individuals that worked on the Authority and their respective billing rates.

For our services as bond counsel in connection with the authorization, issuance, and sale of new money bonds, the Authority will pay us, from the proceeds of sale of each issue or installment of the bonds, the following:

- a. an amount equal to 2% of the first \$3,000,000 in principal amount of the bonds; and
- b. an amount equal to 1½% of the principal amount of such bonds above said first \$3,000,000 in principal amount but not exceeding \$10,000,000 in principal amount; and
- c. an amount equal to 1% of the principal amount of such bonds above \$10,000,000 in principal amount but not exceeding \$20,000,000 in principal amount; and

- d. an amount equal to ½% of the principal amount of such bonds above \$20,000,000 in principal amount.

The above fee schedule shall be applicable to each separate issue or installment of new money bonds, but shall only be due with respect to bonds actually issued, sold, and delivered. Our fee for bond counsel services for any separate issue or installment of the Bonds shall not be less than \$50,000, plus charges for the actual expenses involved.

For our services as bond counsel in connection with the authorization, issuance, and sale of refunding bonds, the Authority will pay us, from the proceeds of sale of each issue or installment of the refunding bonds, an amount equal to 1% of the principal amount (or maturity amount in the event of premium capital appreciation bonds or premium compound interest bonds) of the refunding bonds, but in no event less than \$50,000, plus charges for the actual expenses incurred.

In the event the Authority determines that it is necessary or desirable to issue bond anticipation notes or to obtain other forms of short-term financing, we will render all services necessary in connection therewith. Our fee for such services will be 1% of the principal amount of such notes.

Other Charges

In addition to our fees, there will be other charges for items incident to the performance of our legal services, such as photocopying, messengers, travel expenses, long-distance telephone calls, facsimile transmissions, postage, overtime for secretaries and other non-legal staff, specialized computer applications such as computerized legal research, and filing fees. The basis upon which we establish these other charges is set forth in the Standard Terms of Engagement For Legal Services.

Source Of Funds to Pay All Fees and Charges

None of the members of the Board of Directors of the Authority have any personal liability of any nature or amount, or liability of any kind or nature, to Allen Boone Humphries Robinson LLP for any of the fees or charges due hereunder.

Investment Disclosures

Some of the Firm's lawyers, directly or beneficially, may own interests in corporations and other entities or in real property. If you are at all concerned about these individual investments, we will be pleased to canvass our lawyers about their individual investments in any entity or entities about which you may be concerned.

Withdrawal or Termination

Our relationship is based upon mutual consent and you may terminate our representation at any time, with or without cause, by notifying us. Your termination of our services will not affect your responsibility for payment of fees for legal services rendered and of other charges incurred before termination and in connection with an orderly transition of the matter.

We are subject to the rules of professional conduct for the jurisdictions in which we practice, which list several types of conduct or circumstances that require or allow us to withdraw from representing a client, including for example, nonpayment of fees or costs, misrepresentation or failure to disclose material facts, fundamental disagreements, and conflict of interest with another client. We try to identify in advance and discuss with you any situation which may lead to our withdrawal, and if withdrawal ever becomes necessary, we give you written notice of our withdrawal. If we elect to withdraw for any reason, you will take all steps necessary to free us of any obligation to perform further, including the execution of any documents necessary to complete our withdrawal, and we will be entitled to be paid for all services rendered and other charges accrued on your behalf to the date of withdrawal.

Other

If the foregoing, including the items set forth in the enclosed Standard Terms of Engagement For Legal Services, correctly reflects your understanding of the terms and conditions of our representation, please so indicate by executing the enclosed copy of this letter in the space provided below and return it to the undersigned.

Please contact me if you have any questions. We are pleased to have this opportunity to be of service and to work with you.

Very truly yours,


ALLEN BOONE HUMPHRIES ROBINSON LLP

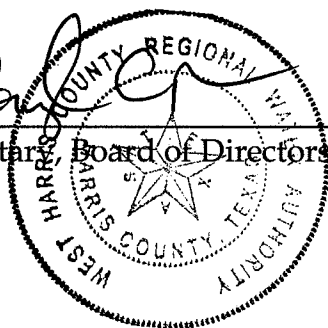
By:  _____

Approved and accepted by the Board of Directors of the West Harris County Regional Water Authority on September 14, 2005.

By: 
President, Board of Directors

ATTEST:

By: 
Secretary, Board of Directors
(SEAL)



ALLEN BOONE HUMPHRIES ROBINSON LLP

Standard Terms of Engagement for Legal Services

This statement sets forth certain standard terms of our engagement as your lawyers and is intended as a supplement to the engagement letter that we have with you as our client. Unless modified in writing by mutual agreement, these terms will be an integral part of our agreement with you as reflected in the engagement letter. Therefore, we ask that you review this statement carefully and contact us promptly if you have any questions. We suggest that you retain this statement in your file with the engagement letter.

The Scope of Our Work

You should have a clear understanding of the legal services we will provide. Any questions that you have should be dealt with promptly.

We will at all times act on your behalf to the best of our ability. Any expressions on our part concerning the outcome of your legal matters are expressions of our best professional judgment, but are not guarantees. Such opinions are necessarily limited by our knowledge of the facts and are based on the state of the law at the time they are expressed.

It is our policy that the person or entity that we represent is the person or entity that is identified in our engagement letter, and absent an express agreement to the contrary does not include any affiliates of such person or entity (e.g., if you are a corporation or partnership, any parents, subsidiaries, employees, officers, directors, shareholders or partners of the corporation or partnership, or commonly owned corporations or partnerships; or, if you are a trade association, any members of the trade association). If you believe this engagement includes additional entities or persons as our clients you should inform us immediately.

It is also our policy that the attorney-client relationship will be considered terminated upon our completion of any services that you have retained us to perform. If you later retain us to perform further or additional services, our attorney-client relationship will be revived subject to the terms of engagement that we agree on at that time.

This engagement shall be subject to the Texas Disciplinary Rules of Professional Conduct.

Who Will Provide the Legal Services

Customarily, each client of the firm is served by a principal attorney contact. The principal attorney should be someone in whom you have confidence and with whom you enjoy working. You are free to request a change of principal attorney at any time. Subject to the supervisory role of the principal attorney, your work or parts of it may be performed by other lawyers and legal assistants in the firm. Such delegation may be for the purpose of involving lawyers or legal assistants with special expertise in a given area or for the purpose of providing services on the most efficient and timely basis. Whenever practicable, we will advise you of the names of those attorneys and legal assistants who work on your matters.

How Our Fees Will Be Set

Generally, our fees are based on the time spent by the lawyers and paralegal personnel who work on the matter. We will charge for all time spent in representing your interests, including, by way of illustration, telephone and office conferences with you and your representatives, consultants (if any), opposing counsel, and others; conferences among our legal and paralegal personnel; factual investigation; legal research; responding to your requests for us to provide information to your auditors in connection with reviews or audits of financial statements; drafting letters and other documents; and travel. We will keep accurate records of the time we devote to your work in units of quarters of an hour.

The hourly rates of our lawyers and legal assistants are reviewed and adjusted annually on a Firm-wide basis to reflect current levels of legal experience, changes in overhead costs, and other factors.

Although we may from time to time, at the client's request, furnish estimates of legal fees and other charges that we anticipate will be incurred, these estimates are by their nature inexact (due to unforeseeable circumstances) and, therefore, the actual fees and charges ultimately billed may vary from such estimates.

Additional Charges

In addition to our fees, there will be other charges for items incident to the performance of our legal services, such as photocopying, messengers, travel expenses, long-distance telephone calls, facsimile transmissions, postage, overtime for secretaries and other non-legal staff, specialized computer applications such as computerized legal research, and filing fees. The current basis for these charges is set forth below. The

Firm will review this schedule of charges on an annual basis and adjust them to take into account changes in the Firm's costs and other factors.

Duplicating

The Firm charges \$.15 per page.

Courier Services

The Firm charges an amount which generally represents cost including the distribution service provided by the Firm. Depending on the volume of work performed by a service provider, the Firm may receive a volume discount during a particular accounting period for which no adjustment is made on an individual client's bill.

Computer Aided Legal Research (CALR)

Third party providers of CALR services charge the Firm amounts each month based on the type, extent, and duration of the services provided. The Firm charges clients for client research only based on the computed cost to the Firm for the use of the services. This cost is monitored and revised periodically to achieve an average "at cost" rate for clients.

Telefax

The Firm charges \$1.00 per page for outgoing telefaxes, which includes all telephone costs.

Telephone

The Firm does not charge for local calls. Due to the Firm-wide volume of long distance calls and multitude of rates for the various area codes and exchanges, the Firm does not bill each individual call based on the statements received from providers, but rather charges a flat rate of \$.41 per minute for each long distance call made within the United States. This rate (\$.41) is an approximation of third party provider charges and internal costs associated with this service. International calls are charged based on the rate in effect for the country being called.

Travel-Related Expenses

Airfare, meals, and related travel expenses charged to the client represent actual, out-of-pocket cost. Depending on the volume of both Firm and personal travel, the Firm may receive beneficial services, including airline tickets from its travel agent for which no adjustment is made on an individual client's account. In addition, credits earned under the Frequent Flyer Programs accrue to the individual traveler and not to the Firm.

All Other Costs

The Firm charges actual disbursements for third-party services like court reporters, expert witnesses, etc., and may recoup expenses reasonably incurred in connection with services performed in-house, such as mail services, secretarial overtime, file retrieval, etc.

Unless special arrangements are otherwise made, fees and expenses of others (such as experts, investigators, consultants and court reporters) will be the responsibility of, and billed directly to, the client. Further, all invoices in excess of \$500 will be forwarded to the client for direct payment.

Billing Arrangements and Terms

Our billing rates are based on the assumption of prompt payment. Consequently, unless other arrangements are made, fees for services and other charges will be billed monthly and are payable within thirty days of receipt.

Advances

Clients of the firm are sometimes asked to deposit funds as an advance payment with the firm. The advance payment will be applied first to payment of charges for such items as photocopying, messengers, travel, etc., as more fully described above, and then to fees for services. The advance will be deposited in our client advance account and we will charge such other charges and our fees against the advance and credit them on our billing statements. In the event such other charges and our fees for services exceed the advance deposited with us, we will bill you for the excess monthly or may request additional advances. Any unused portion of amounts advanced will be refundable at the conclusion of our representation.

Client and Firm Documents

We will maintain any documents that you furnish to us in our client file (or files) for this matter. At your request, we will return your documents to you at the conclusion of the matter (or earlier, if appropriate). It is your obligation to tell us which, if any, of the documents that you furnish us that you want returned. We will return those documents to you promptly after our receipt of payment for outstanding fees and charges. Our own files pertaining to this matter, including the work performed by our attorneys, will be retained by the firm. Any documents retained by the firm will be kept for a certain period of time, and ultimately we will destroy them in accordance with our record retention program schedule then in effect.

ALLEN BOONE HUMPHRIES ROBINSON LLP
ATTORNEYS AT LAW
PHOENIX TOWER
3200 SOUTHWEST FREEWAY
SUITE 2600
HOUSTON, TEXAS 77027
TEL (713) 860-6400
FAX (713) 860-6401
abhr.com

May 13, 2015

Board of Directors
West Harris County Regional Water Authority

Dear Board of Directors:

We appreciate the opportunity to represent the West Harris County Regional Water Authority as its legal counsel. Our experience has been that it is mutually beneficial to set forth the role and responsibilities of both our law firm and the client. That is the purpose of both this letter and the separate Standard Terms of Engagement for Legal Services that is enclosed with this letter. This engagement letter replaces our engagement letter dated September 14, 2005.

Client

The client for this engagement is West Harris County Regional Water Authority (the "Authority"). This engagement does not create an attorney client relationship with any related persons or entities, such as parents, subsidiaries, affiliates, employees, officers, directors, shareholders, or partners.

Scope of Engagement-General Representation of Authority

We will serve as general counsel for the Authority. Our work in connection with this representation will include, but will not be limited to, preparing documents and agenda items for the meetings of the Board of Directors ("Board") of the Authority and its committees, reviewing minutes of those meetings, preparing various resolutions and orders to be adopted by the Board, calling and canvassing any elections to be held, preparing various legal notices required to be given, preparing real estate conveyances (including deeds, easements, and encroachment agreements), and maintaining files and records of the Authority required by the Public Information Act. We also will represent the Authority, when authorized by the Board, in securing approvals from city and county authorities, contract negotiation and preparation, application for permits, and other legal services that the Authority may require from time to time.

Scope of Engagement–Bond Counsel Services

We will perform services as bond counsel in connection with the authorization, issuance and sale of bonds to be issued by the Authority to acquire and construct facilities and finance Authority costs and projects, and to refund Authority bonds, as may be authorized and issued hereafter for such purposes.

Our services as bond counsel will include: attending meetings with your consultants in connection with the planning and authorization of such bond issues, including consultation on federal income tax matters; reviewing of the official statement prepared by the Authority’s underwriters, financial advisors or securities counsel in connection with the sale of the bonds, but only for the limited purposes described in such official statement; preparing the legal documents comprising the transcript of legal proceedings for authorization and issuance of the bonds; preparing and submitting to the Attorney General of Texas a transcript of legal proceedings for the bonds to obtain the approval of the Attorney General and registration of the bonds by the Comptroller of Public Accounts of Texas; preparing and filing legal documents required under federal income tax law for the bonds; coordinating, in conjunction with the Authority’s financial advisor, delivery of the bonds to the initial purchaser; and, if appropriate, delivering at closing our approving opinion as to the validity of the bonds under Texas law and the exclusion of interest on the bonds from gross income of the holders under federal income tax law.

It is our understanding that the Authority will employ one or more recognized investment banking firm(s) to serve as financial advisor(s) to the Authority and that said firm(s) will be responsible for advising the Authority concerning the sale of the bonds and will assist the Authority in the preparation of an Official Notice of Sale and an Official Statement (the “Offering Documents”) in connection with each issue of the bonds offered for sale to the public.

In our capacity as bond counsel, we will review those portions of the Offering Documents which describe the Authority’s legal authority for issuance of the bonds to determine whether such description conforms to and fairly summarizes relevant provisions of Texas law. We also will review those portions of the Offering Documents describing the resolution or indenture of the Board authorizing the bonds to determine whether such description fairly summarizes the provisions of said resolution or indenture. In addition, if requested, we will review such other portions of the Offering Documents as describe matters of law and legal relationships of the Authority about which we have knowledge. We will not, however, undertake to independently verify any of the factual information contained in the Offering Documents, nor will we conduct any investigation of the affairs of the Authority for the purpose of passing on the accuracy or completeness of the Offering Documents. Since our role in connection

with the Offering Documents will be of an advisory rather than an investigatory nature, said documents will contain a statement describing our services as outlined above and stating that our limited participation may not be relied upon as an assumption of responsibility for, or an expression of opinion of any kind with regard to, the accuracy or completeness of the information contained therein.

Unless specifically requested by the Authority pursuant to terms and conditions to be set forth in a separate engagement letter, we will not be responsible for advising the Authority concerning the provisions of the various securities laws, including the Securities Act of 1933 and the Securities Exchange Act of 1934, and the securities laws of the various states in which the bonds may be sold.

Scope of Engagement - Continuing Disclosure Services

Additionally, we will provide legal services in connection with the obligation of the Authority to provide continuing disclosure pursuant to Securities and Exchange Commission Rule 15c2-12, as such rule may be amended from time to time, with respect to any bonds issued by the Authority. In connection with this engagement, we will advise the Authority of its continuing disclosure obligations, prepare resolutions or indentures to be adopted by the Board of Directors of the Authority in connection with the Authority's continuing disclosure obligation, and prepare the Authority's continuing disclosure filings with the assistance of the Authority's bookkeeper, auditor, financial advisors, operator, engineer and other Authority consultants.

General Understandings

We understand and agree that this is not an exclusive agreement, and you are free to retain any other counsel of your choosing. We recognize that we shall be disqualified from representing any other client with interests materially and directly adverse to yours (i) in any matter which is substantially related to our representation of you and (ii) with respect to any matter where there is a reasonable probability that confidential information you furnished to us could be used to your disadvantage. You understand and agree that, with those exceptions, we are free to represent other clients, including clients whose interests may conflict with yours in litigation, business transactions, or other legal matters. You agree that our representing you in this matter will not prevent or disqualify us from representing clients adverse to you in other matters and that you consent in advance to our undertaking such adverse representations.

This engagement and our attorney-client relationship will be terminated when we have completed the services in the matters covered by this engagement letter and any written supplements to this engagement letter. If you later retain us to perform

further or additional services, our attorney-client relationship will be established by another engagement letter.

Cooperation

To enable us to render effectively the legal services contemplated, the Authority has agreed to disclose fully and accurately all facts and keep us informed of all developments relating to our representation. We necessarily must rely on the accuracy and completeness of the facts and information you and your agents provide to us. To the extent it is necessary for the Authority's representatives to attend meetings in connection with this matter, we will attempt to schedule them so that the convenience of those representatives can be served.

Fees

Fees related to matters other than bond counsel services (*i.e.*, fees for serving as general counsel and for continuing disclosure services) are based on hourly rates and will be based on the time spent by the lawyers, paralegals, and administrative personnel who work on the matter. Billing rates vary according to the experience of the individuals. In an effort to reduce overall legal costs, we utilize paralegal and administrative assistant personnel whenever appropriate.

Our monthly bills will reflect all individuals that worked that month on the Authority and their respective billing rates.

For our services as bond counsel in connection with the authorization, issuance, and sale of bonds, the Authority will pay us, from the proceeds of sale of each issue or installment of the bonds, the following:

- a. an amount equal to 1.5% of the first \$5,000,000 in principal amount of the bonds; and
- b. an amount equal to 0.5% of the principal amount of such bonds above said first \$5,000,000 in principal amount but not exceeding \$20,000,000 in principal amount; and
- c. an amount equal to 0.4% of the principal amount of such bonds above \$20,000,000 in principal amount but not exceeding \$35,000,000 in principal amount; and

- d. an amount equal to 0.3% of the principal amount of such bonds above \$35,000,000 in principal amount but not exceeding \$50,000,000 in principal amount; and
- e. an amount equal to 0.2% of the principal amount of such bonds above \$50,000,000 in principal amount but not exceeding \$65,000,000 in principal amount; and
- f. an amount equal to 0.1% of the principal amount of such bonds above \$65,000,000 in principal amount but not exceeding \$80,000,000 in principal amount; and
- g. an amount equal to 0.05% of the principal amount of such bonds above \$80,000,000 in principal amount.

The above fee schedule shall be applicable to each separate issue or installment of bonds, whether new money bonds or refunding bonds, but shall only be due with respect to bonds actually issued, sold, and delivered. Our fee for bond counsel services for any separate issue or installment of the bonds shall not be less than \$60,000, plus charges for the actual expenses involved.

In the event the Authority determines that it is necessary or desirable to issue bond anticipation notes or to obtain other forms of short-term financing, we will render all bond counsel services necessary in connection therewith and our fee shall be set forth in a separate engagement letter mutually agreed upon by the Authority and us.

Other Charges

In addition to our fees, there will be other charges for items incident to the performance of our legal services, such as photocopying, messengers, travel expenses, long distance telephone calls, facsimile transmissions, postage, overtime for secretaries and other non legal staff, specialized computer applications such as computerized legal research, and filing fees. The basis upon which we establish these other charges is set forth in the Standard Terms of Engagement for Legal Services.

Investment Disclosures

The Firm's lawyers, directly or beneficially, may own interests in corporations and other entities or in real property. If you are at all concerned about these individual investments, we will be pleased to canvass our lawyers about their individual investments in any entity or entities about which you may be concerned.

Withdrawal or Termination

Our relationship is based upon mutual consent and you may terminate our representation at any time, with or without cause, by notifying us. Your termination of our services will not affect your responsibility for payment of fees for legal services rendered and of other charges incurred before termination and in connection with an orderly transition of the matter.

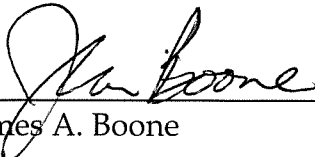
We are subject to the rules of professional conduct for the jurisdictions in which we practice, which list several types of conduct or circumstances that require or allow us to withdraw from representing a client, including for example, nonpayment of fees or costs, misrepresentation or failure to disclose material facts, fundamental disagreements, and conflict of interest with another client. We try to identify in advance and discuss with you any situation which may lead to our withdrawal, and if withdrawal ever becomes necessary, we give you written notice of our withdrawal. If we elect to withdraw for any reason, you will take all steps necessary to free us of any obligation to perform further, including the execution of any documents necessary to complete our withdrawal, and we will be entitled to be paid for all services rendered and other charges accrued on your behalf to the date of withdrawal.

Other


If the foregoing, including the items set forth in the enclosed Standard Terms of Engagement For Legal Services, correctly reflects your understanding of the terms and conditions of our representation, please so indicate by executing the enclosed copy of this letter in the space provided below and return it to the undersigned. Please contact me if you have any questions. We are pleased to have this opportunity to be of service and to work with you.

Very truly yours,

ALLEN BOONE HUMPHRIES ROBINSON LLP

By:  _____
James A. Boone

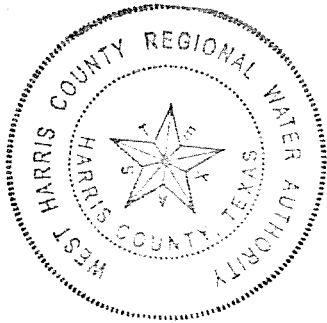
Approved and accepted by the Board of Directors of West Harris County Regional Water Authority on May 13, 2015.

By: 
President, Board of Directors

ATTEST:

By: 
Secretary, Board of Directors

(SEAL)



ALLEN BOONE HUMPHRIES ROBINSON LLP

Standard Terms of Engagement for Legal Services

This statement sets forth certain standard terms of our engagement as your lawyers and is intended as a supplement to the engagement letter that we have with you as our client. Unless modified in writing by mutual agreement, these terms will be an integral part of our agreement with you as reflected in the engagement letter. Therefore, we ask that you review this statement carefully and contact us promptly if you have any questions. We suggest that you retain this statement in your file with the engagement letter.

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You should have a clear understanding of the legal services we will provide. Any questions that you have should be dealt with promptly.

We will at all times act on your behalf to the best of our ability. Any expressions on our part concerning the outcome of your legal matters are expressions of our best professional judgment, but are not guarantees. Such opinions are necessarily limited by our knowledge of the facts and are based on the state of the law at the time they are expressed.

It is our policy that the person or entity that we represent is the person or entity that is identified in our engagement letter, and absent an express agreement to the contrary does not include any affiliates of such person or entity (e.g., if you are a corporation or partnership, any parents, subsidiaries, employees, officers, directors, shareholders or partners of the corporation or partnership, or commonly owned corporations or partnerships; or, if you are a trade association, any members of the trade association). If you believe this engagement includes additional entities or persons as our clients you should inform us immediately.

It is also our policy that the attorney-client relationship will be considered terminated upon our completion of any services that you have retained us to perform. If you later retain us to perform further or additional services, our attorney-client relationship will be revived subject to the terms of engagement that we agree on at that time.

This engagement shall be subject to the Texas Disciplinary Rules of Professional Conduct. We also wish to advise you of the contents of The Texas Lawyer's Creed, a copy of which is included at the end of these Standard Terms of Engagement for Legal Services.

Who Will Provide the Legal Services

Customarily, each client of the Firm is served by a principal attorney contact. The principal attorney should be someone in whom you have confidence and with whom you enjoy working. You are free to request a change of principal attorney at any time. Subject to the supervisory role of the principal attorney, your work or parts of it may be performed by other lawyers and legal assistants in the Firm. Such delegation may be for the purpose of involving lawyers or legal assistants with special expertise in a given area or for the purpose of providing services on the most efficient and timely basis. Whenever practicable, we will advise you of the names of those attorneys and legal assistants who work on your matters.

How Our Fees Will Be Set

Generally, our fees are based on the time spent by the lawyers, paralegals, and administrative personnel who work on the matter. We will charge for all time spent in representing your interests, including, by way of illustration, telephone and office conferences with you and your representatives, consultants (if any), opposing counsel, and others; conferences among our lawyers, paralegals, and administrative personnel; factual investigation; legal research; responding to your requests for us to provide information to your auditors in connection with reviews or audits of financial statements; drafting letters and other documents; and travel. We will keep accurate records of the time we devote to your work in units of quarters of an hour.

The hourly rates of our lawyers, paralegals, and administrative personnel are reviewed and increased from time to time, and at least annually, to reflect current levels of experience, changes in overhead costs, and other factors.

Although we may from time to time, at the client's request, furnish estimates of legal fees and other charges that we anticipate will be incurred, these estimates are by their nature inexact (due to unforeseeable circumstances) and, therefore, the actual fees and charges ultimately billed may vary from such estimates.

Additional Charges

In addition to our fees, there will be other charges for items incident to the performance of our legal services, such as photocopying, messengers, travel expenses, facsimile transmissions, postage, overtime for secretaries and other non-legal staff, specialized computer applications such as computerized legal research, record maintenance and storage, and filing fees. The current basis for these charges is set forth below. The Firm will review this schedule of charges on an annual basis and adjust them to take into account changes in the Firm's costs and other factors.

Duplicating

The Firm charges \$.15 per page.

Courier Services

The Firm charges an amount which generally represents cost including the distribution service provided by the Firm. Depending on the volume of work performed by a service provider, the Firm may receive a volume discount during a particular accounting period for which no adjustment is made on an individual client's bill.

Computer Aided Legal Research (CALR)

Third party providers of CALR services charge the Firm amounts each month based on the type, extent, and duration of the services provided. The Firm charges clients for client research only based on the computed cost to the Firm for the use of the services. This cost is monitored and revised periodically to achieve an average "at cost" rate for clients.

Telefax

The Firm does not charge for telefaxes.

Telephone

The Firm does not charge for local or long distance calls.

Travel-Related Expenses

Airfare, meals, and related travel expenses charged to the client represent actual, out-of-pocket cost. Depending on the volume of both Firm and personal travel, the Firm may receive beneficial services, including airline tickets from its travel agent for which no adjustment is made on an individual client's account. In addition, credits earned under the Frequent Flyer Programs accrue to the individual traveler and not to the Firm.

All Other Costs

The Firm charges an amount which generally represents costs for maintenance and storage of client electronic and hard copy records. In addition, the Firm charges actual disbursements for third-party services like court reporters, expert witnesses, etc., and may recoup expenses reasonably incurred in connection with services performed in-house, such as mail services, secretarial overtime, file retrieval, etc.

Unless special arrangements are otherwise made, fees and expenses of others (such as experts, investigators, consultants and court reporters) will be the responsibility of, and billed directly to, the client. Further, all invoices in excess of \$500 will be forwarded to the client for direct payment.

Billing Arrangements and Terms

Our billing rates are based on the assumption of prompt payment. Consequently, unless other arrangements are made, fees for the services described herein will be billed from time to time as the work is performed or at such regular intervals, not to exceed 30 days, as the client may direct and are payable within thirty days of receipt.

Advances

Clients of the Firm are sometimes asked to deposit funds as an advance payment with the Firm. The advance payment will be applied first to payment of charges for such items as photocopying, messengers, travel, etc., as more fully described above, and then to fees for services. The advance will be deposited in our client advance account and we will charge such other charges and our fees against the advance and credit them on our billing statements. In the event such other charges and our fees for services exceed the advance deposited with us, we will bill you for the excess monthly or may request additional advances. Any unused portion of amounts advanced will be refundable at the conclusion of our representation.

Client and Firm Documents

We will maintain any documents that you furnish to us in our client file (or files) for this matter. At your request, we will return your documents to you at the conclusion of the matter (or earlier, if appropriate). It is your obligation to tell us which, if any, of the documents that you furnish us that you want returned. We will return those documents to you promptly after our receipt of payment for outstanding fees and charges. Our own files pertaining to this matter, including the work performed by our attorneys, will be retained by the Firm. Any documents retained by the Firm will be kept for a certain period of time, and ultimately we will destroy them in accordance with our record retention program schedule then in effect.

Attorney Complaint Information

The State of Texas investigates and prosecutes complaints of professional misconduct against attorneys licensed in Texas. A brochure entitled Attorney Complaint Information is available at our office and is likewise available upon request. A client that has any questions about the State Bar's disciplinary process should call the Grievance Information Helpline of the State Bar of Texas at 1-800-932-1900.

I am a lawyer; I am entrusted by the People of Texas to preserve and improve our legal system. I am licensed by the Supreme Court of Texas. I must therefore abide by the Texas Disciplinary Rules of Professional Conduct, but I know that Professionalism requires more than merely avoiding the violation of laws and rules. I am committed to this Creed for no other reason than it is right.

I. OUR LEGAL SYSTEM. A lawyer owes to the administration of justice personal dignity, integrity, and independence. A lawyer should always adhere to the highest principles of professionalism. I am passionately proud of my profession. Therefore, "My word is my bond." I am responsible to assure that all persons have access to competent representation regardless of wealth or position in life. I commit myself to an adequate and effective pro bono program. I am obligated to educate my clients, the public, and other lawyers regarding the spirit and letter of this Creed. I will always be conscious of my duty to the judicial system.

II. LAWYER TO CLIENT. A lawyer owes to a client allegiance, learning, skill, and industry. A lawyer shall employ all appropriate means to protect and advance the client's legitimate rights, claims, and objectives. A lawyer shall not be deterred by any real or imagined fear of judicial disfavor or public unpopularity, nor be influenced by mere self-interest. I will advise my client of the contents of this Creed when undertaking representation. I will endeavor to achieve my client's lawful objectives in legal transactions and in litigation as quickly and economically as possible. I will be loyal and committed to my client's lawful objectives, but I will not permit that loyalty and commitment to interfere with my duty to provide objective and independent advice. I will advise my client that civility and courtesy are expected and are not a sign of weakness. I will advise my client of proper and expected behavior. I will treat adverse parties and witnesses with fairness and due consideration. A client has no right to demand that I abuse anyone or indulge in any offensive conduct. I will advise my client that we will not pursue conduct which is intended primarily to harass or drain the financial resources of the opposing party. I will advise my client that we will not pursue tactics which are intended primarily for delay. I will advise my client that we will not pursue any course of action which is without merit. I will advise my client that I reserve the right to determine whether to grant accommodations to opposing counsel in all matters that do not adversely affect my client's lawful objectives. A client has no

right to instruct me to refuse reasonable requests made by other counsel. I will advise my client regarding the availability of mediation, arbitration, and other alternative methods of resolving and settling disputes.

III. LAWYER TO LAWYER. A lawyer owes to opposing counsel, in the conduct of legal transactions and the pursuit of litigation, courtesy, candor, cooperation, and scrupulous observance of all agreements and mutual understandings. Ill feelings between clients shall not influence a lawyer's conduct, attitude, or demeanor toward opposing counsel. A lawyer shall not engage in unprofessional conduct in retaliation against other unprofessional conduct. I will be courteous, civil, and prompt in oral and written communications. I will not quarrel over matters of form or style, but I will concentrate on matters of substance. I will identify for other counsel or parties all changes I have made in documents submitted for review. I will attempt to prepare documents which correctly reflect the agreement of the parties. I will not include provisions which have not been agreed upon or omit provisions which are necessary to reflect the agreement of the parties. I will notify opposing counsel, and, if appropriate, the Court or other persons, as soon as practicable, when hearings, depositions, meetings, conferences or closings are canceled. I will agree to reasonable requests for extensions of time and for waiver of procedural formalities, provided legitimate objectives of my client will not be adversely affected. I will not serve motions or pleadings in any manner that unfairly limits another party's opportunity to respond. I will attempt to resolve by agreement my objections to matters contained in pleadings and discovery requests and responses. I can disagree without being disagreeable. I recognize that effective representation does not require antagonistic or obnoxious behavior. I will neither encourage nor knowingly permit my client or anyone under my control to do anything which would be unethical or improper if done by me. I will not, without good cause, attribute bad motives or unethical conduct to opposing counsel nor bring the profession into disrepute by unfounded accusations of impropriety. I will avoid disparaging personal remarks or acrimony towards opposing counsel, parties and witnesses. I will not be influenced by any ill feeling between clients. I will abstain from any allusion to personal peculiarities or idiosyncrasies of opposing counsel. I will not take advantage, by causing any default or dismissal to be rendered, when I know the identity of an opposing counsel, without first inquiring about that counsel's intention to proceed. I will promptly submit orders to

the Court. I will deliver copies to opposing counsel before or contemporaneously with submission to the court. I will promptly approve the form of orders which accurately reflect the substance of the rulings of the Court. I will not attempt to gain an unfair advantage by sending the Court or its staff correspondence or copies of correspondence. I will not arbitrarily schedule a deposition, Court appearance, or hearing until a good faith effort has been made to schedule it by agreement. I will readily stipulate to undisputed facts in order to avoid needless costs or inconvenience for any party. I will refrain from excessive and abusive discovery. I will comply with all reasonable discovery requests. I will not resist discovery requests which are not objectionable. I will not make objections nor give instructions to a witness for the purpose of delaying or obstructing the discovery process. I will encourage witnesses to respond to all deposition questions which are reasonably understandable. I will neither encourage nor permit my witness to quibble about words where their meaning is reasonably clear. I will not seek Court intervention to obtain discovery which is clearly improper and not discoverable. I will not seek sanctions or disqualification unless it is necessary for protection of my client's lawful objectives or is fully justified by the circumstances.

IV. LAWYER AND JUDGE. Lawyers and judges owe each other respect, diligence, candor, punctuality, and protection against unjust and improper criticism and attack. Lawyers and judges are equally responsible to protect the dignity and independence of the Court and the profession. I will always recognize that the position of judge is the symbol of both the judicial system and administration of justice. I will refrain from conduct that degrades this symbol. I will conduct myself in court in a professional manner and demonstrate my respect for the Court and the law. I will treat counsel, opposing parties, the Court, and members of the Court staff with courtesy and civility. I will be punctual. I will not engage in any conduct which offends the dignity and decorum of proceedings. I will not knowingly misrepresent, mischaracterize, misquote or miscite facts or authorities to gain an advantage. I will respect the rulings of the Court. I will give the issues in controversy deliberate, impartial and studied analysis and consideration. I will be considerate of the time constraints and pressures imposed upon the Court, Court staff and counsel in efforts to administer justice and resolve disputes.

Abstract Services Of Houston

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into this 12th day of May, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Top Results Title Services (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.

SERVICES

Section 1.01. Services. Contractor shall perform certain right of way acquisition and related technical services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall

include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Contractor shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II.
COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of B+/VII or better and licensed to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.

- B. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- C. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's compensation insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law.

Section 3.04. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.09. Document Ownership. All documents and reports produced in connection with this Agreement (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.10. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.11. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.11. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.13. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.14. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.15. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.16. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.


[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY

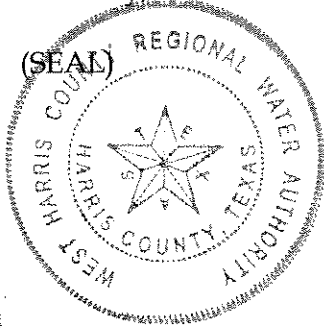


President, Board of Directors

ATTEST



Secretary, Board of Directors



TOP RESULTS TITLE SERVICES

By: 

Name: JAMES Henderson

Title: MANAGING PARTNER

TOP RESULTS TITLE SERVICES

South Office
3726 CRESCENT DR.
PEARLAND, TX 77584
281-489-0405 OFFICE
281-489-0434 FAX
832-818-4445 CELL
James Henderson

North Office
317 SOMERSET RD.
MONTGOMERY, TEXAS 77316
936-588-1143 OFFICE
281-884-6062 FAX
281-235-8599 CELL
Tiffany Bledsoe

PROPOSAL

Mr. Wayne Ahrens, P.E.
Program Manager
West Harris County Regional Water Authority
C/O: Dannenbaum Engineering Corporation
3100 West Alabama Street
Houston, Texas 77098

Date: March 31, 2010

Re: WHCWA Exxon Waterline Project

Dear Mr. Ahrens,

Pursuant to your request please find the following scope of service, price not to exceed and time frame for the above referenced project:

1. Scope of Service: 50 Exxon Easement Parcels

Provide Surveyors:

- A. Provide the Underlying Fee Owner.
- B. Chain of Title History on the Exxon Easement from inception to the 2006 WHCRWA acquisition.
- C. All Easements that cross or affect the Pipeline Easement.

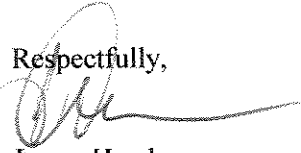
2. Price not to exceed: Price per parcel

Limited Title Certificate: \$325.00
Updates: \$50.00

Note: Any additional research requested that does not fit within the above scope of service will be charged at an hourly rate of \$45.00

This proposal is good for 30 days from the date above.

Respectfully,


James Henderson
Managing Partner
Top Results Title Services

West Harris County Regional Water Authority



President, Board of Directors

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Top Results Title Services)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Top Results Title Services ("Contractor"), to be effective the 10th day of November, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated May 12, 2010 (the "Agreement") to perform certain professional right-of-way acquisition services and other related technical services that may be required; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

TOP RESULTS TITLE SERVICES


Bruce G. Parker, President

Date: 11-10-2010



James Henderson

Date: 12/8/10

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$75,000.00 which includes the following Work Authorizations and any future work authorizations:

Work Authorization No. 1	\$450.00
Work Authorization No. 2	\$23,562.50
Work Authorization No. 3	\$125.00
Work Authorization No. 4	32,987.50
Work Authorization No. 5	\$6,500.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

ASSIGNMENT OF MASTER SERVICES AGREEMENT

Top Results Title Services, LP (the "Assignor") and West Harris County Regional Water Authority (the "Authority") are parties to the Master Services Agreement dated May 12, 2010 and amended by Addendum No. 1 effective Nov. 10, 2010 (collectively, the "Agreement").

The Assignor now wishes to assign all its rights, obligations, title and interests in and to the Agreement to Title Houston Holdings Ltd. d/b/a Abstract Services of Houston (the "Assignee").


Now, therefore, the parties hereto agree as follows:

- I. Assignor agrees to assign, and Assignee agrees to accept such assignment and assumes all of Assignor's rights, obligations, title, and interests in and to the Agreement.
- II. The Authority hereby consents to such assignment.

EFFECTIVE the 18th day of August, 2011.

ASSIGNOR:

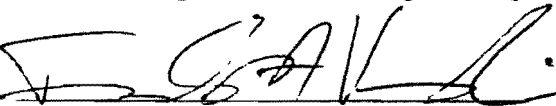
Top Results Title Services, LP

By: 
James Henderson, Managing Partner

ASSIGNEE

Title Houston Holdings Ltd.
d/b/a/ Abstract Services of Houston

By: THH Management LLC, its general partner

By: 
Frank Vandiver, President



AGREED TO AND ACCEPTED this 14th day of September, 2011.

THE AUTHORITY

West Harris County Regional Water Authority

By: Bruce Parker
Bruce Parker
President, Board of Directors



**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Title Houston Holdings Ltd. d/b/a Abstract Services of Houston)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Title Houston Holdings Ltd. d/b/a Abstract Services of Houston ("Contractor"), to be effective the 12th day of September, 2012.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated May 12, 2010 (the "Agreement") to perform certain professional services or such other related services that may be required, and the Assignment of Master Services Agreement effective on August 18, 2011; and amended by Addendum No. 1 on November 10, 2010 to increase the potential maximum amount that Contractor may earn for all Work Authorizations, and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

TITLE HOUSTON HOLDINGS LTD.
d/b/a ABSTRACT SERVICES OF HOUSTON


Date: 9/12/12
Bruce G. Parker, President


Date: 9/30/12

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 3 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Title Houston Holdings Ltd. d/b/a Abstract Services of Houston)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Title Houston Holdings Ltd. d/b/a Abstract Services of Houston ("Contractor"), to be effective the 12th day of February, 2014.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated May 12, 2010 (the "Agreement") to perform certain professional services or such other related services that may be required, and the Assignment of Master Services Agreement effective on August 18, 2011; and amended by Addendum No. 1 on November 10, 2010 and Addendum No. 2 on September 12, 2012 to increase the potential maximum amount that Contractor may earn for all Work Authorizations, and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

TITLE HOUSTON HOLDINGS LTD.
d/b/a ABSTRACT SERVICES OF HOUSTON


Date: 2/12/14
Bruce G. Parker, President



Date: 2/11/14
James Henderson
Vice President

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$150,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 4 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Title Houston Holdings Ltd. d/b/a Abstract Services of Houston)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Title Houston Holdings Ltd. d/b/a Abstract Services of Houston ("Contractor"), to be effective the 11th day of March, 2015.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated May 12, 2010 (the "Agreement") to perform certain professional services or such other related services that may be required, and the Assignment of Master Services Agreement effective on August 18, 2011; and amended by Addendum No. 1 on November 10, 2010, Addendum No. 2 on September 12, 2012 and Addendum No. 3 on February 12, 2014 to increase the potential maximum amount that Contractor may earn for all Work Authorizations, and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

TITLE HOUSTON HOLDINGS LTD.
d/b/a ABSTRACT SERVICES OF HOUSTON


Bruce G. Parker, President Date: 3-11-2015


 Date: 3/3/15

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$200,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Allen, Williford, and Seal, Inc.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into as of this 13th day of October, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Allen, Williford, and Seale, Inc., a Texas corporation (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I. SERVICES

Section 1.01. Services. Contractor shall perform certain appraisal services described in Exhibit A (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with Exhibit A and shall be dated when approved. All fees described in the Work Authorization shall include charges for labor,

materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Contractor shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY,**

COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having either (i) a Best's rating of B+ or better and

licensed to transact business in the State of Texas, or (ii) a Best's rating of A- or better and admitted to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$500,000
 - b. General aggregate - \$1,000,000
 - c. Products-Completed Operations Aggregate - \$500,000
 - d. Personal & Advertising Injury -\$500,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$1,000,000/\$1,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD

HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control. Notwithstanding anything contained in any attachments or exhibits hereto, the Authority shall not be required to provide insurance for the Contractor or indemnify the Contractor.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the

other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.


Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)



ALLEN, WILLIFORD, AND SEALE, INC.,
a Texas corporation


By: 
Name: ALBERT N. ALLEN
Title: PRESIDENT

EXHIBIT A



Allen, Williford & Seale, Inc.
Real Estate Appraisers

September 22, 2010

Katie Dorfman
Allen Boone Humphries Robinson LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

RE: WHCRWA Appraisal Services Proposal

Dear Ms. Dorfman:

We appreciate the opportunity to offer our professional services in connection with the above referenced matter. By way of introduction, I have included information describing our experience in right of way valuation and eminent domain litigation support. We have a large staff and will be able to perform in a timely manner. Members of our firm have provided expert witness testimony on hundreds of occasions.

We will provide appraisal services in connection with the acquisition of certain parcels to be designated by the West Harris County Regional Water Authority (the "Authority") that are related to the Authority's water line facilities, and other related facilities, along the route shown on Exhibit A attached hereto (the "Second Source Line").

The scope of our appraisal services will include; property inspections, data collection and analysis, any consultation, pre-hearing conferences, depositions, trial or any other judicial proceeding, and any appraisals, summaries (written or verbal) or documentation that you may require in connection with the project. Any appraisal will be developed in conformance with and subject to the requirements of the Uniform Standards of Professional Appraisal Practices of the Appraisal Foundation and the reporting requirements of the Appraisal Institute.

Upon identification of the parcel to be appraised, we will provide a lump-sum fee proposal for the preparation and completion of an appraisal report determining the compensation owed for the proposed acquisition of the parcel.

Katie Dorfman
Allen Boone Humphries Robinson LLP
September 22, 2010
Page 2

It should be clearly understood that engagement and payment for any services rendered under this agreement are not dependent or contingent upon any finding, determination, award, approval, or commitment in which we provided professional assistance.

We look forward to working with you on this assignment.

Sincerely,

ALLEN, WILLIFORD & SEALE, INC.



Albert N. Allen, CRE, MAI, SR/WA

EXECUTIVE SUMMARY

Right of Way Appraisal - AWS has been a leader in right of way valuation since 1977. We are involved in nationwide projects such as pipeline and utility easements, railroad and highway rights of way, transportation corridors, fiber optics, airports and many others. Our mission is to exceed clients' expectations by combining expert analysis, accurate information and the latest technology to provide complete appraisals in the shortest amount of time possible. We pride ourselves on maintaining continued education among our team members in order to provide a high level of knowledge and expertise to our clients. We are committed to employing the right people with the latest technology for our right of way services.

Professional - AWS has one of the largest staffs of professionals in the industry. All AWS appraisers are associated with the Appraisal Institute, and several hold the MAI designation. Additionally, many of our staff are certified as real estate appraisers in various states across the nation. All of our reporting complies with the Uniform Standards of Professional Appraisal Practice and the reporting requirements of the Appraisal Institute. Our staff is active in the International Right of Way Association, serving on various local and international committees.

Corridors - AWS is one of the leading corridor valuation firms in the United States. We have been engaged in corridor analysis for over 20 years and have appraised or conducted market analysis in more than 20 states and Canada.

Litigation Support - AWS appraisers have testified as expert witnesses in hundreds of cases, to include administrative hearings, condemnation trials, ad valorem taxation, bankruptcy, and hearings before city, county, state and federal regulatory agencies. We have qualified in local, state and federal courts.

Review - AWS not only prepares appraisals but also provides appraisal management and/or review services on any size and type of project. AWS personnel have served in the review capacity on numerous projects, ensuring that the appraisals conform to all applicable state, federal, and private guidelines. We are knowledgeable regarding the various standards and how these are to be incorporated into different appraisal formats.

Environmental - AWS provides environmental services, such as appraisals of contaminated properties, stigma analysis, valuation of wetlands, court testimony, and other due diligence. Albert N. Allen of our firm is the author of an IR/WA course dealing with the appraisal of contaminated properties.

Education - AWS has participated as developers, instructors, or coordinators in over 200 courses, seminars, and other presentations. We specialize in real estate appraisal training and eminent domain. Several members of our staff serve as instructors for professional organizations to include the International Right of Way Association and the National Highway Institute/Federal Highway Administration.

HOURLY FEE SCHEDULE

Our work is billed on an hourly basis and a statement will be provided monthly. In addition to our fees, we will bill for appropriate expenses to include but not limited to: exhibit, photographs, delivery, faxes, copying, documentation, travel and lodging. We will provide copies of all receipts. Payment is due upon receipt of our bill. All accounts must be current prior to any testimony being given. Either party may terminate this agreement within a 30-day written notification.

Our hourly rates will be as follows:

Litigation	\$200.00
Principal	\$175.00
MAI Designated	\$150.00
State Certified	\$125.00
Associate Appraiser	\$95.00
Research Analyst	\$75.00

Upon identification of the parcel to be appraised, we will provide a lump-sum fee proposal for the preparation and completion of an appraisal report determining the compensation owed for the proposed acquisition of the parcel.

Additional consultants or professional experts may be included or added to the scope of services on an as needed basis and will be billed as a cost reimbursement. Of course these costs will be discussed with you in advance.

REFERENCES

Dave Anderson

El Paso Natural Gas

2 North Nevada, Colorado Springs, Colorado 80903 (719) 529-3727

Steve T. Benson, SR/WA, President

Universal Field Services, Inc. 6666 South Sheridan Road, Suite 230

Tulsa, Oklahoma 74133-1763 (800) 447-9191

Stephen K. Carroll, Attorney at Law

Fulbright & Jaworski

1301 McKinney, 43rd Floor Houston, Texas 77010 (713) 651-5699

David S. Gamble, Attorney at Law

Beirne, Maynard & Parsons, L.L.P.

1300 Post Oak Boulevard, Suite 2500

Houston, Texas 77056-3000 (713) 960-7317

Joe Coates, President

Coates Field Service, Inc. 4800 North Santa Fe Avenue

Oklahoma City, Oklahoma 73118 (405) 528-5676

Steve Hartmann

University of Texas Lands

P.O. Box 553, Midland, Texas 79701-6634 (915) 684-4404

Lori Keeter

Enterprise Products

2727 North Loop West, Houston, Texas 77008-1044 (713) 803-8063

Brent Leftwich, President

Contract Land Staff, Inc. 10701 Corporate Drive, Suite 215

Stafford, Texas 77477 (281) 240-3370

Alan D. Wurtz, SR/WA, Senior Vice President

Percheron Acquisitions, LLC

P.O. Box 880, Simonton, Texas 77476 (281) 533-9750

Allen D. Schulze

Texas Department of Transportation Post Office Box 3249

Bryan, Texas 77805 (979) 778-2165

Dan Houlihan

Denbury Resources

5100 Tennyson Parkway, Suite 1200, Plano, Texas 75024 (082) 673-2272

WATER UTILITY ASSIGNMENTS

Lewis and Clark Rural Water System Waterline Project - appraisal project which valued land for a waterline from the Missouri River to Sioux Falls, South Dakota across three counties as well as an offshoot waterline in Sioux County, Iowa. The line runs through areas of agricultural, gravel extraction, and future residential development land uses.

El Paso Water Utilities Public Services Board - provided appraisal services for the partial acquisitions of residential, commercial, and agricultural properties for the Socorro EDAP Water and Wastewater Facilities Project Phase II. Services include providing appraisal reports for partial acquisitions for installing a sanitary sewer system which conforms to the Uniform Act.

Greater Houston Wastewater Program - provided appraisal and appraisal review services for residential, commercial, and industrial properties in conjunction with this major capital improvement program for the City of Houston. Services include partial and whole acquisitions for updating and expansion of the sanitary sewer system.

Sabine River Authority Water Line Project - completed market surveys, appraisals and expert witness testimony for a water pipeline project in Rusk County, Panola County and Shelby County, Texas. The project consisted of over 30 appraisals on a route across three counties. Properties along the line were primarily agricultural tracts consisting of timberland and pastureland with some rural residential sites. The market surveys involved the collection and confirmation of sales data as well as estimating value ranges of properties along the project. The appraisals included the valuation of partial acquisitions for permanent easements and determining the impact to the remainder.

SPECIALTY ASSIGNMENTS

METRO Light Rail Project (Metropolitan Transit Authority – Houston, Texas) – completed appraisal review of dual appraisals for inaugural light rail project in Houston, Texas. The project route extended from Downtown Houston southward through the Medical Center and Midtown and terminated south of the Astrodome and Reliant Park. The assignment consisted of review of dual appraisals for more than 45 parcels with recommendations. Property types along the route included improved retail, office, multi-family, light industrial and single family, along with various types of vacant land. The appraisals included the valuation of whole and partial acquisitions for fee simple, permanent easement, and temporary easement acquisitions and most required before and after analysis to measure impact to the remainder.

Department of Aviation, City of Houston - provided appraisal and appraisal review services for activities undertaken at all of the airports in the City of Houston. A major appraisal problem involved a large property consisting of six warehouse/office facilities; car rental agencies; and two apartment complexes with over 170 occupied units. Other properties involved include multi-use commercial land, motels, and vacant land. Ongoing projects include appraising market value and market rent for facilities within the Houston airport system.

Little Rock International Airport/Little Rock Airport Authority - appraisal services for runway expansion. Both partial and whole acquisition appraisals were performed under the requirements of the Uniform Act.

DFW International Airport - provided appraisal and litigation support services for the Expansion and New Runway 16/34 East.

TGV Project Texas - completed market study for a proposed TGV train route from Dallas to Houston (East Leg) and Waco to San Antonio (West Leg) in Texas. Counties involved in the market research included Dallas, Ellis, Navarro, Leon, Robertson, Brazos, Grimes, Waller, Harris, McClennen, Bell, Caldwell, Falls, Williamson, Milam, Travis, Hill, Hays, and Bexar Counties. The scope of services included data research and confirmation for use in preparing a market data book. Data contained in the data book included sales, listings, ad valorem maps and assessments, county economic information and conditions, and value ranges for various property types.

Phoenix Light Rail Project, Arizona – completed approximately 325 appraisal assignments from 2003 through 2005. City of Phoenix was the client. Many of the properties were complex, improved properties. All of the appraisals employed the “before and after” methodology.

SPECIALTY ASSIGNMENTS

UT System Lands Rate Study – West Texas - involved a market study performed to ascertain the prices paid for right of way acquisitions in the West Texas region. In conducting this study, AWS conducted an exhaustive survey of corporate and government entities, knowledgeable right-of-way firms and professionals, and landowners to ascertain the current compensation being paid for right-of-way acquisitions involving pipelines, electric transmission lines, and fiber optic projects located in the West Texas region. The respondents were surveyed as to compensation paid or received for right of way acquisitions, the structure of the agreements, the unit of comparison utilized for negotiation, and the payment methodology. The results of the survey were then compiled into a comprehensive report.

Metro Light Rail Assignment – Metropolitan Authority of Harris County (Houston) employed AWS to establish a database, appraise 150 parcels and provide litigation support for acquisition. Many of the parcels were complex, improved properties.

Shared Telecommunication Resources Rate Study for Right of Ways in Idaho's Interstate Corridors - scope of the assignment was to collect and verify completely, comparable transactions of shared resource agreements in interstate highways from state departments of transportations. Responsible individuals with the individual states were interviewed based on the pertinent details concerning existing, proposed or defaulted agreements concerning uses of interstate right of ways. The findings from the interviews were summarized and considerations for in-kind services were allocated on a monetary basis when possible.

Superconducting Super Collider Project / Texas - heavily involved in the appraisal function completing approximately 400 appraisals out of a 1,200-parcel project. Property types included both rural residential and agricultural, as well as several special purpose type properties. Appraisal problems consisted of whole property takings, partial acquisitions considering damages, and subsurface stratified fee takings

Metropolitan Transportation System of Long Island New York - assignment of over 300± miles of Long Island Railroad corridors occupied by electric transmission easements. Project involved ATF valuation, corridor analysis of highest and best use, assemblage valuation for updating rental amounts and providing consultation services for ongoing fee schedule for right of way occupancies.

Volunteer Army Ammunition Plant, Chattanooga, Tennessee - appraisal of 18.67 Mile Railroad Easement and Improvements within a former TNT military manufacturing plant. Project involved ATF valuation, highest and best use determination, salvage value and net salvage value for the right of way and improvements for potential sale by the GSA to local government.

ALBERT N. ALLEN, MAI, CRE, SR/WA

Albert N. Allen is a principal in Allen, Williford & Seale a real estate appraisal firm with a national right of way valuation and litigation support practice. AWS has corporate offices in Houston, Texas and maintains project offices throughout the country. Allen frequently testifies as an expert witness regarding real property value in local, state and federal courts of law. He lectures on appraisal, right of way and eminent domain litigation at seminars and courses throughout the United States and Canada. Mr. Allen has been engaged in appraisal since 1972.

Biographical Data

Mr. Allen was born in San Antonio, Texas, in 1946. He attended public schools in Carrizo Springs, Texas and graduated from Texas A & M University in 1969. Mr. Allen served as an officer in the United States Army Corps of Engineers from 1969 to 1972. He is married and has three children.

Education

Bachelor of Science Degree:

Texas A & M University

Post Graduate Work at Texas A & M and University of Houston

Continuing Education Credits through Courses, Seminars and Lectures

Professional Affiliations

The Counselors of Real Estate (CRE)

Appraisal Institute (MAI, SRA)

International Right of Way Association (SR/WA)

Arizona Certified General Real Estate Appraiser No. 30968

Texas Certified General Real Estate Appraiser No. TX-1320152-G

Also certified in various other states

Activities

International Right of Way Association – Past International President

International Right of Way Association - Gulf Coast Chapter 8 (Past President)

International Valuation Committee (IR/WA) (Past Chairman)

Society of Real Estate Appraisers - Houston Chapter (Past President)

Texas Real Estate Appraiser Certification Committee (Past Member)

Appraisal Institute - Board of Directors Houston Chapter (Past Member)

Professional of the Year Finalist (IR/WA)

Y.T. Lum Award Recipient (IR/WA)

CONNIE W. WILLIFORD, MAI

Connie W. Williford is a principal associated with Allen, Williford & Seale, Inc. AWS is a real estate appraisal firm with corporate offices in Houston, Texas. Field offices are maintained throughout the nation. Mr. Williford's responsibilities include appraisal of all types of right of way and commercial properties and he has testified as an expert witness regarding real property value on numerous occasions in local, state and federal courts of law. Additionally, Mr. Williford has served as an instructor in appraisal and right of way courses throughout the Continental United States, Alaska and Puerto Rico.

Biographical Data

Mr. Williford was born in Seagraves, Texas, in 1957. He attended public schools in Seagraves prior to attending Texas A & M University in College Station in 1975 where he earned a Bachelor of Science Degree in Agricultural Economics with special emphasis in Real Estate. Mr. Williford is married and has three children.

Education

Bachelor of Science Degree (Agricultural Economics):
Texas A & M University (1979)
Yellow Book Seminar, presented by Appraisal Institute
Continuing Education Credits through Seminars, Courses, and Lectures

Professional Affiliations

Appraisal Institute (MAI No. 9347)
International Right of Way Association (Member)
State Certified General Real Estate Appraiser:
Texas Certificate No. TX-1321100-G
New Mexico Certificate No. 02650-G
Texas Water Conservation Association (Member)
Texas Brokers License

Activities

International Right of Way Association
Y.T. Lum Award Recipient 2004 (IRWA)
2004 Professional of the Year – Region II
International Pipeline Committee (Member)
Past President and Director - Chapter 8
Right of Way Professional of the Year - Chapter 8
Past Chairman - Region II
Right of Way International Education Foundation (Past Treasurer)
Appraisal Institute Chapter 33
Houston Livestock Show & Rodeo (Committeeman)

RANDY L. SEALE, MAI

Randy L. Seale is a principal associated with Allen, Williford & Seale, Inc. AWS is a real estate appraisal firm with a national right of way valuation and litigation support practice. AWS maintains corporate offices in Houston, Texas and project offices throughout the country. Mr. Seale's responsibilities include appraisal of all types of right of way and commercial properties and he has testified as an expert witness regarding real property value on numerous occasions in local, state, and federal courts of law.

Biographical Data

Mr. Seale was born in Pittsburg, Texas, in 1962. He attended public schools in Pittsburg, Texas, prior to attending Texas A & M University. Mr. Seale is married and has three children.

Education

Bachelor of Science Degree (Agricultural Economics):
Texas A & M University (1984)
Appraisal Institute: Various Course Work
International Right of Way Association: Various Course Work

Professional Affiliations

Appraisal Institute (MAI No. 8445)
International Right of Way Association (Member)
State Certified General Real Estate Appraiser:
Texas Certificate No. TX-1320302-G
California Appraiser I.D. No. AG017798
Arizona Certificate No. 31132
New Mexico Certificate No. 1421-G
Washington Certificate No. 27011
Nevada Certificate No. A.0006519-CG
Louisiana Certificate No. G0972
Colorado Certificate No. CG01324213
Mississippi Certificate No. GA-483
Pennsylvania Certificate No. GA001396L
Utah Certificate No. CG00048354
New York Certificate No. 5460038-CG00
Texas Water Conservation Association (Member)

Activities

Mr. Seale is active in Houston Chapter 33 of the Appraisal Institute where he has served on the Regional Ethics and Council Panel, and is Past President of the Gulf Coast Chapter 8 of the International Right of Way Association. He currently serves as Vice Chairman on the International Right of Way Association's Valuation Committee.

DAVID R. BETHEL, MAI

David R. Bethel is a principal associated with Allen, Williford & Seale, Inc. AWS is a real estate appraisal firm with a national right of way valuation and litigation support practice. AWS maintains corporate offices in Houston, Texas and project offices throughout the country. Mr. Bethel's responsibilities include appraisal and appraisal review of all types of right of way and commercial properties. He has testified as an expert witness regarding real property value on numerous occasions.

Biographical Data

Mr. Bethel was born in Lubbock, Texas in 1976. He graduated from the public schools in Lamesa, Texas, prior to attending Texas A & M University.

Education

Bachelor of Business Administration Degree (Finance):
Texas A & M University (1998)

Appraisal Institute:

- Appraisal Procedures
- Basic Income Capitalization
- Standards of Professional Practice Part A
- Standards of Professional Practice Part B
- Advanced Income Capitalization
- Advanced Sales Comparison
- Advanced Applications
- Report Writing

Professional Affiliations

Appraisal Institute (MAI No. 12420)
State Certified General Real Estate Appraiser:
Texas Certificate No. TX-1330545-G
Oklahoma Certificate No. 12719-CGA
Virginia Certificate No. 4001 013508-G
West Virginia Certificate No. CG397
North Carolina Certificate No. A7314
Kentucky Certificate No. 004431
International Right of Way Association (Member)

Activities

Gulf Coast Chapter 8 of the International Right of Way Association (President Elect)

CARLO S. FORNI, MAI

Carlo S. Forni is a senior real estate appraiser associated with Allen, Williford & Seale, Inc. AWS is a real estate appraisal firm with a national right of way valuation and litigation support practice. AWS maintains corporate offices in Houston, Texas and field offices throughout the nation. Mr. Forni's responsibilities include appraisal and appraisal review of all types of right of way and commercial properties.

Biographical Data

Mr. Forni was born in Corpus Christi, Texas in 1982. He attended public schools in Corpus Christi prior to graduating from The University of Texas at Austin.

Education

Bachelor of Business Administration (Finance):
The University of Texas at Austin (2004)

Appraisal Institute Courses:

- Appraisal Procedures
- Basic Income Capitalization
- Advanced Income Capitalization
- Highest and Best Use and Market Analysis
- Advanced Sales Comparison and Cost Approaches
- Report Writing and Valuation Analysis
- Advanced Applications
- Uniform Standards of Professional Practice
- Business Practices and Ethics

Professional Affiliations

Appraisal Institute (MAI No. 12581)

State Certified General Real Estate Appraiser:

- Texas Certificate No. TX-1336773-G
- Oklahoma Certificate No. 12744CGA
- Mississippi Certificate No. GA-869
- Alabama Certificate No. G00865
- Illinois Certificate No. 553.001958
- Virginia Certificate No. 4001 014363
- West Virginia Certificate No. CG409

International Right of Way Association (Member)

J. BRANDON HODGE, MAI

J. Brandon Hodge is a senior real estate appraiser with Allen, Williford & Seale, Inc. AWS is a real estate appraisal firm with a national right of way valuation and litigation support practice. AWS maintains corporate offices in Houston, Texas and project offices throughout the country. Field offices are maintained throughout the nation. Mr. Hodge's responsibilities include appraisal and appraisal review of all types of right of way and commercial properties. He has testified as an expert witness regarding real property value on numerous occasions.

Biographical Data

Mr. Hodge was born in Dallas, Texas where he attended public schools in Dallas prior to graduating from Texas A & M University. While attending Texas A & M University, Mr. Hodge was active in student affairs and a distinguished student.

Education

Texas A&M University
Bachelor of Science in Economics

Appraisal Institute:
Appraisal Procedures
Basic Income Capitalization
Advanced Income Capitalization
Highest & Best Use and Market Analysis
Advanced Sales Comparison and Cost Approach
Advanced Report Writing
Advanced Applications
Uniform Standards of Professional Practice
Business Practices and Ethics

Professional Affiliations

Appraisal Institute – MAI
State Certified General Real Estate Appraiser:
Texas Certificate No. TX-1336611-G
Arizona Certificate No. 31515
Virginia Certificate No. 4001-013507
International Right of Way Association Chapter 8 Member

**ADDENDUM No. 1 TO MASTER SERVICES AGREEMENT FOR
PROFESSIONAL SERVICES
(Allen, Williford, and Seale, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Appraisal Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Allen, Williford, and Seale, Inc. ("Contractor"), to be effective the 8th day of December, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services dated October 13, 2010 (the "Agreement") to perform appraisal services and other related professional services that may be required; and

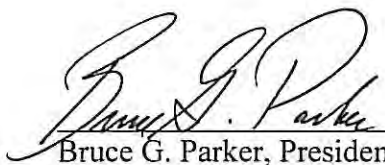
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

ALLEN, WILLIFORD, AND SEALE, INC.


Date: 12/8/10
Bruce G. Parker, President


Date: 12/16/10
Albert N. Allen, President

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$50,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Ambrose Appraisal Company

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into as of this 13th day of October, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and The Ambrose Appraisal Company, a Texas corporation (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.

SERVICES

Section 1.01. Services. Contractor shall perform certain appraisal services described in Exhibit A (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with Exhibit A and shall be dated when approved. All fees described in the Work Authorization shall include charges for labor,

materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Contractor shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY,**

COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having either (i) a Best's rating of B+ or better and

licensed to transact business in the State of Texas, or (ii) a Best's rating of A- or better and admitted to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$500,000
 - b. General aggregate - \$1,000,000
 - c. Products-Completed Operations Aggregate - \$500,000
 - d. Personal & Advertising Injury - \$500,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$1,000,000/\$1,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD

HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control. Notwithstanding anything contained in any attachments or exhibits hereto, the Authority shall not be required to provide insurance for the Contractor or indemnify the Contractor.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the

other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

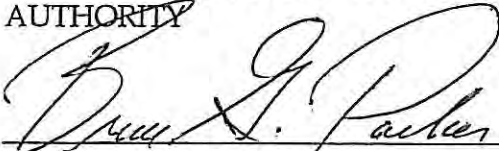
Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.


[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST

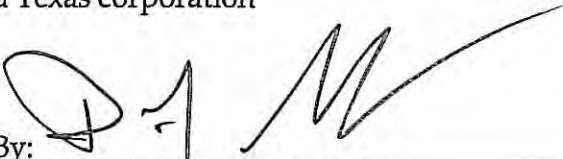


Secretary, Board of Directors

(SEAL)



THE AMBROSE APPRAISAL COMPANY,
a Texas corporation

By: 

David Ambrose, President

EXHIBIT A

October 7, 2010

Katie Dorfman
Allen Boone Humphries Robinson, LLP
Via E-Mail: KDorfman@ABHR.com

RE: Summary Appraisals pertaining to the West Harris County Regional Water Authority parcels

Dear Ms. Dorfman:

Pursuant to your request, we are submitting a proposal for the appraisals of the above referenced project.

We will provide appraisal services in connection with the acquisition of certain parcels to be designated by the West Harris County Regional Water Authority (the "Authority") that are related to the Authority's water line facilities, and other related facilities, along the route shown Exhibit A attached hereto (the "Second Source Line").

The purpose of the appraisals is to determine the total compensation of each parcel due to the partial acquisition. The total compensation is based upon the value difference from the subject whole and the subject remainder. In addition, damages are awarded if the partial acquisition decreases the value more than the difference from the subject whole to the subject remainder. The appraisals will be prepared in accordance with the Uniform Standards of Professional Appraisal Practice and the market value is based on the definition as described by the Texas Supreme Court, City of Harlingen vs Estate of Sharboneau, 48 S.W.3d177 (Texas, 2001)

Upon identification of the parcel to be appraised, we will provide a lump-sum fee proposal for the preparation and completion of an appraisal report determining the compensation owed for the proposed acquisition of the parcel.

We will furnish three copies of the appraisal report and charge a flat fee for each parcel based on the scope of each assignment. The flat fee does include all costs incurred in the preparation of the appraisal reports; however, this fee does not include preparation for and expert witness testimony. Our fee for these services will be \$200.00/hour for David Ambrose's time and \$100.00/hour for support staff.



Ambrose Appraisal Company



Ambrose Cost Segregation



Ambrose Property Tax Consulting

Dallas
6500 Greenville Avenue - Suite 340
Dallas, Texas 75206
T (888) 210.5400
P (214) 382.2276 - F (214) 382.2277

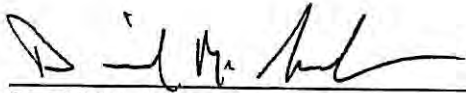
Houston
16545 Village Drive - Building A
Jersey Village, Texas 77040
T (888) 210.5400
P (713) 688.7733 - F (713) 688.1117

Katie Dorfman
October 7, 2010
Page 2

Attached please find my credentials and references.

Should you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,



David M. Ambrose, MAI
State Certified General RE Appraiser
Certificate No. TX-1326613-G

AMBROSE APPRAISAL COMPANY
RIGHT-OF-WAY REFERENCES

Jim Teltschik
Texas Department of Transportation
7600 Washington Avenue
Houston, Texas 77007
Jteltsch@dot.state.tx.us
(713) 802-5692

Charles McFarland, RE Attorney
Joyce, McFarland & McFarland
910 Louisiana, Suite 5000
Houston, Texas 77002
cmcfarland@jmmllp.com
(713) 222-1115

Ms. Tina Williams
Harris County Right-of-Way District
10555 Northwest Freeway, Suite 210
Houston, Texas 77092
Twilliams@ROW.HCTX.net
(713) 683-0473

Fred Junkin, Attorney
Andrews & Kurth
600 Travis, Suite 4200
Houston, TX 77002
Fredjunkin@andrewskurth.com
(713) 220-4200

Ms. Lucy Ortiz
City of Houston-Aviation Department
16930 JFK Blvd.
Houston, Texas 77032
Lucy.Ortiz@cityofhouston.net
(713) 233-3000

QUALIFICATIONS OF DAVID M. AMBROSE, MAI

David M. Ambrose is the president of The Ambrose Appraisal Company which has offices in Houston and Dallas, Texas. Mr. Ambrose received the MAI designation in 3 years from entering the profession. He holds a MBA Degree from Baylor University and is an approved instructor for the International Right-of-Way Association. Mr. Ambrose's experience includes the valuation of all types of commercial and residential properties. He has testified as an expert witness regarding property value on numerous occasions in various courts of law.

BIOGRAPHICAL DATA

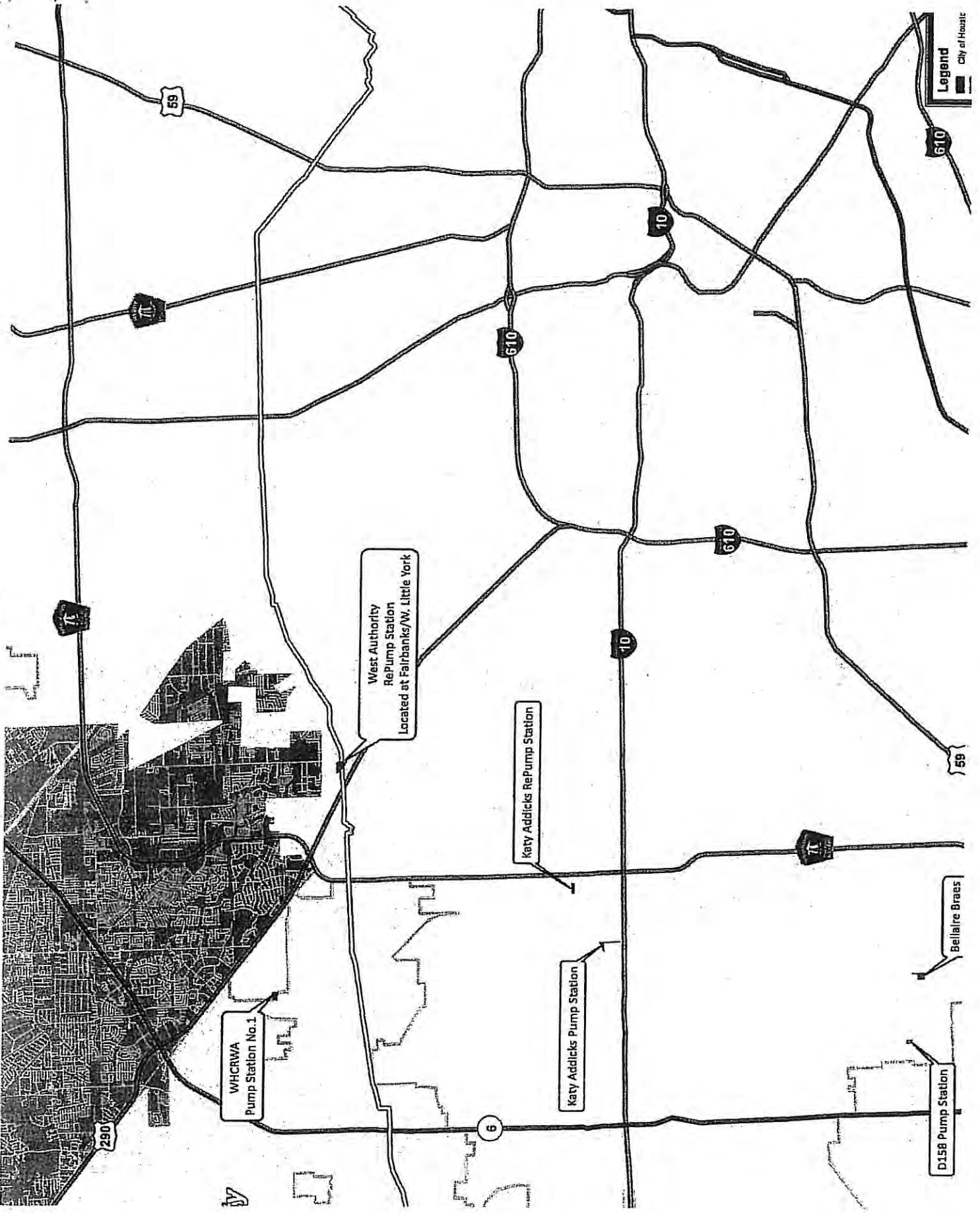
Mr. Ambrose was born in San Antonio, Texas in 1964. He graduated from the public schools in San Antonio, Texas prior to attending Baylor University. While attending Baylor University, Mr. Ambrose received the Jim Weatherby Scholarship for Academic Excellence. Mr. Ambrose is married and has four children.

EDUCATION

Bachelor of Business Administration Degree (Finance/Real Estate):
Baylor University (1986)
Masters of Business Administration:
Baylor University (1988)
International Right of Way Association:
Numerous Appraisal Seminars, Courses, Lectures, etc.

PROFESSIONAL AFFILIATIONS

Appraisal Institute (MAI No. 9041)
State Certified General Real Estate Appraiser-Certificate No. TX-1322613-G
Texas Real Estate Commission (Broker)-License No. 0382964



Legend
City of Houston

WHCWA
Pump Station No. 1

West Authority
RePump Station
Located at Fairbanks/W. Little York

Katy Addicks RePump Station

Katy Addicks Pump Station

D158 Pump Station

Bellaire Braes

59

610

10

610

10

59

290

6

**ADDENDUM No. 1 TO MASTER SERVICES AGREEMENT FOR
PROFESSIONAL SERVICES
(The Ambrose Appraisal Company)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Appraisal Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and The Ambrose Appraisal Company ("Contractor"), to be effective the 8th day of December, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services dated October 13, 2010 (the "Agreement") to perform appraisal services and other related professional services that may be required; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

THE AMBROSE APPRAISAL COMPANY



Bruce G. Parker, President

Date: 12/8/10



David Ambrose, President

Date: 12-16-2010

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$50,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Andrews Kurth, LLP.

July 9, 2010

Mr. Bruce Parker, President
West Harris County Regional Water Authority
c/o Allen Boone Humphries Robinson, LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Re: West Harris County Regional Water Authority
Engagement Agreement for Second Source Water Line

Dear Mr. Parker:

We appreciate the opportunity for Andrews Kurth LLP (the "Firm") to provide the West Harris County Regional Water Authority (the "Authority") with legal services in connection with the acquisition of certain parcels to be designated by the Authority that are related to the Authority's water line facilities along the route shown on Exhibit A attached hereto (the "Second Source Line"). This letter will confirm the nature and scope of our engagement, the agreement as to fees, and the role and responsibilities of the Firm and the Authority in connection with this engagement.

NATURE AND SCOPE OF ENGAGEMENT

The Authority is the client for purposes of this engagement. It is understood that this representation of the Authority does not create an attorney-client relationship with any related persons or entities, such as employees, officers, directors, or contractors, unless specifically agreed otherwise in writing. It also is understood that the Firm's representation of the Authority under the terms of this engagement letter is limited to the above-referenced project. If, in the future, the Authority wishes to limit or expand the scope of the Firm's representation, that should be the subject of additional discussion and confirmed in a separate engagement letter.

PAYMENT PROVISIONS

The Authority agrees to pay the reasonable fees and other charges billed by the Firm in connection with this representation.

The Firm's fees for services are based on time expended (at increments of one-tenth of an hour), computed at hourly rates, by those persons performing the services required. Set forth in Exhibit B are the attorneys and legal assistants, and the discounted hourly rates to be charged for their services, who we anticipate may be asked to assist in this representation. However, depending on the course of the proceedings with respect to a particular acquisition, other lawyers and paralegals employed by the Firm may also be asked to assist in the representation. The Firm's hourly rates for this representation are subject to annual adjustment, effective January 1 of

Mr. Bruce Parker, President
July 9, 2010
Page 2

each year. The Firm will provide the Authority thirty (30) days advance written notice of any rate increase.

In addition to its hourly fees, the Firm also will charge for certain other items. These charges may relate to, but are not limited to, such things as long distance telephone services, facsimile and photocopy services, travel costs, delivery and messenger services, special postage charges, filing and recording fees, and any disbursements the Firm may make to other service providers, such as court reporters, expert witnesses, and investigators. These charges will be billed on the terms set forth in Exhibit C.

The Firm anticipates submitting to you monthly invoices for the professional services rendered and other charges and expenses incurred on behalf of the Authority. The Authority will receive an invoice that will identify the attorneys and other professionals who have worked on the Authority's behalf during the billing period, the dates on which the work was performed, and the nature of the work performed. The Firm's invoices also will contain a summary of the costs and disbursements that were incurred or expended on behalf of the Authority.

Payment is due upon receipt of the Firm's statement and in no event later than 30 days thereafter. The Authority may, at any time, request details regarding the individuals involved in the representation, their positions at the firm, the hours and work performed, and any other matters relating to the representation.

CONFLICT CONSIDERATIONS AND AGREEMENT

We understand and agree that this is not an exclusive engagement and that the Authority is free to retain any other counsel for any aspect of this matter. Nonetheless, we recognize that the Firm is disqualified from representing any other client with interests materially and directly adverse to the Authority in any matter (i) which is substantially related to this representation or (ii) where there is a reasonable probability that confidential information the Authority furnished to us could be used to the Authority's disadvantage. The Authority understands and agrees that, with those exceptions, our representation of the Authority in this matter will not prevent or disqualify the Firm from representing clients adverse to the Authority, or whose interests may conflict with the Authority, in litigation, business transactions, or other matters.

Furthermore, the Firm represents a number of lawyers and law firms in various matters. This means that we may have represented, may currently represent, or in the future may represent counsel that oppose the Authority's interests in a matter in which we represent the Authority. This will not in any way affect the diligence or vigor with which we represent the Authority's interests in any matter on which it has engaged the Firm. Nonetheless, if this is a concern to you, please let us know and we will check with the particular lawyers to be involved in this representation and discuss this with you further.

Finally, many of the Firm's lawyers, directly or beneficially, own interests in publicly held corporations and other entities as well as in real property. Our computerized system used for checking conflicts of interest does not contain data as to investments made individually by each of the firm's lawyers, paralegals, or other personnel. If the Authority is at all concerned

about individual investments, we will be pleased to canvass our lawyers about their individual investments in any entity or entities about which it may be concerned.

COOPERATION

We necessarily must rely on the accuracy and completeness of the facts and information the Authority and its employees and agents provide to us. In order to enable us to render effectively the legal services contemplated, we must be provided full and accurate disclosure of all facts and kept informed of all developments relating to this engagement. We likewise will keep you advised of all significant developments and will provide any other detailed reporting you request.

To the extent that it is necessary for a client representative to attend meetings or hearings in connection with this project, we will attempt to schedule the event for a time that is convenient for the Authority's representative. However, it should be recognized that there are many circumstances in which the timing of events is beyond our control.

WITHDRAWAL OR TERMINATION

Our relationship is based upon mutual consent, and the Authority may terminate our representation at any time, with or without cause, by notifying us. Should it choose to do so, the Authority shall remain responsible for payment of fees for legal services rendered and of other charges incurred before termination and in connection with an orderly transition of the matter.

We are subject to rules of professional conduct, which list several circumstances that require or allow us to withdraw from representing a client, including, for example, nonpayment of fees or costs, misrepresentation of or failure to disclose material facts, fundamental disagreements, and a conflict of interest with another client. We try to identify in advance and discuss with each client any situation that may lead to our withdrawal, and if withdrawal ever becomes necessary, we will give the client written notice of our withdrawal. If we elect to withdraw for any reason, the Authority agrees that it will take all steps necessary to free us of any obligation to perform further, including the execution of any documents necessary to complete our withdrawal, and that the Firm will be entitled to be paid for all services rendered and other charges accrued on the Authority's behalf to the date of withdrawal.

CLIENT DOCUMENTS

After our representation of the Authority on the project is concluded, our current policy is to close our matter file and retain it for seven years following closure. For various reasons, including minimizing storage costs, when the seven-year retention period expires, we may, and we are hereby given the right to, dispose of the matter file (including discarding paper and deleting electronic records pertaining to the project that were not previously discarded or deleted). We may, however, retain beyond the seven-year retention period (i) our business and administrative records pertaining to the project or the Authority, including, for example, matter opening records, financial records, time and expense reports, personnel and staffing records, and records of our communications with the Authority (collectively our "business file"), (ii) records that our attorneys may designate for longer retention, (iii) work product of our attorneys, such as

Mr. Bruce Parker, President
July 9, 2010
Page 4

contracts, research, briefs, notes or memoranda, that our attorneys may elect to retain for form use purposes, and (iv) certain types of records that our records retention policy provides should be retained longer.

If the Authority wants to take possession of the originals or receive copies of any portion of our project file belonging to it before the retention period expires, the Authority must notify us in writing and, provided that we have received payment of our outstanding fees and costs incurred for the project, we will send the Authority the requested portion of our matter file belonging to it at the Authority's expense. We may retain, at our expense, a copy of that portion of our matter file that is sent to the Authority. Additionally, the Authority must notify us in writing if it wants us to retain our matter file for a different retention period.

CONCLUSION OF ENGAGEMENT

Upon the completion of our representation of the Authority, whether upon completion of the assigned work or due to termination or withdrawal, we will have no further obligation to advise you with respect to the matters that were the subject of the representation or with respect to changes in the laws or regulations that could have an impact upon your future rights and liabilities relating to such matters.

CHOICE OF LAW

This Agreement shall be governed by and construed in accordance with the laws of the State of Texas.

ACCEPTANCE

This letter (i) constitutes the entire agreement between the Authority and the Firm regarding this engagement and supersedes all prior understandings, written or oral, relating to its subject matter, (ii) is subject to no oral agreements or understandings, and (iii) can be modified or changed only by a further written agreement signed on behalf of the Authority and the Firm. No obligation or undertaking that is not set forth expressly in this letter shall be implied on the part of either the Authority or the Firm.

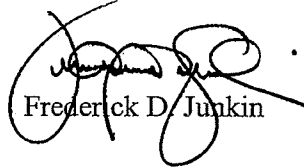
If this letter accurately reflects your understanding of the terms and conditions of our engagement, please arrange for the appropriate representative of the Authority to execute this letter in the space provided below and return it to the Firm's offices, to my attention.

Mr. Bruce Parker, President
July 9, 2010
Page 5

Should you have any questions regarding these matters, please do not hesitate to call me. On behalf of Andrews Kurth LLP, I thank you for the opportunity to be of service to the Authority.

Yours very truly,

ANDREWS KURTH LLP


Frederick D. Junkin

Agreed to and Accepted:

**WEST HARRIS COUNTY
REGIONAL WATER AUTHORITY**

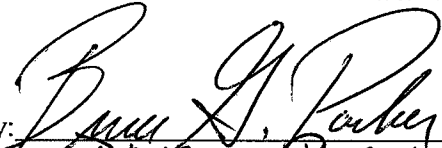
By: 
Name: BRUCE PARKER
Title: PRESIDENT

EXHIBIT B

2010 Hourly Rates

<u>Name</u>	<u>Status</u>	<u>Rate</u>
J. Mark Breeding	Partner	\$495.00
Frederick D. Junkin	Partner	\$465.00
C. Charles Dippel	Of Counsel	\$465.00
Derek Pfaff	Of Counsel	\$420.00
William Dillard	Of Counsel	\$330.00
Paul Radich	Associate	\$363.50
Mark Merrell	Associate	\$330.00
Kathryn Ahlrich	Associate	\$235.00
Dawn Bebell	Paralegal	\$190.00
Craig Judge	Paralegal	\$185.50

EXHIBIT C

Photocopying. The firm will charge not more than 20¢ per page for duplicating performed at the firm. Larger duplicating jobs are normally sent to an outside vendor, and the client is billed only for the actual amount invoiced by the vendor.

Courier Services. The firm will charge an amount, which generally represents cost including the distribution service, provided by the firm. Third-party services are billed at actual cost.

Computer Aided Research. Direct cost or allocation of direct cost (varies based on search type).

Telefax. Not more than \$1.00 per page for outgoing telefaxes, including all telephone costs.

Telephone. The firm does not charge local calls as an expense item. Long distance calls are charged 7¢ per minute. International calls will be billed at our cost, without overhead adjustment.

Travel-Related Expenses. Airfare, meals and related travel expenses billed to the client are actual, out-of-pocket cost. Credits earned under the Frequent Flyer Programs accrue to the individual traveler and not to the firm.

All Other Disbursements. Disbursements for other third-party services like court reporters, expert witnesses, process servers, etc. are billed to the client at actual cost. In any event, unless special arrangements are otherwise made, it is our policy to forward all invoices in excess of \$500 to the client for direct payment.

**ANDREWS
KURTH**

Andrews Kurth LLP
600 Travis, Suite 4200
Houston, Texas 77002-3090
+1.713.220.4200 Phone
+1.713.220.4285 Fax
andrewskurth.com

Frederick D. Junkin
713.220.4766 Phone
713.238.7387 Fax
fredjunkin@andrewskurth.com

December 31, 2014

By Certified Mail

Mr. Bruce G. Parker
President, Board of Directors
West Harris County Regional Water Authority
c/o Allen Boone Humphries Robinson, LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Re: Adjustment in Billing Rates (effective as of February 1, 2015)

Dear Mr. Parker:

By an Engagement Agreement dated July 9, 2010 (the "Agreement"), the West Harris County Regional Water Authority (the "Authority") retained Andrews Kurth LLP (the "Firm") to provide legal services in connection with the acquisition of property and interests in property required for the Second Source Line. The Agreement set forth the rates to be charged for the Firm's services, subject to annual adjustment following advance notice of not less than 30 days. Since that time, the Firm has provided the Authority with legal services relating to the Second Source Line and other projects at the rates set forth in the Agreement, without adjustment.

In accordance with the terms of the Agreement, I am writing to provide you notice of an adjustment in the rates for the legal services the Firm provides to the Authority effective as of February 1, 2015. Set forth in Attachment A are the billing professionals who we anticipate may be asked to assist in the representation of the Authority and the discounted hourly rates to be charged for their services.

These new rates are reflective of increased experience levels for the non-partner billing professionals assisting in the representation of the Authority. The new rates for the partners reflect the changes in billing rates for attorneys with similar skills and experience in the Houston area. In each instance, the new rates are significantly discounted off of the Firm's standard hourly billing rates. As in the past, we will continue to allocate the Authority's work to lawyers and other billing professionals with the appropriate level of experience for each task.

Mr. Bruce G. Parker
December 31, 2014
Page 2

If you have any questions regarding these new rates, please do not hesitate to call me.
We appreciate the opportunity to be of continued service to the Authority.

Very truly yours,



Frederick D. Junkin

FDJ:srp
Attachment

cc: Mr. Alex Garcia (By e-mail)
Mr. Wayne Ahrens (By e-mail)

ATTACHMENT A

**Hourly Rates
(Effective February 1, 2015)**

<u>Name</u>	<u>Status</u>	<u>Rate</u>
J. Mark Breeding	Partner	\$575.00
Frederick D. Junkin	Partner	\$490.00
Derek Pfaff	Of Counsel	\$505.00
Katie Ahlrich	Associate	\$445.00
Dawn Bebell	Paralegal	\$230.00
Craig Judge	Paralegal	\$230.00
Sharron Prescott	Legal Assistant	\$125.00

Baseline Corporation, Inc.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into November 9, 2011, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Baseline Corporation, Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I. SERVICES

Section 1.01. Services. Contractor shall perform certain services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall

include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.02. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000.00, unless otherwise amended.

Option 1 - Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 - Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit B**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation

3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III. GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000"

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be

endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over

Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry

out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors


ATTEST



Secretary, Board of Directors

(SEAL)

CONTRACTOR

By: 
Name: J. Patrick Going, RPLS, CFM
Title: President, Baseline Corporation, Inc.

**RATE SCHEDULE****FIELD PARTIES:**

1 - Person Survey Crew	95.00 per hour
2 - Person Survey Crew	120.00 per hour
3 - Person Survey Crew	140.00 per hour
4 - Person Survey Crew	160.00 per hour
1 - Person Survey Crew w/ Robotic Total Station	130.00 per hour
2 - Person Survey Crew w/ Robotic Total Station	155.00 per hour
1 - Person Survey Crew with GPS/RTK	140.00 per hour
2 - Person Survey Crew with GPS/RTK	165.00 per hour
3 - Person Survey Crew with GPS/RTK	185.00 per hour
Field Supervisor with Truck	95.00 per hour

OFFICE PERSONNEL:

Principal (PE and/or RPLS)	130.00 per hour
Survey Manager (RPLS)	115.00 per hour
Project Manager (RPLS)	110.00 per hour
Sr. Survey Technician	95.00 per hour
Survey Technician	80.00 per hour
Administrative Assistant	50.00 per hour
CADD Technician	80.00 per hour
Professional Abstractor	at cost, plus 10%

EQUIPMENT:

Total Station with Data Collector	12.00 per hour
Robotic Total Station with Data Collector	25.00 per hour
Second GPS RTK Rover with Crew	45.00 per hour
CADD WorkStation, with Plotter	13.50 per hour
Boat with motor	160.00 per day

The above rates for field parties include vehicle and usual surveying equipment and are charged portal-to-portal from our office.

- A. Crew G.P.S. rates include: one "static base station" or one RTK "rover".
- B. All time over eight hours per day, Saturdays, Sundays, and Holidays shall be billed at 1.30 time the above rates.
- C. All direct non-labor expenses, as may be required for the proper execution of the work, shall be billed at cost plus ten percent (10%). Mileage will be billed at the current IRS Tax Rate.

Payment Terms: NET 30 DAYS



EXHIBIT B

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
10/31/2011

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement.

PRODUCER: John L. Wortham & Son, L.P.
CONTACT NAME:
INSURER(S) AFFORDING COVERAGE: INSURER A: Hartford Underwriters Insurance Co, INSURER B: Hartford Casualty Insurance Co

COVERAGES CERTIFICATE NUMBER: 11635138 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES.

Table with columns: INSR LTR, TYPE OF INSURANCE, POLICY NUMBER, POLICY EFF, POLICY EXP, LIMITS. Rows include General Liability, Automobile Liability, Umbrella Liability, and Workers Compensation.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
West Harris County Regional Water Authority & agents & employees are included as additional insured on all policies except workers compensation when required by written contract...

CERTIFICATE HOLDER: West Harris County Regional Water Authority
CANCELLATION: SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

CERTIFICATE ADDENDUM

DATE ISSUED

10/31/2011

NAMED INSURED:

Baseline Corporation
1702 Seamist Drive, Suite 320
Houston TX 77008

CERTIFICATE HOLDER:

West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston TX 77002

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, WE WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER(S) NAMED ON THIS CERTIFICATE, EXCEPT FOR NON-PAYMENT OF PREMIUM OR ANY OTHER CIRCUMSTANCE PERMITTED BY STATE LAW OR POLICY CONDITIONS. FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON US.

CERTIFICATE ADDENDUM

DATE ISSUED

10/31/2011

NAMED INSURED:

Baseline Corporation
1702 Seamist Drive, Suite 320
Houston TX 77008

CERTIFICATE HOLDER:

West Harris County Regional
Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, TX 77098

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, WE WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER(S) NAMED ON THIS CERTIFICATE, EXCEPT FOR NON-PAYMENT OF PREMIUM OR ANY OTHER CIRCUMSTANCE PERMITTED BY STATE LAW OR POLICY CONDITIONS. FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON US.

Berg Oliver Associates, Inc.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into this 11th day of May, 2011, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Berg Oliver Associates Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall

include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.02. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$25,000, unless otherwise amended.

Option 1 - Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 - Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit B**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation

3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000"

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be

endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over

Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry

out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)

BERG OLIVER ASSOCIATES INC.

By: *David Shepp*
Name: David Shepp
Title: Director of Permitting & Land Use

FIRST AMENDMENT TO MASTER SERVICES AGREEMENT

This First Amendment Master Service Agreement (this "First Amendment") is entered into this 8th day of June, 2011, but effective as of the 11th day of May, 2011 (the "Effective Date"), by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Berg Oliver Associates Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority and Contractor have previously entered into that certain Master Services Agreement dated as of May 11, 2011, (the "Agreement") for the provision of certain services described therein; and

WHEREAS, the parties now desire to amend certain terms of the Agreement, which amended terms shall be effective as of the Effective Date;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits contained herein and in the Agreement, the Authority and Contractor agree as follows:

AGREEMENT

I. The final sentence of Section 3.03 of the Agreement shall be revised to read as follows:

"Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$3,000,000
 - b. General aggregate - \$3,000,000
 - c. Products-Completed Operations Aggregate - \$3,000,000

- d. Personal & Advertising Injury -\$3,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Professional Liability: \$3,000,000/\$3,000,000"

II. Except as specifically amended in this First Amendment, the Agreement shall remain in full force and effect in accordance with its original terms and conditions.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



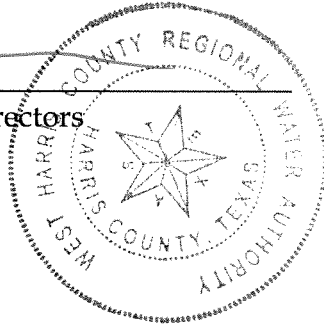
President, Board of Directors

ATTEST

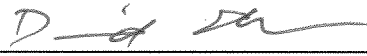


Secretary, Board of Directors

(SEAL)



BERG OLIVER ASSOCIATES INC.

By: 
Name: David Sherrill
Title: Director

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Berg ♦ Oliver Associates, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Environmental Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Berg ♦ Oliver Associates, Inc. ("Contractor"), to be effective the 11th day of January, 2012.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Environmental Services, dated May 11, 2011 (the "Agreement") and the First Amendment entered into on June 8, 2011 to perform certain professional environmental services or such other related services that may be required; and amended Section 3.03 of the Agreement to reflect a change in insurance coverage for Commercial General Liability, Professional Liability, and Excess Liability, and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

BERG ♦ OLIVER ASSOCIATES, INC.



Bruce G. Parker, President Date: 1/11/2012



Chris Thayer Date: 01/24/12

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$50,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 3 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Berg ♦ Oliver Associates, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Environmental Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Berg ♦ Oliver Associates, Inc. ("Contractor"), to be effective the 13th day of February, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Environmental Services, dated May 11, 2011 (the "Agreement") and the First Amendment entered into on June 8, 2011 and further amended by Addendum No. 2 dated January 11, 2012 to perform certain professional environmental services or such other related services that may be required;


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

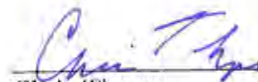
1. The attached Exhibit B-1 – Hourly Rate Schedule shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

BERG ♦ OLIVER ASSOCIATES, INC.



Bruce G. Parker, President Date: 2/13/13



Chris Thayer Date: 03/25/13

EXHIBIT "B-1"

ATTACHMENT A



BERG ♦ OLIVER ASSOCIATES, INC.
Environmental Science, Engineering & Land Use Consultants
14701 St. Mary's Lane, Suite 400, Houston, Texas 77079
(281) 589-0898 Fax: (281) 589-0007
Houston ♦ Dallas/Fort Worth ♦ WDBE/HUB ♦ www.bergoliver.com

2012 PERSONNEL RATE SCHEDULE

<u>Personnel</u>	<u>Hourly Billing Rate</u>
Project Director/Principal	\$180.00
Senior Associate	\$160.00
Professional Engineer	\$160.00
Project Manager/Registered Environmental Manager	\$140.00
Professional Geologist	\$130.00
Health/Safety Officer/Chemist	\$130.00
Project Coordinator	\$120.00
Wetlands Biologist/Ecologist	\$115.00
Soil Scientist/Geologist	\$115.00
Senior GIS Analyst	\$110.00
GIS Analyst	\$100.00
Field Technician	\$80.00
In-House Technician/Administrator	\$75.00
CADD Sr. Analyst	\$95.00
CADD Analyst	\$75.00
Administrative/Word Processing	\$65.00
Specialist Subcontractors	Cost + 15%

Above rates include all normal expenses of BOA's business, including mailing charges, in-house photocopying, long distance telephone costs, in-house graphic systems, and local area travel, unless otherwise stated in the agreement. Expenses, such as travel beyond fifty (50) miles, outside photocopying, delivery charges, photographic reproduction, and other outside services, are considered reimbursable by the client at rate of cost + 15%. Any extraordinary reimbursable expenses, in excess of \$250.00 must have authorization from the client.

NOTE: The rate schedule is for the current fiscal year, with an effective date of January 1. Hourly rates are adjusted annually as inflation dictates. If this contract spans more than one fiscal year (ending December 31), hourly rates may be adjusted. Regardless of any rate adjustment, the "not to exceed" figures in a contract will not change.

**ADDENDUM No. 3 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Berg ♦ Oliver Associates, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Environmental Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Berg ♦ Oliver Associates, Inc. ("Contractor"), to be effective the 13th day of February, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Environmental Services, dated May 11, 2011 (the "Agreement") and the First Amendment entered into on June 8, 2011 and further amended by Addendum No. 2 dated January 11, 2012 to perform certain professional environmental services or such other related services that may be required;


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

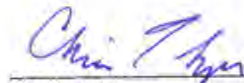
1. The attached Exhibit B-1 – Hourly Rate Schedule shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

BERG ♦ OLIVER ASSOCIATES, INC.



Bruce G. Parker, President Date: 2/13/13



Chris Thayer Date: 03/25/13

EXHIBIT "B-1"

ATTACHMENT A



BERG ♦ OLIVER ASSOCIATES, INC.
Environmental Science, Engineering & Land Use Consultants
14701 St. Mary's Lane, Suite 400, Houston, Texas 77079
(281) 589-0898 Fax: (281) 589-0007
Houston ♦ Dallas/Fort Worth ♦ WDBE/HUB ♦ www.bergoliver.com

2012 PERSONNEL RATE SCHEDULE

<u>Personnel</u>	<u>Hourly Billing Rate</u>
Project Director/Principal	\$180.00
Senior Associate	\$160.00
Professional Engineer	\$160.00
Project Manager/Registered Environmental Manager	\$140.00
Professional Geologist	\$130.00
Health/Safety Officer/Chemist	\$130.00
Project Coordinator	\$120.00
Wetlands Biologist/Ecologist	\$115.00
Soil Scientist/Geologist	\$115.00
Senior GIS Analyst	\$110.00
GIS Analyst	\$100.00
Field Technician	\$80.00
In-House Technician/Administrator	\$75.00
CADD Sr. Analyst	\$95.00
CADD Analyst	\$75.00
Administrative/Word Processing	\$65.00
Specialist Subcontractors	Cost + 15%

Above rates include all normal expenses of BOA's business, including mailing charges, in-house photocopying, long distance telephone costs, in-house graphic systems, and local area travel, unless otherwise stated in the agreement. Expenses, such as travel beyond fifty (50) miles, outside photocopying, delivery charges, photographic reproduction, and other outside services, are considered reimbursable by the client at rate of cost +15%. Any extraordinary reimbursable expenses, in excess of \$250.00 must have authorization from the client.

NOTE: The rate schedule is for the current fiscal year, with an effective date of January 1. Hourly rates are adjusted annually as inflation dictates. If this contract spans more than one fiscal year (ending December 31), hourly rates may be adjusted. Regardless of any rate adjustment, the "not to exceed" figures in a contract will not change.

Bolton & Baer, Ltd.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into as of this 13th day of October, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Bolton & Baer, Ltd., a Texas limited partnership (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain appraisal services described in Exhibit A (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with Exhibit A and shall be dated when approved. All fees described in the Work Authorization shall include charges for labor,

materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Contractor shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY,**

COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having either (i) a Best's rating of B+ or better and

licensed to transact business in the State of Texas, or (ii) a Best's rating of A- or better and admitted to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$500,000
 - b. General aggregate - \$1,000,000
 - c. Products-Completed Operations Aggregate - \$500,000
 - d. Personal & Advertising Injury -\$500,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$1,000,000/\$1,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD

HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control. Notwithstanding anything contained in any attachments or exhibits hereto, the Authority shall not be required to provide insurance for the Contractor or indemnify the Contractor.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the

other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

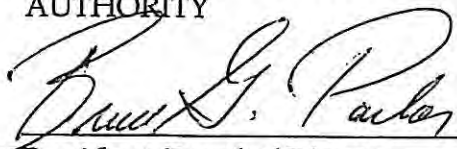
Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)



BOLTON & BAER, LTD.,
a Texas limited partnership

By: B&B Consulting, L.L.C.,
a Texas limited liability company,
its general partner

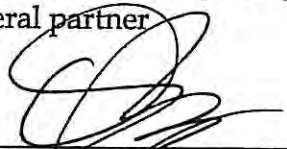

By: _____
Name: WAYNE B. BAER
Title: PRESIDENT

EXHIBIT A

BOLTON & BAER, LTD.

REAL ESTATE CONSULTANTS
www.boltonbaer.com

DAVID R. BOLTON, MAI
WAYNE B. BAER, MAI

1301 LEE LAND STREET
SUITE 300
HOUSTON, TEXAS 77002
(713) 868-3196
FAX (713) 868-3659

JAMES A. ROHRIG, MAI, CPA

October 7, 2010

West Harris County Regional Water Authority
c/o: Ms. Katie Dorfman
Allen Boone Humphries Robinson, LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Re: Appraisal services in connection with the acquisition of certain parcels to be designated by the West Harris County Regional Water Authority (the "Authority") that are related to the Authority's water line facilities, and other related facilities, along the route shown on attached Exhibit "A" (the "Second Source Line")

Dear Ms. Dorfman:

The following will serve as our agreement to provide Appraisal and/or Consultation services to the Authority in the above referenced matter.

Given the nature of this assignment, Appraisal Report Fees can individually vary according to factors including, but not necessarily limited to, parcel type, location, complexity, and/or volume. Upon identification of the parcel to be appraised, we will provide a lump-sum fee proposal for the preparation and completion of an appraisal report determining the compensation owed for the proposed acquisition parcel.

Post Appraisal Report Fees ("Additional Services") will be based on hourly rates with Direct Expenses billed at cost. Additional Services include Appraisal Report updates or amendments, as requested by the client, as well as consultation, preparation, stand-by, or testimony required in litigation. Direct Expenses are primarily related to special exhibits or materials requested by the client or client's legal counsel. Our firm's hourly rates for this assignment are set forth as follows:

Wayne B. Baer, MAI	\$225.00 per hour
Senior Associate	\$175.00 per hour
Associate	\$100.00 per hour

Austin
Bolton Real Estate Consultants, Ltd.
3103 Bee Caves Road, Ste. 225
Austin, Texas 78746
Tel: (512) 477-1597 Fax: (512) 477-1567

Houston
Bolton & Baer, Ltd.
1301 Leeland Street, Ste. 300
Houston, Texas 77002
Tel: (713) 868-3196 Fax: (713) 868-3659

Dallas/Ft. Worth
Bolton & Baer, Ltd.
1075 Griffin Street West, Ste. 205
Dallas, Texas 75215
Tel: (214) 565-0336

Ms. Katie Dorfman
October 7, 2010
Page 2

Appraisal/Consultation and
Reporting Standards:

Any appraisal or consultation report(s) will conform to the standards of the Appraisal Institute and Uniform Standards of Appraisal Practice. Additionally, Jurisdictional Exceptions may be imposed in accordance with state law.

Client Scope of Services:

Bolton & Baer, Ltd. will provide services in connection with the acquisition of certain parcels to be designated by the Authority that are related to the Authority's water line facilities, along the route shown on attached Exhibit "A".

Confidentiality: All information and materials gained by Bolton & Baer, Ltd. in this matter will be kept confidential. Bolton & Baer, Ltd. acknowledges that all information and materials disclosed to Bolton & Baer, Ltd. on behalf of the Authority and the work Bolton & Baer, Ltd. performs for the Authority, hereunder, are confidential, and Bolton & Baer, Ltd. will abide by all reasonable restrictions on the dissemination of said materials, information, and work.

It is agreed that our company makes no guarantee of any appraisal valuation(s) or any consultation result(s) required as part of this assignment, and the billings are in no way contingent upon any pre-determined appraisal valuation(s) or consultation result(s). Failure to make complete and timely payment of the agreed Appraisal/Consultation billings and billings for Additional Services provides Bolton & Baer, Ltd. the right to file a lawsuit against the client for recovery of the amount owed, in addition to reasonable attorney's fees and expenses, costs, and applicable pre- and post-judgment interest.

If this agreement is acceptable, please have the owner or authorized representative sign below and return one (1) copy to our office in Houston, Texas.

Yours truly,



Wayne B. Baer, MAI
Bolton & Baer, Ltd.

Owner/Authorized Representative

Date

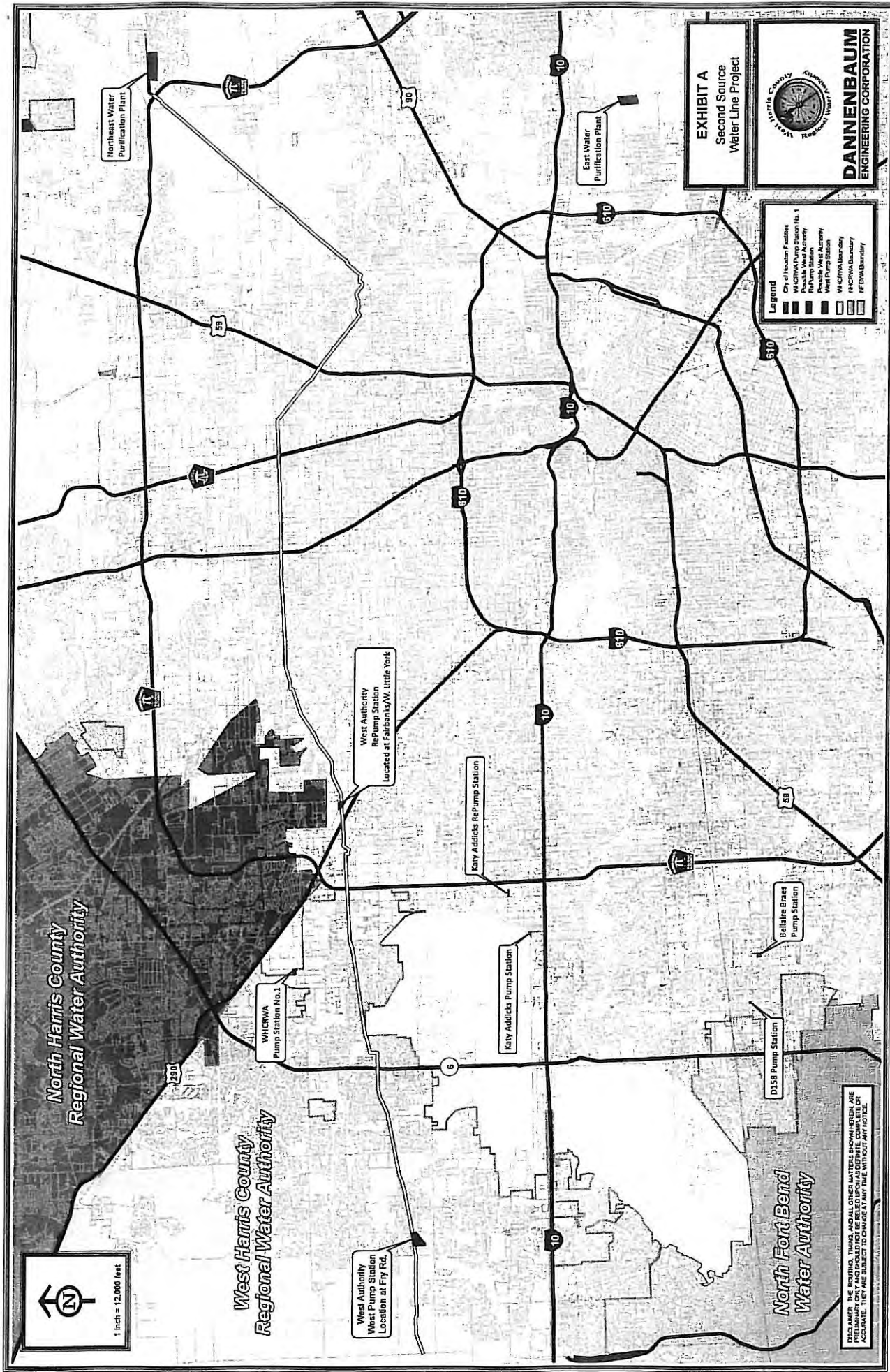


EXHIBIT A
Second Source
Water Line Project



- Legend**
- City of Houston Facilities
 - WHCRWA Pump Station No. 1
 - Pasadena Water Authority
 - Re-Pump Station
 - West Pump Station
 - WHCRWA Boundary
 - HCRWA Boundary
 - IFDMA Boundary

1 inch = 12,000 feet

DISCLAIMER: THE ROUTING, TIMING, AND ALL OTHER MATTERS SHOWN HEREIN ARE PRELIMINARY ONLY AND SHOULD NOT BE RELIED UPON AS DEFINITE. COMPLETE OF COURSE, THEY ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT ANY NOTICE.

**ADDENDUM No. 1 TO MASTER SERVICES AGREEMENT FOR
PROFESSIONAL SERVICES
(Bolton & Baer, Ltd.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Appraisal Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Bolton & Baer, Ltd. ("Contractor"), to be effective the 8th day of December, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services dated October 13, 2010 (the "Agreement") to perform appraisal services and other related professional services that may be required; and

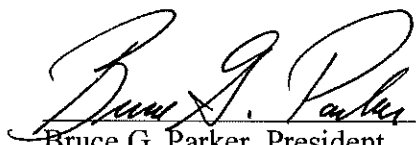
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

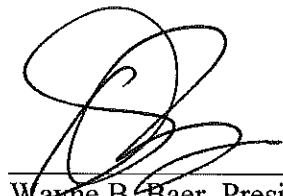
WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

BOLTON & BAER, LTD.



Bruce G. Parker, President

Date: 12/8/10



Wayne B. Baer, President

Date: 12/21/10

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$50,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Brown and Gay Engineers, Inc.

MASTER SERVICES AGREEMENT FOR SURVEYING SERVICES

This Master Service Agreement (this "Agreement") is entered into 01/09/2013 2013, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Brown & Gay Engineers, Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I. SERVICES

Section 1.01. Services. Contractor shall perform certain surveying services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.02. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000.00, unless otherwise amended.

Option 1 - Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 - Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit B**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III. GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates

shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury - \$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000"

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

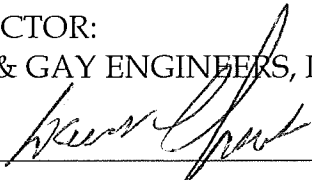
ATTEST



Secretary, Board of Directors

(SEAL)

CONTRACTOR:
BROWN & GAY ENGINEERS, INC.

By: 

Name: David C. Lowe, P.E.

Title: Director Public Works

EXHIBIT B – FEE SCHEDULE

Hourly Rate Schedule & Other Direct Costs

Brown & Gay Engineers, Inc.

The maximum amount payable is based on the following data and calculations:

Labor Cost

Job Classification	Contract Rate
RPLS	\$ 135.00
Senior Survey Tech/SIT	\$ 98.00
Survey Tech	\$ 85.00
Field Supervisor	\$ 95.00
2-Man Crew	\$ 120.00
3-Man Crew	\$ 130.00
GPS Crew	\$ 155.00
Admin	\$ 65.00

Other Direct Costs

Expense Description	Unit Cost
Mileage (per mile)	\$ 0.565/Mile
Parking	\$10.00/Day
Overnight Mail Letter Size	\$20.00 each
Overnight Mail Oversized Box	\$40.00 each
Courier Sevices	\$25.00 each
Boat with Motor	\$40.00 each
Map Records	\$3.95/Sheet
Deed Copies	\$1.00/Sheet
Certified Deed Copies	\$2.00/Sheet
Law Enforcement/Police Officer	\$45.00/Hour/Officer
Flagger	\$20.00/Hour

Cobb Fendley & Associates, Inc.

AGREEMENT

Lump Sum or Specified Rate
Work Authorizations Used

This Agreement ("Agreement") is entered into as of August 17, 2004, between West Harris County Regional Water Authority ("WHCRWA") and Cobb Fendley & Associates, Inc. (Contractor).

WITNESSETH:

WHEREAS, WHCRWA desires to obtain professional services pursuant to the terms and conditions of this Agreement; and

WHEREAS, Contractor desires to provide such services in exchange for the fees hereinafter specified.

NOW, THEREFORE, for and in consideration of the promises and mutual covenants contained herein, the parties hereto agree as follows:

1. General.

1.1 WHCRWA hereby retains Contractor and Contractor hereby agrees to perform the services and to develop the work product described on Exhibit "A" attached and incorporated hereto and specified on future written Work Authorizations (the "Work").

1.2 The relationship of Contractor to WHCRWA under this Agreement and otherwise shall be that of independent contractor. Contractor shall take no action which is likely to lead third parties to believe that it is a partner or venturer with WHCRWA in connection with the performance of the Work. Contractor is not, by the terms of this Agreement or otherwise, an agent, employee, or representative of WHCRWA. While Contractor shall be responsible to perform the duties and obligations owed to WHCRWA under this Agreement, WHCRWA shall not control or have the right to control the manner or methods employed by Contractor in the performance of its Work hereunder.

2. Certain Duties of Contractor.

In addition to its other duties under this Agreement, Contractor shall comply with the following:

2.1 Contractor agrees to provide prompt and efficient professional services as herein described for the fees hereinafter specified. Contractor shall coordinate its performance of the services hereunder with WHCRWA. Contractor shall make

periodic oral or written reports and recommendations to WHCRWA with respect to conditions, transactions, situations, or circumstances encountered by Contractor relating to the services to be performed under this Agreement.

2.2 Contractor shall make timely payments to all persons and entities supplying labor, materials, or equipment in connection with the Work to be performed under of this Agreement. **CONTRACTOR SHALL PROTECT, INDEMNIFY AND HOLD HARMLESS, WHCRWA, ITS DIRECTORS, OFFICERS, AGENTS AND EMPLOYEES FROM ANY EVERY KIND AND CHARACTER OF DAMAGES, LAWSUITS, EXPENSES, DEMANDS, CLAIMS AND CAUSES OF ACTION ARISING AGAINST WHCRWA, ITS OFFICERS, AGENTS OR EMPLOYEES, OR ITS SUBCONTRACTORS, THEIR OFFICERS, AGENTS AND EMPLOYEES, OR OTHER PERSONS, FIRMS, OR CORPORATIONS WHATSOEVER ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

2.3 Contractor shall obtain, maintain, and pay for all licenses, permits, and certificates, including all professional licenses that are required by any statute, ordinance, rule, or regulation to be obtained by Contractor in connection with the performance of the Work under this Agreement. Contractor shall immediately notify WHCRWA of any suspension, revocation, or other detrimental action against any license, permit or certification required hereunder.

2.4 Contractor shall replace any of its personnel or consultants whose work product is deemed unsatisfactory by WHCRWA, in the WHCRWA's sole and absolute discretion.

2.5 Contractor expressly represents that all the Work to be performed by Contractor shall be of good quality and shall be performed in a professional manner using that degree of care and skill ordinarily exercised by and consistent with the standards of competent professionals providing similar services in connection with the same or similar projects, and that all work products provided by Contractor to WHCRWA shall be fit for the purposes intended by WHCRWA. Contractor's Work shall comply with all applicable federal, state and local laws, codes, rules and regulations.

2.6 Contractor agrees that it shall perform its obligations to WHCRWA under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of WHCRWA.

2.7 No Work of any nature shall be undertaken by Contractor under this Agreement until a written Work Authorization is executed and a notice to proceed is issued by WHCRWA.

3. Contractor's Compensation:

3.1 In complete compensation and satisfaction for all services to be provided by Contractor under this Agreement, WHCRWA shall pay the fees set forth in each Work Authorization and per rates included in Exhibit "B", attached and incorporated hereto. In the event the Work is delayed by Contractor, Contractor shall provide such overtime and additional manpower and equipment as is required to overcome such delays, and Contractor shall not be entitled to additional compensation to pay for any additional costs incurred in overcoming such delays. It is agreed that the fees specified in the Work Authorizations shall not be exceeded under any circumstances without prior written approval from WHCRWA.

3.2 Contractor shall invoice WHCRWA monthly in the proper amounts based on the services performed by Contractor. Dependant upon the payment option referenced on each Work Authorization, Contractor shall provide invoices as detailed in Exhibit "B" for the applicable payment option. All invoices are subject to approval by WHCRWA. WHCRWA shall approve, in whole or in part, or disapprove Contractor's invoices within 45 calendar days of receipt. Contractor will be notified if the invoice or any portion thereof is rejected by WHCRWA or is delayed for any reason.

3.3 WHCRWA shall pay Contractor within the above-mentioned 45 calendar day period the amount of any approved invoice. All remittances by WHCRWA of such compensation shall be made by check. Such checks will be made payable to Contractor and payments will be addressed to Contractor at its address specified herein for notices. Neither partial payments made hereunder nor approval of invoices or Work by WHCRWA shall be construed as final acceptance or approval of that part of Contractor's Work to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

3.4 Monthly invoices shall be submitted as follows:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
West Harris County Regional Water Authority
1621 Milam, 3rd Floor
Houston, Texas 77002-8017

Copies to: West Harris County Regional Water Authority
 c/o Wayne Ahrens
 Dannenbaum Engineering
 3100 West Alabama
 Houston, Texas 77098

West Harris County Regional Water Authority
 c/o Cam Postle
 Postle Property Services, Inc.
 1300 Post Oak Boulevard, Suite 1110
 Houston, Texas 77056

4. **Insurance:**

4.1 Contractor must obtain the types and limits of insurance, including special provisions as provided below:

COVERAGE	LIMITS OF LIABILITY
Workers' Compensation	Statutory for Workers' Compensation
Employer's Liability	Bodily Injury by Accident \$500,000 (each accident) Bodily Injury by Disease \$500,000 (policy limit) Bodily Injury by Disease \$500,000 (each employee)
Commercial General Liability	Bodily and Personal Injury; Products and Completed Operations, Bodily Injury and Property Damage, and Contractual Liability Combined Limits of \$1,000,000 each Occurrence, and \$2,000,000 aggregate
Excess/Umbrella Coverage	\$1,000,000 each occurrence, and \$1,000,000 aggregate
Automobile Liability	\$500,000 combined single limit
Professional Liability Coverage	\$1,000,000 per claim/\$1,000,000 aggregate

4.2 **Issuers of Policies.** The issuer of any policy (1) shall have a Certificate of Authority to transact insurance business in Texas and (2) shall be an admitted insurer in

the State of Texas and have a Best's rating of at least A and a Best's Financial size Category of Class VIII or better, according to the most current edition of *Best's Key Rating Guide*.

4.3 **Insured Parties.** Each policy, except those for Workers' Compensation, Employer's Liability, and Professional Liability, must name WHCRWA (and their officers, agents, and employees) as additional insured parties on the original policy and all renewals or replacements.

4.4 **Deductibles.** Contractor shall be responsible for and bear any claims or losses to the extent of any deductible amounts and waives any claim it may have for the same against WHCRWA and their officers, agents, or employees.

4.5 **Cancellation:**

(1) Each policy, with the exception of Professional Liability, must state that it may not be canceled, materially modified, or nonrenewed unless the insurance company gives WHCRWA 30 days' advance written notice. Professional liability policies must state that they may not be canceled, non-renewed, or have their limit of liability or types of coverage reduced by endorsement unless the insurance company gives WHCRWA 30 days advance written notice.

(2) Contractor shall give written notice to WHCRWA within 5 days of the date on which total claims by any party against Contractor reduce the aggregate amount of coverage below the amounts required by this Agreement.

4.6 **Subrogation.** Each policy, except Professional Liability, must contain an endorsement to the effect that the insurer waives any claim or right of subrogation to recover against WHCRWA and their officers, agents, or employees.

4.7 **Endorsement of Primary Insurance.** Each policy, except Worker's Compensation and Professional Liability, must contain an endorsement that the policy is primary to any other insurance available to the additional insureds with respect to claims arising under this Agreement.

4.8 **Liability for Premium.** Contractor shall pay all insurance premiums.

4.9 **Delivery of Policies.** Contractor shall provide certificates of insurance in accordance with the requirements of the Agreement and prior to the start of the Work.

4.10 **Indemnification.** CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS WHCRWA, ITS DIRECTORS, OFFICERS, AGENTS, AND EMPLOYEES FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING REASONABLE ATTORNEY'S FEES AND EXPENSES, COURT COSTS, AND OTHER EXPENSES

INCURRED IN ENFORCING THIS INDEMNITY PROVISION) BROUGHT BY CONTRACTOR OR ANY OF CONTRACTOR'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENCE OR MISCONDUCT OF CONTRACTOR, OR CONTRACTOR'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES.

5. Term and Termination.

5.1 This Agreement shall be effective upon the date of execution by WHCRWA, and shall continue thereafter, subject to the notice to proceed and issuance of a Work Authorization, unless otherwise terminated as hereinafter provided.

5.2 WHCRWA may terminate, with or without cause, this Agreement, resultant Work Authorizations and Contractor's performance of the Work hereunder at any time by giving 14 calendar days written notice to the Contractor. As soon as possible, but not later than the effective date of such notice, the Contractor shall, unless the notice directs otherwise, immediately discontinue all Work in connection with this Agreement and shall proceed to promptly cancel all existing orders and subcontracts insofar as such orders or subcontracts are chargeable to this Agreement. Within 30 calendar days after the effective date of the notice of termination, Contractor shall deliver to WHCRWA all work products obtained by or prepared by Contractor as part of its Work hereunder (including but not limited to all reports, schedules, charts, analysis, maps, letters, notes, manuals, plans, models and photographs), and shall submit an invoice showing in detail Work performed under this Agreement to the date of termination. WHCRWA shall then pay the prescribed fees to the Contractor for Work actually performed under this Agreement up to the date of termination, less any previous payments, in the same manner as prescribed in Section 3. The Contractor may, if necessary, submit invoices for vendor and subcontractor charges which are incurred in connection with this Agreement prior to the effective date of termination and received by the Contractor after the termination invoice. WHCRWA shall not be obligated to pay Contractor any other termination expenses.

5.3 Contractor may terminate its performance under this Agreement if WHCRWA fails to pay the compensation owed to Contractor pursuant to the terms of this Agreement. Should such default occur, Contractor shall have the right to terminate all or part of its duties under this Agreement as of the 30th calendar day following the receipt by WHCRWA of a notice from Contractor describing such default and intended termination, provided: (i) such termination shall be ineffective if within the 30 calendar day period WHCRWA cures the default, and (ii) such termination may be stayed beyond such 30 calendar day period, at the sole option of the Contractor, pending cure of the default.

5.4 Contractor may terminate Contractor's performance under this Agreement, with or without cause, by giving 14 calendar days written notice to the WHCRWA.

5.5 Should WHCRWA desire to suspend or terminate a Work Authorization but not terminate the Agreement, WHCRWA may orally notify the Contractor followed by written confirmation, giving fourteen (14) days notice. Both parties may waive the fourteen day notice in writing. A Work Authorization may be reinstated and resumed in full force and effect upon written notice from WHCRWA to resume the work. If WHCRWA suspends a Work Authorization, the Work Authorization will terminate on the date specified unless the Work Authorization is amended to authorize additional time. WHCRWA shall have no liability for Work performed or costs incurred prior to the date authorized by WHCRWA to begin Work, during periods when Work is suspended, or after the completion date of the Work Authorization or termination of the Agreement.

5.6 No allowance for an extension of time for any cause whatsoever, shall be claimed by, or given to, Contractor unless Contractor shall have made written request upon WHCRWA for such extension within forty-eight (48) hours after the cause of such extension occurred.

6. The Ownership of Work Product.

6.1 WHCRWA shall be the Owner of all ideas and information created, developed or obtained by Contractor in the performance of the Work hereunder. Contractor shall furnish to WHCRWA all field notes, reports, the original tracings of all drawings, plans, maps, photographs, and other materials (including, if requested by WHCRWA, design computations, design sketches, and review drawings) prepared pursuant to this Agreement. The originals of all such documents shall be and remain the property of WHCRWA. With respect to the forms of expression of ideas reduced to a tangible medium of expression, such as engineering drawings, plans, maps, and the like, which are covered by federal copyright laws, WHCRWA shall be the Owner of such works and all exclusive rights of copyright therein. It is agreed that all such works shall be deemed to be "works made for hire," as that term is defined in 17 U.S.C. 101. However, in the event it should be determined that any of such works is not a "work made for hire," then Contractor agrees to assign, and does hereby assign unto WHCRWA all right, title, and interest in and to such works, including all right, title, and interest in and to all exclusive rights of copyright therein.

6.2 Notwithstanding the foregoing, Contractor may retain copies of such documents and shall have the right to use such copies for its own internal purposes, but Contractor may not provide such documents to others or sell, license, or otherwise market to others such documents or the information contained therein.

6.3 Contractor shall take all steps which may be necessary or appropriate to ensure that it or its nominee (which shall be WHCRWA) obtains title to the work product that may be created or developed by its employees and its subcontractors who assist in the performance of the Work hereunder. For example, in all Agreements entered into between Contractor and subcontractors, it shall be provided that the subcontractor assigns to Contractor or its nominee (which shall be WHCRWA) all of the subcontractor's rights in and to the Work and all exclusive rights of copyright herein.

7. Confidential Information.

7.1 During the term of this Agreement, Contractor may acquire from WHCRWA, or obtain or develop in connection with the performance of its Work hereunder, confidential information belonging to WHCRWA. As used herein, the term "confidential information" shall mean any information, written or oral, relating to the Work and which gives WHCRWA a business advantage over others, including but not limited to, processes, techniques, procedures, designs, drawings, plans, diagrams, specifications, computer programs, systems, know-how, trade secrets and other technical data, project information, policies and agreements, including this Agreement. Contractor shall not, without the prior written consent of WHCRWA, disclose or make available to any person, or use, directly or indirectly, except in connection with the performance of its Work hereunder, any of such confidential information. This obligation shall not apply to such portions of WHCRWA's confidential information which: (a) was previously known to Contractor (as evidenced by its written records) prior to obtaining the same from WHCRWA or developing the same for WHCRWA while performing the Work hereunder; or (b) was in the public domain prior to the time of disclosure by WHCRWA to the Contractor or prior to the time such information was developed by Contractor for WHCRWA under this Agreement; or (c) the information is later disclosed to Contractor by a third party who did not receive the same, directly or indirectly, from WHCRWA or who had no obligation of secrecy with respect thereto. No provision of this Agreement shall be construed to impose any confidentiality obligation or requirement upon the WHCRWA and the WHCRWA may (at its discretion) disclose to whomever any information or documents deemed appropriate by the WHCRWA.

7.2 Contractor further agrees that it shall not make any announcements or release any information or photographs concerning this Agreement or the Work or any part thereof to any member of the public or to the press or to any official body, unless prior written consent is obtained from WHCRWA.

7.3 Contractor shall take all steps which may be necessary or appropriate in order that its employees and its vendors and consultants are bound by and adhere to the confidentiality provisions of this Agreement (including but not limited to, the inclusion of appropriate clauses to carry out the purpose and intent hereof in all subcontracts, purchase orders and consulting agreements entered into by Contractor pursuant to the performance of this Agreement).

8. Miscellaneous.

8.1 This Agreement shall be construed and enforced for all purposes pursuant to the laws of the State of Texas and, to the extent applicable, all federal laws and all rules and regulations of any regulatory body or officer having jurisdiction. The parties agree that this Agreement is to be performed at least in part in Harris County, Texas and therefore the federal and state courts in Houston, Harris County, Texas shall have in personam jurisdiction over the parties to resolve any disputes between them arising out of this Agreement.

8.2 This Agreement shall inure to the benefit of WHCRWA and Contractor. This Agreement is personal to Contractor and may not be assigned or transferred without the written permission of WHCRWA. This Agreement shall not be construed in favor or against either party on the basis that such party did nor did not draft the Agreement.

8.3 This Agreement (including all documents incorporated by reference or attached as exhibits hereto) represents the entire Agreement between WHCRWA and Contractor with respect to the subject matter hereof and supersedes and merges all prior negotiations, representations, discussions or agreements, either written or oral, with respect to the subject matter hereof. This Agreement may be amended only by written instrument signed by duly authorized representatives of both WHCRWA and Contractor.

8.4 All Work Authorizations issued pursuant to this Agreement shall be incorporated herein by reference, be subject to the terms and conditions set forth herein and shall follow the format set forth in Exhibit "A-1".

8.5 All notices required or permitted hereunder shall be in writing and shall be deemed delivered on the date of delivery if by personal delivery or, if by mail, three days after deposit with the United States Postal Service (certified mail, return receipt requested) addressed to the respective other party at the addresses shown below:


West Harris County Regional
Water Authority
c/o Allen Boone Humphries LLP
3200 Southwest Freeway
Suite 2600
Houston, Texas 77027

Cobb Fendley & Associates
5300 Hollister, Suite 400
Houston, Texas 77040

8.6 The failure of either party to insist on performance of any of the provisions of this Agreement shall not be construed as a waiver of the requirements of such provision.

IN WITNESS WHEREOF, this Agreement is executed in duplicate originals by WHCRWA and Contractor.

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY

By: 
Name: JAN VALLE
Title: PRESIDENT
Date: 8-10-04

COBB FENDLEY & ASSOCIATES, INC.

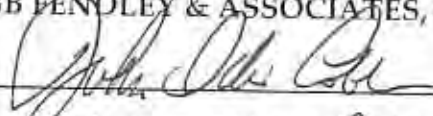
By: 
Name: John Odis Cobb
Title: President
Date: August 17, 2004

EXHIBIT "A"

SCOPE OF WORK

Contractor agrees to furnish all supervision, labor, materials, supplies and equipment, and other items necessary to **perform professional surveying services** as directed, set forth and specified in individual Work Authorizations to be issued periodically pursuant to this agreement.

WHCRWA will issue Work Authorization(s) to authorize all work under this contract. The Contractor must sign and return a Work Authorization within seven (7) working days after receipt. Refusal to accept a Work Authorization may be grounds for termination of the Agreement. WHCRWA shall not be responsible for any action by the Contractor or any costs incurred by the Contractor relating to work not directly associated with or begun prior to the execution of a Work Authorization.

Work Authorizations are issued at the discretion of WHCRWA. While it is WHCRWA's intent to issue Work Authorizations hereunder, the **Contractor shall have no cause of action conditioned upon the lack of quantity or dollar amount of Work Authorizations issued. Contractor is not guaranteed Work Authorizations in the maximum total amount set forth in Exhibit "B", nor in any amount whatsoever. The amount set forth in Exhibit "B" represents the potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement.** Each Work Authorization shall be signed by both parties and become a part of the Agreement. No Work Authorization will waive WHCRWA's or the Contractor's responsibilities and obligations established in this Agreement. The Contractor shall promptly notify WHCRWA of any event that will affect completion of a Work Authorization.

Before additional Work may be performed or additional costs incurred a written Supplemental Work Authorization must be issued. Both parties must execute a Supplemental Work Authorization within the period of performance specified in the original Work Authorization. WHCRWA shall not be responsible for actions by the Contractor or any costs incurred by Contractor for work begun prior to the execution of the Supplemental Work Authorization. If the Contractor determines or reasonably anticipates that a Work Authorization cannot be completed before the specified completion date, the Contractor shall promptly notify WHCRWA. WHCRWA may, at its sole discretion, extend the work authorization period by execution of a Supplemental Work Authorization.

EXHIBIT "A-1"

WORK AUTHORIZATION NO. ____

West Harris County Regional Water Authority District

Contractor: Cobb Fendley & Associates, Inc.
5300 Hollister, Suite 400
Houston, Texas 77040

THIS WORK AUTHORIZATION is made pursuant to and is subject to the terms and conditions of the Agreement dated as of August 17, 2004 entered into by and between West Harris County Regional Water Authority (WHCRWA), and Cobb Fendley & Associates, Inc. (Contractor).

Description of Work: The Contractor will perform surveying services generally described as _____ in accordance with the project description referenced above. The responsibilities of the Contractor as well as the work schedule are further detailed in the attached Exhibit WA__-A which is made a part of this Work Authorization.

Total Authorization: The maximum amount payable under this Work Authorization is \$_____. This amount is based upon fees set forth in Exhibit B-1, Rates and Expenses, of the Agreement.

Payment: Payment to the Contractor for the services established under this Work Authorization shall be made in accordance with Option 1 - Lump Sum Basis or Option 2 - Specified Rate Basis (pick one and omit other option) of the Agreement.

Work Period: This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on _____, 2004, unless extended by a supplemental Work Authorization.

Miscellaneous: This Work Authorization does not waive the parties' responsibilities and obligations provided under the original Agreement.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

Engineer: West Harris County Regional Water Authority Contractor: Cobb Fendley & Associates, Inc.

Signature: _____ Signature: _____

Name/Title: _____ Name/Title: _____

Date: _____ Date: _____

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000

All Work Authorizations shall specify one of the payment options listed below.

Option 1 - Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and expenses and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost or expenses.

Option 2 - Specified Rate and Expenses Basis

The specified rates and expenses for each classification are shown in the attached Rate Schedule, Exhibit "B-1". Payment shall be based on: (i) actual reimbursable expenses incurred (without any mark-up); plus (ii) actual hours worked multiplied by the specified personnel rate.

Exhibit B-1 Rates and Expenses

HOURLY

6140	Senior Engineer	\$135/HR
0340	Project Manager.....	\$120/HR
5840	Project Engineer.....	\$105/HR
0640	Graduate Engineer.....	\$ 80/HR
5640	Designer.....	\$ 75/HR
0430	CAD Operator	\$ 68/HR
1650	Registered Professional Land Surveyor.....	\$ 88/HR
1350	Utility Specialist	\$105/HR
0750	Survey Technician.....	\$ 68/HR
6010	4- Man Survey Crew	\$120/HR
1410	3- Man Survey Crew	\$110/HR
1510	2- Man Survey Crew	\$ 93/HR
7250	Post Processing GPS Data	\$ 85/HR
2680	Right-of-Way Agent.....	\$ 80/HR
3845	Construction Manager.....	\$ 95/HR
3745	Construction Observer	\$ 70/HR
1870	Telecommunications Specialist.....	\$ 70/HR
6970	Telecommunications Technician	\$ 55/HR
1290	Administration/Clerical	\$ 50/HR

SUBSURFACE UTILITY ENGINEERING

Level C & D (Without Level B)	\$0.30/Foot
Level B - Designation (Without Level C & D).....	\$1.20/Foot
Level A - Location (Non-Destructive Excavation):	
➤ Vertical Depth: 0 Ft. - 5 Ft.	\$ 900/Hole
5 Ft. - 8 Ft.	\$1,100/Hole
8 Ft. - 13 Ft.	\$1,480/Hole
13 Ft. - 20 Ft.	\$2,075/Hole
> 20 Ft.....	\$3,190/Hole

Ground Penetrating Radar	To Be Negotiated
SUE Technician (With Equipment)	\$85/HR
Locating (With Equipment & Two (2) Technicians)	\$295/HR
Traffic Control Officer	@ Cost
Traffic Control (Lane Closures, etc.)	To Be Negotiated
Permits (Local, State, etc.)	@ Cost
Designation & Traffic Control Vehicles	\$3.00/Mile
Location Vehicles	\$6.00/Mile

REIMBURSABLE

Consultant or Specialty Contractor	@ Cost
Courier, Printing, Special Equipment Rental.....	@ Cost
Reasonable Out of Town Travel Expenses (Air, Hotel, Rental, etc.)	@ Cost
Mileage (Standard Car or Truck).....	IRS Approved Rate
Per Diem (Per Day/Person)	\$30/Day
GPS (Per Day/Receiver)	\$125/Day
Title Plant Charges.....	@ Cost
Technology Charge.....	\$3.50/HR/Person

In-House Reproduction:

- Copies (Up to 11" x 17").....\$0.15/Each
- Color Prints (Up to 11" x 17")
- Color Prints (Larger than 11" x 17")..... \$2.25/Sq. Ft.
- Bluelines (All Sizes)
- Bond Prints (All Sizes).....\$6.00/Each
- Mylar Prints
- Vellum Prints.....\$9.00/Each

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Cobb, Fendley & Associates, Inc.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Cobb, Fendley & Associates, Inc. ("Contractor"), to be effective the 14th day of May, 2008.

WHEREAS, the Authority and Engineer originally entered into an Agreement for Professional Services, dated August 17, 2004 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and

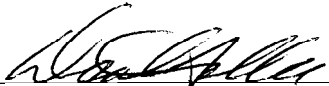
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement, is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

COBB, FENDLEY & ASSOCIATES, INC.


Date: 5/14/08
Dan H. Sallee, President

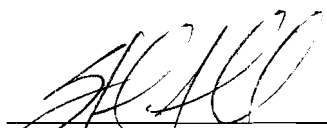

Date: 05-20-08
Stephanie A. Funk, Director of Surveying

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$200,000.00

All Work Authorizations shall specify one of the payment options listed below

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Cobb, Fendley & Associates, Inc.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Cobb, Fendley & Associates, Inc. ("Contractor"), to be effective the 11th day of August, 2010.

WHEREAS, the Authority and Engineer originally entered into an Agreement for Professional Services, dated August 17, 2004 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and amended on May 14, 2008 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement, and amended on May 14, 2008 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

COBB, FENDLEY & ASSOCIATES, INC.



Bruce G. Parker, President

Date: 8/11/2010



Stephanie A. Funk, Director of Surveying

Date: 08.19.2010

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$450,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 3 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Cobb, Fendley & Associates, Inc.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Cobb, Fendley & Associates, Inc. ("Contractor"), to be effective the 13th day of February, 2013.

WHEREAS, the Authority and Engineer originally entered into an Agreement for Professional Services, dated August 17, 2004 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and amended by Addendum No. 1 dated May 14, 2008, and Addendum No. 2 dated August 11, 2010 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement, and amended by Addendum No. 1 on May 14, 2008 and further amended by Addendum No. 2 on August 11, 2010 are hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

COBB, FENDLEY & ASSOCIATES, INC.


Date: 2/13/13
Bruce G. Parker, President


Date: 02-20-2013
Stephanie A. Funk, Director of Surveying

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$700,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Cotton Surveying Company

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into November 9, 2011, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Cotton Surveying Company (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I. SERVICES

Section 1.01. Services. Contractor shall perform certain services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall

include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.02. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000.00, unless otherwise amended.

Option 1 - Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 - Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit B**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation

3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000"

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be

endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over

Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry

out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)

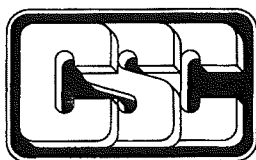
CONTRACTOR

By: Martin G. Hicks

Name: Martin G. Hicks

Title: Vice President, Cotton Surveying Company

EXHIBIT A



**COTTON SURVEYING
COMPANY**

6335 Gulfton, Suite 100
Houston, Texas 77081-1169
TEL 713 981 0275
FAX 713 777 5976

AUSTIN
HOUSTON
SAN ANTONIO
COLLEGE STATION

DALLAS
BRENHAM
ROSENBERG
THE WOODLANDS

SCHEDULE OF REIMBURSABLE EXPENSES

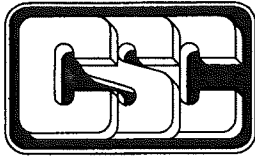
Effective January 2011

Subject to Annual Revision in January 2012

1. Reproduction performed in office

<u>Size</u>	<u>Black & White</u>	<u>Color</u>
8½" x 11" (single-sided)	\$0.05/page	\$.50/page
8½" x 11" (double-sided)	\$0.15/page	\$ 1.00/page
8½" x 14"	\$0.15/page	\$.75/page
11" x 17"	\$0.20/page	\$ 1.00/page
 <u>Large Document Prints/Plots</u>		
	<u>Black & White</u>	<u>Color</u>
Translucent Bond	\$0.20/sq ft	\$ 5.00/sq ft
Color Bond	\$0.30/sq ft	\$ 4.00/sq ft
Photographic Bond	\$4.00/sq ft	\$ 8.00/sq ft
Vellum	\$1.00/sq ft	N/A
Mylar (4 mil)	\$2.00/sq ft	N/A
 <u>Aerial Backgrounds</u>		
All sizes	\$5.00/sheet (plus above sq. ft. cost)	

- 2. Facsimiles sent: \$1.00/each
- 3. Transportation (mileage): \$0.50/mile
- 4. Audio/Video Conferencing
 - a. Audio Conferencing \$0.15/minute/person
 - b. Video Conferencing \$0.50/minute/person
 - c. Audio/Video Conferencing \$0.65/minute/person
- 5. Subcontracts and all other outside expenses and fees: Actual cost plus 10% service charge
- 6. Surveying Expenses
 - a. Crew Rates: Includes time charged portal to portal and the first 120 miles of transportation and standard survey equipment
 - b. Special Rental Equipment: Actual cost plus 10%
 - c. Stakes: Cost plus 10% service charge where an excessive number of wooden stakes or any special stakes are required
 - d. Iron Rods and Pipes: Cost plus 10%
 - e. All-Terrain Vehicle (ATV): \$150/day
 - f. Overnight Stays: \$190/night
 - g. Overtime Rates: Jobs requiring work on weekends or holidays billed at 1.5 times the standard rate
 - h. Sales Tax: To be paid on boundary-related services.
 - i. Deliveries, abstracting services, outside reproduction costs, and other reimbursable expenses charged at cost plus 10%



**COTTON SURVEYING
COMPANY**

6335 Gulfton, Suite 100
Houston, Texas 77081-1169
TEL 713 981 0275
FAX 713 777 5976

AUSTIN
HOUSTON
SAN ANTONIO
COLLEGE STATION

DALLAS
BRENHAM
ROSENBERG
THE WOODLANDS

SCHEDULE OF HOURLY RATES
Effective January 2011
Subject to Annual Revision in January 2012

SURVEYING PERSONNEL

4-Man Field Crew	\$150
3-Man Field Crew	\$140
2-Man Field Crew	\$120
4-Man Field Crew w/Robotic Survey System	\$180
3-Man Field Crew w/Robotic Survey System	\$170
2-Man Field Crew w/Robotic Survey System	\$150
1-Man Field Crew w/Robotic Survey System	\$125
4-Man Field Crew w/GPS System	\$210
3-Man Field Crew w/GPS System	\$200
2-Man Field Crew w/GPS System	\$170
1-Man Field Crew w/GPS System	\$150
Survey Technician I	\$ 52
Survey Technician II	\$ 62
Project Surveyor I	\$ 67
Project Surveyor II	\$ 80
Project Surveyor III	\$ 92
Chief of Survey Crews	\$ 92
Registered Prof. Land Surveyor	\$135
Survey Manager	\$145

DRAFTING PERSONNEL

CAD Operator I	\$ 43
CAD Operator II	\$ 49
CAD Operator III	\$ 58
CAD Operator IV	\$ 68
CAD Operator V	\$ 78
CAD Manager	\$ 92

OFFICE PERSONNEL

Computer Tech	\$ 50
Computer Manager	\$100
Secretary II	\$ 45
Secretary III	\$ 55



EXHIBIT B CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
11/7/2011

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER USI Southwest Three Memorial City 840 Gessner, Suite 600 Houston TX 77024	CONTACT NAME: PHONE (A/C, No, Ext): 713-490-4600 FAX (A/C, No): 713-490-4700 E-MAIL ADDRESS: PRODUCER CUSTOMER ID #:														
INSURED Jones & Carter, Inc. " Insured continued below" 6335 Gulfton Houston TX 77081	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">INSURER(S) AFFORDING COVERAGE</th> <th style="width: 20%;">NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A: Catlin Insurance Company, Inc.</td> <td>19518</td> </tr> <tr> <td>INSURER B: Travelers Indemnity Company of CT</td> <td>25682</td> </tr> <tr> <td>INSURER C: Travelers Lloyds Insurance Co</td> <td>41262</td> </tr> <tr> <td>INSURER D: St Paul Fire and Marine Insurance C</td> <td>24767</td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Catlin Insurance Company, Inc.	19518	INSURER B: Travelers Indemnity Company of CT	25682	INSURER C: Travelers Lloyds Insurance Co	41262	INSURER D: St Paul Fire and Marine Insurance C	24767	INSURER E:		INSURER F:	
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INSURER E:															
INSURER F:															

COVERAGES **CERTIFICATE NUMBER:** 1464783999 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR		POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS			
		INSR	WVD							
C	GENERAL LIABILITY	Y	Y	PACP211M4110	11/1/2011	11/1/2012	EACH OCCURRENCE	\$1000000		
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$300000		
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						MED EXP (Any one person)	\$10000		
	GEN'L AGGREGATE LIMIT APPLIES PER:						PERSONAL & ADV INJURY	\$1000000		
	<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC						GENERAL AGGREGATE	\$2000000		
	AUTOMOBILE LIABILITY						PRODUCTS - COMP/OP AGG	\$2000000		
	<input type="checkbox"/> ANY AUTO							\$		
	<input type="checkbox"/> ALL OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident)	\$		
	<input type="checkbox"/> SCHEDULED AUTOS						BODILY INJURY (Per person)	\$		
	<input type="checkbox"/> HIRED AUTOS						BODILY INJURY (Per accident)	\$		
	<input type="checkbox"/> NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	\$		
								\$		
								\$		
B D	<input checked="" type="checkbox"/> UMBRELLA LIAB	<input checked="" type="checkbox"/>	OCCUR	Y	Y	CUP3598T491	11/1/2011	11/1/2012	EACH OCCURRENCE	\$5,000,000
	<input type="checkbox"/> EXCESS LIAB		CLAIMS-MADE			QI06501415	11/1/2011	11/1/2012	AGGREGATE	\$5,000,000
	<input type="checkbox"/> DEDUCTIBLE								Each Occ	\$5,000,000
	<input checked="" type="checkbox"/> RETENTION \$10000								Aggregate	\$5,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY								WC STATUTORY LIMITS	OTHER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)		Y/N		N/A				E.L. EACH ACCIDENT	\$
	If yes, describe under DESCRIPTION OF OPERATIONS below								E.L. DISEASE - EA EMPLOYEE	\$
									E.L. DISEASE - POLICY LIMIT	\$
A	Professional Liability			AED985531211	12/31/2010	12/31/2011	\$2,000,000		\$4,000,000	per claim annual aggreg.

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Insured continued:
 Cotton Surveying, Inc.
 Jones & Carter dba Cotton Surveying, Inc.
 See Attached...

CERTIFICATE HOLDER West Harris County Regional Water Authority c/o Mr. James A. Boone ABHR 3200 Southwest Freeway, Suite 2600 Houston TX 77027	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
---	--

AGENCY CUSTOMER ID: _____

LOC #: _____



ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

AGENCY USI Southwest		NAMED INSURED Jones & Carter, Inc. " Insured continued below"	
POLICY NUMBER		6335 Gulfton Houston TX 77081	
CARRIER	NAIC CODE	EFFECTIVE DATE:	

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

Jones & Carter Inc dba Terra Firma, Inc.
McCullah Surveying Inc
Charles Kalkomey Surveying Inc.
Pledger Kalkomey Inc a Jones & Carter Company
Terra Firma, Inc
Brown Engineering Company
Brown Engineering, a Jones & Carter Company

Blanket Waiver of Subrogation (all policies) and Blanket Additional Insured (all policies except Professional Liability) is issued in favor of the Certificate Holder as required by written contract, but limited to the operations of the Named Insured. The General Liability policy is primary and non-contributory to the insurance available to the Additional Insured as required by written contract.

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Cotton Surveying Company)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Cotton Surveying Company ("Contractor"), to be effective the 10th day of July, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated November 9, 2011 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

COTTON SURVEYING COMPANY



Bruce G. Parker, President

Date: 7/10/13



Martin G. Hicks, RPLS

Date: 7/17/13

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$350,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Cotton Surveying Company)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Cotton Surveying Company ("Contractor"), to be effective the 9th day of July, 2014.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated November 9, 2011 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and amended by Addendum No. 1 on July 10, 2013 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

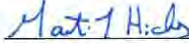
1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

COTTON SURVEYING COMPANY



Bruce G. Parker, President Date: 7/9/14



Martin G. Hicks, RPLS Date: AUGUST 26, 2014

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$450,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Courthouse Specialists

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into this 12th day of May, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Courthouse Specialists, Integrity Title Company, LLC (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the Parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain right of way acquisition and related technical services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall

include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Contractor shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II.
COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of B+/VII or better and licensed to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.

- B. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- C. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's compensation insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law.

Section 3.04. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.09. Document Ownership. All documents and reports produced in connection with this Agreement (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.10. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.11. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.11. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.13. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.14. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

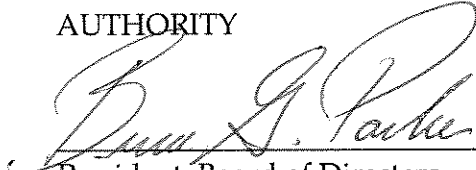
Section 3.15. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.16. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



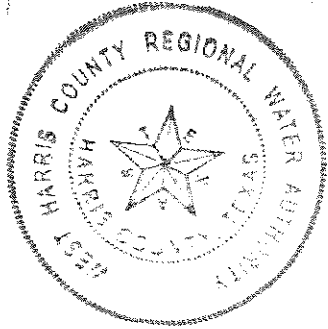
President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)



COURTHOUSE SPECIALISTS,
INTEGRITY TITLE COMPANY, LLC

By: 

Name: Paul Cones

Title: President



**COURTHOUSE
SPECIALISTS**

PROFESSIONAL RESEARCH SERVICES
P.O. BOX 70558 • HOUSTON, TX 77270-0558

P.O. BOX 70558
HOUSTON, TEXAS 77270
713/683-4027

March 31, 2010

Mr. Wayne Ahrens, P.E.,
Program Manager
West Harris County Regional Water Authority
c/o Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Ref: Fee Proposal for Abstracting Services

Dear Mr. Ahrens:

Thank you for requesting information from Courthouse Specialists. We appreciate the opportunity to help with this project in Harris County.

The research will include approximately fifty tracts along the former Exxon easement, providing the underlying fee ownership, title history of the former Exxon easement, and all easements across the fee owners' tracts. The cost of the Limited Title Certificate research is as follows:

RESEARCH:

Underlying fee ownership, title history of the former Exxon easement with any amendments, and all easements across the fee owner's tract

\$300 per tract for up to 4 hours of time, plus \$75 each additional hour required above 4 hours

Copies

\$0.50 per page

Thank you for allowing us to help with this project. Please call if you have any questions. We look forward to helping with your request.

Sincerely,

Paul Cones
President
Courthouse Specialists
Integrity Title Company, LLC

Quote Accepted:

Date:

5-14-2010

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Courthouse Specialists, Integrity Title Company, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Courthouse Specialists, Integrity Title Company, LLC ("Contractor"), to be effective the 10th day of November, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated May 12, 2010 (the "Agreement") to perform certain professional right-of-way acquisition services and other related technical services that may be required; and

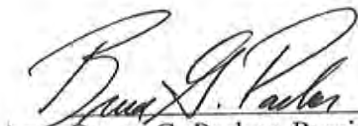
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

COURTHOUSE SPECIALISTS,
INTEGRITY TITLE COMPANY, LLC


Bruce G. Parker, President

Date: 11-10-2011

 Date: 12-20-2010

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$75,000.00 which includes the following Work Authorizations and any future work authorizations:

Work Authorization No. 1	\$15,000.00
Work Authorization No. 2	\$25,200.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Courthouse Specialists, Integrity Title Company, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Courthouse Specialists, Integrity Title Company, LLC ("Contractor"), to be effective the 8th day of May, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated May 12, 2010 (the "Agreement") to perform certain professional right-of-way acquisition services and other related technical services that may be required; and amended by Addendum No. 1 on November 10, 2010.

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

COURTHOUSE SPECIALISTS,
INTEGRITY TITLE COMPANY, LLC



Bruce G. Parker, President

Date: 5/8/13



Date: 5/13/13

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$200,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Dannenbaum Engineering Corporation (DEC)

**DANNENBAUM ENGINEERING CORPORATION
LETTER OF AGREEMENT
FOR CONSULTING SERVICES**

This Agreement is made and entered into this 6th day of June, 2001, by and between Dannenbaum Engineering Corporation of Harris County, Texas (hereinafter called the "Engineer"), and West Harris County Regional Water Authority (hereinafter called the "Authority").

That whereas the Authority has requested basic services of the Engineer in relation to:

General Engineering Consultant Services for the operation of the West Harris County Regional Water Authority (herein called the "Project") to include but not be limited to:

- a. Providing general engineering services as needed
- b. Attending meetings of the Authority, Districts within the Authority, and other agencies
- c. Completion of a Water Rate Study
- d. Preparation of a Ground Water Reduction Plan
- e. Preliminary and final design of water supply facilities

NOW, THEREFORE, the AUTHORITY and the ENGINEER, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Upon receipt of the executed copy of this Agreement, the Engineer will perform services to provide the Authority with the data, information or opinion requested, proceed with the work as expeditiously as practical, inform the Authority of any delays and provide to the Authority with a minimum of two formalized copies of the final product or findings.

The Authority will place at the Engineer's disposal all available information pertinent to the Project including previous reports and any other relative data and will arrange for and provide access to the Engineer, without liability of any nature to the Engineer except for Engineer's own misconduct, to enter upon public and private lands as required for the Engineer to perform his work under this Agreement.

Payments for services of the Engineer will be based on payroll costs of salaries and wages times a factor for general overhead and profit (see Exhibit "A"). Reimbursable expenses, or services and expenses of sub-consultants, will be charged at Engineer's cost. Any reimbursable expenses, or services and expenses of sub-consultants, in excess of \$2,000 will be invoiced directly to the Authority.

Reimbursable expenses shall mean the Engineer's actual expense of transportation and subsistence of principals, employees and consultants when traveling in connection with the Project, consultant's fees, field office expenses, toll telephone calls and telegrams, reproduction of reports, drawings and similar Project related items.

Payments for services, additional services and reimbursable expenses shall be made by the Authority within sixty (60) days after receipt of Engineer's statement.

Termination of this Agreement prior to completion must be made in writing and may be made by either party. If this Agreement is terminated at any time by either party, the Engineer shall be paid for services actually performed.

If, prior to termination of this Agreement, any work is suspended in whole or in part for more than three months, or abandoned, after written notice from the Authority, the Engineer shall be paid for services performed prior to receipt of such notice from the Authority.

All documents, including original drawings, estimates, specifications, field notes and data are and shall remain the property of the Engineer as instruments of service. The Authority may at his expense obtain a set of reproducible.

NOTWITHSTANDING anything to the contrary herein, all fees and charges due to Dannenbaum Engineering Corporation under this agreement shall be paid only from funds raised by the Authority. None of the members of the Board of Directors of the Authority have any personal liability of any nature or amount for any of the fees or charges due hereunder.

The parties hereto have made and executed this Agreement the day and year first above written.


CLIENT:

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY



ENGINEER:

DANNENBAUM ENGINEERING
CORPORATION



Wayne G. Ahrens, P.E.
Principal

EXHIBIT "A"
DANNENBAUM ENGINEERING CORPORATION
SCHEDULE OF HOURLY SALARY COST

MARCH, 2001

<u>RANGE OF CLASSIFICATION</u>	<u>SALARY COST PER HOUR</u>	
Clerks, Printers, etc.	25.00	- 55.00
Secretaries	35.00	- 65.00
Executive Secretary, Administrative Asst., Proposal Asst.	65.00	- 85.00
CAD Manager	85.00	- 110.00
System Analyst, Computer Operators	60.00	- 85.00
Computer Technicians I, Draftsmen I	25.00	- 50.00
Computer Technicians II & III, Draftsmen II & III	45.00	- 85.00
Designers, Grade I & II	60.00	- 85.00
Designers, Grade III	70.00	- 100.00
4 Man Survey Crew	120.00	- 165.00
3 Man Survey Crew	95.00	- 140.00
2 Man Survey Crew	65.00	- 110.00
Party Chief	45.00	- 70.00
Instrument Technicians	25.00	- 50.00
Rodmen, Chainmen	20.00	- 35.00
Survey Coordinator, Project Surveyor	80.00	- 115.00
Director of Survey, Registered Surveyor	110.00	- 150.00
Inspectors, Project Representatives	50.00	- 85.00
Engineers I & II, Engineering Assistant	50.00	- 80.00
Engineers III, Engineering Associate	65.00	- 100.00
Engineers IV	75.00	- 110.00
Engineers V, Project Manager	100.00	- 150.00
Engineers VI, Principal, Division Manager, Project Director	135.00	- 250.00

COMPUTER COSTS (NO MARK-UP INCLUDED):

MICROSTATION/AUTOCAD: \$ 10 per Workstation Hour

GPS RTK: \$350 per Day (Survey)

IN HOUSE REPRODUCTION COSTS (NO MARK-UP INCLUDED):

Xerox	\$ 0.05 per Copy (8 1/2" x 11")
Xerox Prints	\$ 1.00 per Square Foot
Bluelines	\$ 0.20 per Square Foot
Sepias	\$ 1.50 per Square Foot
Mylars	\$ 3.75 per Square Foot
Vellum	\$ 2.30 per Square Foot

PROFESSIONAL ENGINEERING SERVICES AGREEMENT

This Professional Engineering Services Agreement (this "Agreement") is by and between West Harris County Regional Water Authority (the "Authority") and Dannenbaum Engineering Corporation ("Engineer") and is effective as of this 13th day of October, 2010.

RECITALS

WHEREAS, the Authority has previously executed that certain Dannenbaum Engineering Corporation Letter of Agreement for Consulting Services dated June 6, 2001 (the "Letter Agreement");

WHEREAS, the Authority wishes to engage Engineer to perform certain professional engineering services ("Services");

WHEREAS, this Agreement is intended to supersede and replace the Letter Agreement; provided, however, that any outstanding Work Authorizations approved pursuant to the Letter Agreement shall remain in full force and effect and shall hereafter be subject to the terms and conditions of this Agreement;

AGREEMENT

NOW, THEREFORE, for the mutual promises and benefits contained herein, the parties agree as follows:

I. ENGINEER'S RESPONSIBILITIES. Engineer agrees to perform or furnish professional engineering services for the Authority as set out herein and to give professional engineering consultation and advice to the Authority in its capacity as the Authority's Engineer for the compensation set forth herein.

A. SCOPE OF SERVICES. There are two types of Services provided under this Agreement: Program and Construction Management Services and Additional Services.

1. Program and Construction Management Services.

The Authority and Engineer understand and agree that routine program management and construction management services ("Program and Construction Management Services") shall include the following:

- a. Attending meetings of the Authority and representing the Authority at meetings and conferences;
- b. On-site inspections of facilities;
- c. Preparing letter reports;
- d. Correspondence with regulatory agencies;
- e. Renewing or amending permits;
- f. Managing design consultants;
- g. Reviewing construction plans and specifications;
- h. Coordinating with Authority operator and other consultants;
- i. Communication among service providers; and
- j. Other miscellaneous items of work relating to routine operations and business of the Authority.

Engineer shall attend the regular monthly meetings of the Authority. Program and Construction Management Services do not require a separate Work Authorization, as defined below.

2. Additional Services.

Additional Services shall include the following:

1. Field surveys to collect information required for design, including photogrammetry, and related office computations and drafting.
2. Special studies and analysis relating to the Authority's facilities.
3. Services of a resident project representative ("Project Representative"), and other field personnel as requested or agreed to by the Authority for extensive continuous or part-time on-the-site observation of construction and for performance of required construction layout surveys.
4. Preparation and submittal of funding applications to the Texas Water Development Board ("TWBD"), including related appearances before the TWBD.
5. Land surveys and establishment of boundaries and monuments, and related office computations and drafting.

6. Construction and control staking to delineate the location of all improvements.
7. Preparation of property or easement descriptions.
8. Preparation of any special reports required for marketing of bonds.
9. Appearances before regulatory agencies for any purpose other than approval of design drawings and documents.
10. Assistance to the Authority as an expert witness in any litigation with third parties arising from the development or construction of Authority projects.
11. Special investigations involving detailed consideration of operation, maintenance and overhead expenses; preparation of rate schedules; and special feasibility studies.
12. Soil and foundation investigations coordination, including field and laboratory tests, borings, related engineering analyses, and recommendations.
13. Detailed mill, shop and/or laboratory inspection of materials and equipment.
14. Travel and subsistence required of Engineer and authorized by the Authority.
15. Additional copies of reports, specifications, and additional copies of drawings over five copies.
16. Preparation of applications and supporting documents for government grants or planning advances for public works projects.
17. Preparation of environmental statements and assistance to owner in preparing for and attending public hearings.
18. Revision of design drawings after a definite plan has been approved by the Authority.
19. Any other Services approved in a Work Authorization not specifically described herein.

B. WORK AUTHORIZATIONS. All Services, other than Program and Construction Management Services as defined below, shall require a written work authorization ("Work Authorization"), and each Work Authorization shall include:

- a. Description of work;
- b. Description of support data to be supplied by the Authority;
- c. Basis of compensation;
- d. Budget of estimated fees;
- e. Completion schedule;
- f. Statement that performance of the work will be in accordance with this Agreement;
- g. Proposed project manager or administrator, if applicable;
- h. Special provisions applicable to the Work Authorization;
- i. Engineer's signature and date;
- j. Approval and signature block for Authority; and
- k. Effective date of Authority's acceptance and date of authorization.

II. COMPENSATION, BILLING, AND PAYMENT. The Authority shall pay Engineer for Services in accordance with the following:

A. PROGRAM AND CONSTRUCTION MANAGEMENT SERVICES. The Authority shall pay Engineer for Program and Construction Management Services based on time and materials plus reimbursable expenses in accordance with the Rate Schedule attached hereto as **Exhibit A**.

B. ADDITIONAL SERVICES. The Authority shall pay Engineer for Additional Services based either on (i) time and materials plus reimbursable expenses in accordance with the Rate Schedule attached hereto as **Exhibit A** or (ii) a lump sum basis, each as determined in the applicable Work Authorization.

C. PAYMENTS. Engineer shall submit monthly written invoices for services performed during the preceding month to the Authority's bookkeeper, and the Authority will use its best efforts to make payment within forty-five (45) days of receipt of invoice. Unless special arrangements are made, if the Authority fails to make payment within 45 days after receipt of Engineer's invoice therefor, the amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate allowed by law, if less), from the 46th day. In the event of disputed or contested billing, only that portion so contested may be withheld from payment, and the undisputed portion will be paid. No interest will accrue on any contested portion of the billing until mutually resolved.

III. STANDARD TERMS AND CONDITIONS.

A. STANDARD OF CARE. Engineer's services shall be performed in accordance with the standard of professional practice ordinarily exercised by professional engineers at the time and within the locality where the Services are performed commensurate with the requirements of the civil engineering profession and through persons ordinarily engaged therein.

B. DELAYS. If events beyond the control of the Authority or Engineer, including, but not limited to, fire, flood, explosion, riot, stroke, war, process shutdown, act of God or the public enemy, and act or regulation of any government agency, result in delay to any schedule established in this Agreement, such schedule shall be amended to the extent necessary to compensate for such delay. In the event such delay exceeds ninety (90) days, Engineer shall be entitled to an equitable adjustment in compensation if mutually agreeable to the Engineer and the Authority.

C. TERMINATION/SUSPENSION. Either party may terminate this Agreement upon thirty (30) days written notice to the other party. The Authority shall pay Engineer for all Services rendered prior to termination. Copies of all completed or partially completed designs, drawings, specifications, reports or any other document prepared by Engineer pursuant to this Agreement shall be delivered to the Authority within fourteen (14) days of the effective date of termination, at no additional cost to the Authority. In the event either party defaults in its obligations under this Agreement (including Authority's obligation to make the payments required hereunder), the non-defaulting party may suspend performance under this Agreement after seven (7) days written notice stating its intention to suspend performance under the Agreement if cure of such default is not commenced and diligently continued.

D. OPINIONS OF CONSTRUCTION COST. Any opinion of probable construction costs prepared by Engineer is supplied for the general guidance of the Authority only. Because Engineer has no control over competitive bidding or market conditions, Engineer cannot guarantee the accuracy of such opinions as compared to contract bids or actual costs to the Authority.

E. RELATIONSHIP WITH CONTRACTORS. Engineer shall serve as the Authority's professional representative for the Services, and may make recommendations to the Authority concerning actions relating to the Authority's contractors, but Engineer specifically disclaims any authority to direct or supervise the means, methods, techniques, sequences or procedures of construction selected by the Authority's contractors.

F. INSURANCE. Engineer shall furnish certificates of insurance to the Authority evidencing compliance with the insurance requirements hereof. Certificates

shall name Engineer, name of insurance company, policy number, term of coverage, and limits of coverage. Engineer, shall cause its insurance companies to provide the Authority with at least thirty (30) days prior written notice of any reduction in the limit of liability by endorsement of the policy, cancellation or non-renewal of the insurance coverage required under this Agreement. Engineer shall obtain such insurance from such companies having a Bests rating of B+/VII or better, licensed or approved to transact business in the state in which the Services shall be performed, and shall obtain such insurance of the following types and minimum limits:

1. Worker's Compensation insurance in accordance with the laws of the State of Texas, and Employers' liability coverage with a limit of not less than \$500,000 each employee for Occupational Disease: \$500,000 policy limit for Occupational Disease; and Employer's Liability of \$500,000 each accident.
2. Commercial General Liability insurance including coverage for Products/Completed Operation, Blanket Contractual, Contractors' Protective Liability Broad Form Property Damage, Personal Injury/Advertising Liability, and Bodily Injury and Property Damage with limits of not less than

\$2,000,000	general aggregate limit
\$1,000,000	each occurrence, combined single limit
\$1,000,000	aggregate Products, combined single limit
\$1,000,000	aggregate Personal Injury/Advertising Liability
3. Business Automobile Liability coverage applying to owned, non-owned and hired automobiles with limits not less than \$1,000,000 each occurrence combined single limit for Bodily Injury and Property Damage combined.
4. Umbrella Excess Liability insurance written as excess of Employer's Liability, with limits not less than \$2,000,000 each occurrence combined single limit.
5. Professional Liability insurance with limits not less than \$2,000,000 each claim/annual aggregate.

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverages required above, except those in paragraphs (1) and (5). All policies written on behalf of Engineer shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees, with the exception of insurance required under paragraph (5). In addition, all of the aforesaid policies shall be endorsed to provide that they are primary coverages and not in excess of any other insurance available to the Authority, and without rights of contribution or recovery

against the Authority or from any such other insurance available to the Authority. The Engineer, and not the Authority, shall be responsible for paying the premiums and deductibles, if any, that may from time to time be due under all of the insurance policies required of the Engineer.

G. INDEMNITY. ENGINEER SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE AUTHORITY, ITS DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND ASSIGNS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES AND EXPENSES, COURT COSTS, AND OTHER EXPENSES INCURRED IN ENFORCING THIS INDEMNITY PROVISION) OR FROM ANY OTHER LOSS OR CLAIM ARISING FROM THIRD PARTY PERSONAL INJURY OR PROPERTY DAMAGE BROUGHT BY ENGINEER OR ANY OF ENGINEER'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENT ACT OR, OMISSION, OR MISCONDUCT OF ENGINEER'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES.

H. INDEPENDENT CONTRACTOR. In the performance of work or Services herein agreed to, Engineer shall be deemed an independent contractor, and any of its employees performing work required hereunder shall be deemed solely employees of Engineer, or its subcontractors where appropriate.

I. OWNERSHIP OF DOCUMENTS. All documents, including original drawings, estimates, specifications, periodic construction progress notes, and data (collectively, the "Documents") shall be the property of the Authority, provided that Engineer has received full compensation due pursuant to the terms of this Agreement, in consideration of which it is mutually agreed that the Authority will use them solely in connection with the project for which such documents were designed, except with the express consent of Engineer, which consent will not be unreasonable withheld. Engineer may retain reproducible copies of such documents at Engineer's sole cost and expense. The Engineer agrees that it shall not reuse any portion of the Documents that is unique to the Authority's projects or projects for any other client, without the express written consent of the Authority, which consent will not be unreasonably withheld.

J. ADDRESS OF NOTICE AND COMMUNICATIONS. All notices and communications under this Agreement to be mailed or delivered to the Engineer shall be to the following address:

Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098
Attn. Mr. Wayne Ahrens, P.E.

All notices and communications under this Agreement to be mailed or delivered to the Authority shall be to the following address:

West Harris County Regional Water Authority
c/o Allen Boone Humphries Robinson LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027
Attn: Mr. James A. Boone

K. AMENDMENT. This Agreement, upon execution by both parties hereto, can be amended only by a written instrument signed by both parties.

L. ASSIGNMENT. The rights and obligations of this Agreement may be assigned by either party only upon written agreement of the other party. This Agreement shall be binding upon and inure to the benefit of any permitted assigns.

M. NO WAIVER. No waiver by either party or any default by the other party in the performance of any particular section of this Agreement shall invalidate any other section of this Agreement or operate as a waiver of any future default, whether like or different in character.

N. NO THIRD-PARTY BENEFICIARY. Nothing contained in this Agreement, nor the performance of the parties hereunder, is intended to benefit, nor shall inure to the benefit of, any third party, including the Authority's contractors, if any.

O. SEVERABILITY. The various terms, provisions and covenants herein contained shall be deemed to be separate and severable, and the invalidity or unenforceability of any of them shall not affect or impair the validity or enforceability of the remainder.

P. RECITALS. The recitals written above are hereby found to be true and correct and incorporated in this Agreement for all purposes.

Q. AUTHORITY. The persons signing this Agreement warrant that they have the authority to sign as, or on behalf of, the party for whom they are signing.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY
REGIONAL WATER AUTHORITY

By:  _____

Bruce Parker

President, Board of Directors

DANNENBAUM ENGINEERING
CORPORATION

By:  9/29/10

Name: WAYNE G. AHRENS

Title: EXECUTIVE VICE PRESIDENT

EXHIBIT A
RATE SCHEDULE

EXHIBIT "A"
DANNENBAUM ENGINEERING CORPORATION
SCHEDULE OF HOURLY BILLING RATE

SEPTEMBER 2010

<u>RANGE OF CLASSIFICATION</u>	<u>BILLING RATE PER HOUR</u>
Clerks, Printers, etc.	40.00
Secretaries	65.00
Executive Secretary, Administrative Asst., Proposal Asst.	85.00
CAD Manager	90.00
System Analyst, Computer Operators	75.00
Computer Technicians I, Draftsmen I	50.00
Computer Technicians II & III, Draftsmen II & III	83.00
Designers, Grade I & II	83.00
Designers, Grade III	110.00
3 Man Survey Crew	165.00
2 Man Survey Crew	130.00
1 Man Survey Crew	115.00
Party Chief	77.00
Instrument Technicians	49.00
Rodmen, Chainmen	42.00
Survey Coordinator, Project Surveyor	140.00
Director of Survey, Registered Surveyor, Chief of Surveying	150.00
Inspector I	58.00
Inspector II, Project Representative	69.00
Senior Project Representative	98.00
Engineers I & II, Engineering Assistant	92.00
Engineers III, Engineering Associate	115.00
Engineers IV	130.00
Engineers V	165.00
Engineers VI	200.00
Principal, Project Director	250.00

GPS RTK: \$350.00/Day (Survey)

IN HOUSE REPRODUCTION COSTS (NO MARK-UP INCLUDED):

Xerox	\$ 0.05 per Copy (8 1/2" x 11")
Bluelines	\$ 0.20 per Square Foot
Sepias	\$ 1.50 per Square Foot
Mylars	\$ 3.75 per Square Foot
Vellum	\$ 2.30 per Square Foot

**FIRST AMENDMENT TO PROFESSIONAL ENGINEERING SERVICES
AGREEMENT**

This First Amendment to Professional Engineering Services Agreement (this "Amendment") is by and between West Harris County Regional Water Authority (the "Authority") and Dannenbaum Engineering Corporation ("Engineer") and is effective as of the 1st day of October, 2011 (the "Effective Date").

RECITALS

WHEREAS, the Authority and the Engineer have previously entered into that certain Professional Engineering Services Agreement dated October 13, 2010 (the "Agreement"); and

WHEREAS, the Authority has entered into that certain Joint Facilities Agreement with North Fort Bend Water Authority, under which the Authority is required to cause certain contractors to agree in writing: (i) to carry liability insurance that names both Authority and North Fort Bend Water Authority as an "additional insured," and (ii) to defend and indemnify both the Owner and North Fort Bend Water Authority for the negligence of such contractor;

AGREEMENT

NOW, THEREFORE, for the mutual promises and benefits contained herein, the parties agree as follows:

I. Section III.F. of the Agreement shall be amended to add the following paragraphs:

Additionally, North Fort Bend Water Authority and its directors shall be added as additional insureds to all coverages required above, except for those requirements of paragraphs "1" and "5," with respect to the Second Source Waterline, as defined herein. All such policies written on behalf of the Engineer shall contain a waiver of subrogation in favor of the North Fort Bend Water Authority and the North Fort Bend Water Authority's directors, with the exception of insurance required under paragraph "5." In addition, all of the aforesaid policies shall be endorsed to provide that they are primary coverages and not in excess of any other insurance available to the North Fort Bend Water Authority, and without rights of contribution or recovery against the North Fort Bend Water Authority or from any such other insurance available to the North Fort Bend Water Authority. The Engineer, and not the North Fort Bend Water Authority, shall be responsible for paying the premiums and deductibles, if any, that may from time to time be due under all of the insurance policies required of the Engineer.

For purposes of this Agreement, the term "Second Source Waterline" shall have the same definition as that provided by the Joint Facilities Agreement for Segment 0, Segment 1A, Bellaire Pump Station, and Second Source Waterline/Pump Stations by and between the Authority and North Fort Bend Regional Water Authority dated July 1, 2011, as amended.

II. Section III.G. of the Agreement shall be amended to add the following paragraph:

AS FURTHER CONSIDERATION FOR THIS AGREEMENT, ENGINEER SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS NORTH FORT BEND WATER AUTHORITY, ITS DIRECTORS, OFFICERS, AGENTS, EMPLOYEES, AND AFFILIATES, FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGEMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING ATTORNEY'S FEES AND EXPENSES, COURT COSTS, AND OTHER EXPENSES INCURRED IN ENFORCING THIS INDEMNITY PROVISION) BROUGHT BY ENGINEER OR ANY OF ENGINEER'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY, SUBCONTRACTORS, OR SUBCONSULTANTS (REGARDLESS OF WHETHER SAME WERE SELECTED BY ENGINEER, AUTHORITY, OR SOME OTHER PARTY), OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENCE OR MISCONDUCT OF ENGINEER'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY, SUBCONTRACTORS, OR SUBCONSULTANTS (REGARDLESS OF WHETHER SAME WERE SELECTED BY ENGINEER, AUTHORITY, OR SOME OTHER PARTY) OR REPRESENTATIVES WITH RESPECT TO SERVICES PERFORMED IN RELATION TO THE SECOND SOURCE WATERLINE, AS DEFINED HEREIN. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE ENGINEER OR ANY SUBCONTRACTOR, SUBCONSULTANT OR AGENT OF THE ENGINEER.

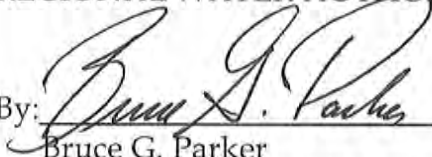
III. With the amendments herein presented, the Agreement remains in full force and effect. No other changes to the terms and conditions of the Agreement are contemplated by these amendments.

[EXECUTION PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment to be effective on the Effective Date in several counterparts, each of which shall be considered as an original.

WEST HARRIS COUNTY
REGIONAL WATER AUTHORITY

By:



Bruce G. Parker
President, Board of Directors

DANNENBAUM ENGINEERING
CORPORATION

By:



Wayne G. Ahrens, P.E.
Executive Vice President

**SECOND AMENDMENT TO PROFESSIONAL ENGINEERING SERVICES
AGREEMENT**

This Second Amendment to Professional Engineering Services Agreement (this "Amendment") is by and between West Harris County Regional Water Authority (the "Authority") and Dannenbaum Engineering Corporation ("Engineer") and is effective as of the 13th day of June, 2012 (the "Effective Date").

RECITALS

WHEREAS, the Authority and the Engineer have previously entered into that certain Professional Engineering Services Agreement dated October 13, 2010 (the "Agreement"); and amended by First Amendment on October 1, 2011.

AGREEMENT

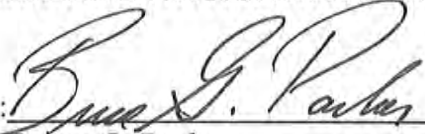
NOW, THEREFORE, for the mutual promises and benefits contained herein, the parties agree as follows:

- I. Section II.A. of the Agreement shall be amended to revise the Rate Schedule to add classification for Right-of-Way Manager as attached hereto as Revised Exhibit A.
- II. With the amendment herein presented, the Agreement remains in full force and effect. No other changes to the terms and conditions of the Agreement are contemplated by this amendment.

[EXECUTION PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment to be effective on the Effective Date in several counterparts, each of which shall be considered as an original.

WEST HARRIS COUNTY
REGIONAL WATER AUTHORITY

By: 
Bruce G. Parker
President, Board of Directors

DANNENBAUM ENGINEERING
CORPORATION

By:  6/12/12
Wayne G. Ahrens, P.E.
Executive Vice President

REVISED EXHIBIT "A"
DANNENBAUM ENGINEERING CORPORATION
SCHEDULE OF HOURLY BILLING RATE

JUNE 2012

<u>RANGE OF CLASSIFICATION</u>	<u>BILLING RATE PER HOUR</u>
Clerks, Printers, etc.	40.00
Secretaries	65.00
Executive Secretary, Administrative Asst., Proposal Asst.	85.00
CAD Manager	90.00
System Analyst, Computer Operators	75.00
Computer Technicians I, Draftsmen I	50.00
Computer Technicians II & III, Draftsmen II & III	83.00
Designers, Grade I & II	83.00
Designers, Grade III	110.00
3 Man Survey Crew	165.00
2 Man Survey Crew	130.00
1 Man Survey Crew	115.00
Party Chief	77.00
Instrument Technicians	49.00
Rodmen, Chainmen	42.00
Survey Coordinator, Project Surveyor	140.00
Director of Survey, Registered Surveyor, Chief of Surveying	150.00
Inspector I	58.00
Inspector II, Project Representative	69.00
Senior Project Representative	98.00
Right-of-Way Manager	165.00
Engineers I & II, Engineering Assistant	92.00
Engineers III, Engineering Associate	115.00
Engineers IV	130.00
Engineers V	165.00
Engineers VI	200.00
Principal, Project Director	250.00

GPS RTK: \$350.00/Day (Survey)

IN HOUSE REPRODUCTION COSTS (NO MARK-UP INCLUDED):

Xerox	\$ 0.05 per Copy (8 ½" x 11")
Bluelines	\$ 0.20 per Square Foot
Sepias	\$ 1.50 per Square Foot
Mylars	\$ 3.75 per Square Foot
Vellum	\$ 2.30 per Square Foot

**THIRD AMENDMENT TO PROFESSIONAL ENGINEERING SERVICES
AGREEMENT**

This Third Amendment to Professional Engineering Services Agreement (this "Amendment") is by and between West Harris County Regional Water Authority (the "Authority") and Dannenbaum Engineering Corporation ("Engineer") and is effective as of the 10th day of December, 2014 (the "Effective Date").

RECITALS

WHEREAS, the Authority and the Engineer have previously entered into that certain Professional Engineering Services Agreement dated October 13, 2010 (the "Agreement"); and amended by First Amendment on October 1, 2011 and the Second Amendment on June 13, 2012.

AGREEMENT

NOW, THEREFORE, for the mutual promises and benefits contained herein, the parties agree as follows:

- I. Section II.A. of the Agreement shall be amended to revise the Rate Schedule to as attached hereto Revised Exhibit A.
- II. With the amendment herein presented, the Agreement remains in full force and effect. No other changes to the terms and conditions of the Agreement are contemplated by this amendment.

[EXECUTION PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have executed this Amendment to be effective on the Effective Date in several counterparts, each of which shall be considered as an original.

WEST HARRIS COUNTY
REGIONAL WATER AUTHORITY

By: 

President, Board of Directors

DANNENBAUM ENGINEERING
CORPORATION

By: 

Wayne G. Ahrens, P.E.
Executive Vice President

REVISED EXHIBIT "A"
DANNENBAUM ENGINEERING CORPORATION
SCHEDULE OF HOURLY BILLING RATE

December 2014

RANGE OF CLASSIFICATION

BILLING RATE PER HOUR

Clerks, Printers, etc.	40.00
Secretaries	70.00
Executive Secretary, Administrative Asst., Proposal Asst.	95.00
CAD Manager	119.00
System Analyst, Computer Operators	108.00
Computer Technicians I, Draftsmen I	54.00
Computer Technicians II & III, Draftsmen II & III	87.00
Designers, Grade I & II	87.00
Designers, Grade III	130.00
3 Man Survey Crew	165.00
2 Man Survey Crew	130.00
1 Man Survey Crew	115.00
Party Chief	85.00
Instrument Technicians	50.00
Rodmen, Chainmen	42.00
Survey Coordinator, Project Surveyor	145.00
Director of Survey, Registered Surveyor, Chief of Surveying	170.00
Inspectors, Project Representatives	75.00
Senior Project Representative	104.00
Right-of-Way Manager	165.00
Engineers I & II, Engineering Assistant	92.00
Engineers III, Engineering Associate	115.00
Engineers IV	144.00
Engineers V	170.00
Engineers VI	225.00
Principal, Project Director	300.00

GPS RTK:

\$350.00/Day (Survey)

IN HOUSE REPRODUCTION COSTS (NO MARK-UP INCLUDED):

Xerox	\$ 0.05 per Copy (8 1/2" x 11")
Bluelines	\$ 0.20 per Square Foot
Sepias	\$ 1.50 per Square Foot
Mylars	\$ 3.75 per Square Foot
Vellum	\$ 2.30 per Square Foot

Deal Sikes & Associates

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into as of this 13th day of October, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Deal Sikes & Associates (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain appraisal services described in Exhibit A (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with Exhibit A and shall be dated when approved. All fees described in the Work Authorization shall include charges for labor,

materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Contractor shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY,**

COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having either (i) a Best's rating of B+ or better and

licensed to transact business in the State of Texas, or (ii) a Best's rating of A- or better and admitted to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$500,000
 - b. General aggregate - \$1,000,000
 - c. Products-Completed Operations Aggregate - \$500,000
 - d. Personal & Advertising Injury - \$500,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$1,000,000/\$1,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD

HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control. Notwithstanding anything contained in any attachments or exhibits hereto, the Authority shall not be required to provide insurance for the Contractor or indemnify the Contractor.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the

other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY

President, Board of Directors

ATTEST

Secretary, Board of Directors

(SEAL)

DEAL SIKES & ASSOCIATES

By: 

Name: Matthew C. Deal

Title: Owner

EXHIBIT A

DEAL · SIKES
& a s s o c i a t e s
REAL ESTATE VALUATION & COUNSELING

September 24, 2010

Board of Directors of the West Harris County
Regional Water Authority
o/o Mr. Alex E. Garcia
Allen Boone Humphries Robinson, LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

**Re: Real Property Valuation Retention Contract in conjunction with the Second Source
Water Line Project**

Dear Board of Directors:

Thank you for the opportunity to present our professional services. This agreement specifies the nature of the requested assignment and the financial terms concerning payment for our fees.

Please contact us with questions concerning this agreement. We look forward to working with you on this project.

1.0 Parties.

Deal Sikes & Associates ("DSA") will provide real property valuation services for the West Harris County Regional Water Authority (the "Authority").

The relationship between DSA and the Authority under this agreement and otherwise shall be that of independent contractor. DSA is not by the terms of this agreement or otherwise, an agent, employee, or representative of the Authority.

2.0 Scope of the Assignment.

The scope of our assignment includes providing appraisal services in connection with the acquisition of certain parcels to be designated by the Authority that are related to the Authority's water line facilities, and other related facilities, along the route shown on Exhibit A attached hereto (the "Second Source Line Project Route Map").

3.0 Fees and Expenses.

Once individual parcels have been identified the Parties will agree upon fixed fees for developing opinions of market value and submitting appraisal reports. Professional fees for additional services performed shall be billed on an hourly rate basis, and DSA's time will be tracked and invoiced to the nearest ¼ of an hour at the attached hourly rates presented on Exhibit B attached hereto ("Deal Sikes & Associates Hourly Rate Schedule").

In addition to our fees, expenses including but not limited to photocopies, photographs, document storage and retrieval, travel expenses and exhibits, shall also be billed at cost plus 15% for administrative processing.

4.0 Retention.

The parties agree that DSA will only become retained by the Authority once this contract has been mutually executed. While we typically require a retainer prior to engagement, no retainer is requested for this project. DSA has no duties to the Authority until such time as this agreement is executed.

5.0 Payment Terms.

All payments are to be made to:

Deal Sikes & Associates
3901 Bellaire Boulevard, Suite A
Houston, Texas 77025
Taxpayer Identification No.: 26-4118216

All invoices will be paid within sixty (60) days of issuance of the invoice. If the account has not been paid within sixty (60) days of issuance it is past due and an interest rate of 1.5% per month shall accrue to the balance of the account. The Authority is responsible for collecting any and all legal and administrative fees including deposition fees owed by other parties, their counsel and representatives. In the event that these fees are reduced by court order, the Authority shall still pay DSA's full fee specified in this contract. No work product will be provided and no testimony will be given by DSA unless invoices are paid pursuant to this contract.

6.0 Duties of the Authority, Authority's Attorney or Authority's Representatives.

The duty of the Authority, the Authority's Attorney or the Authority's Representatives, specifically includes, but is not limited to:

- a. Abiding by the applicable rules of professional conduct for attorneys.
- b. Making all payments under the terms as specified in Paragraphs 3, 4 and 5.

7.0 Duties of DSA.

- a. To truthfully represent DSA's credentials.
- b. To formulate with honesty and due care and truthfully express DSA's opinion(s) in those areas (and only those areas) where DSA feels qualified to render an opinion and where the Authority has requested an opinion. The Authority agrees that DSA's opinion(s) are not preordained, might be contrary to the Authority's position, and are subject to modification as a result of new or additional information.
- c. DSA is under no duty to provide and express opinions if DSA is given time deadlines or cost-based or other restrictions by the Authority that would not reasonably allow DSA to in good faith formulate and express his opinions with reasonable care.
- d. To prepare written reports if requested.
- e. To meet all reasonable deadlines requested by the Authority.
- f. To retain and preserve (during this engagement) all evidence provided to DSA from the underlying legal matter unless the Authority gives written permission for destructive testing or the like, subject to the requirements of the Texas Appraiser Licensing and Certification Board (TALCB), the Texas Real Estate Commission (TREC), the Uniform Standards of Professional Appraisal Practice (USPAP) and the Appraisal Institute (AI).
- g. To be available on reasonable notice to consult with the Authority. DSA's additional contact information is:

Mr. Matthew C. Deal, CRE
E-mail: mdeal@dealsikes.com
Mobile: (713) 385-1193

Mr. Mark O. Sikes
E-mail: msikes@dealsikes.com
Mobile: (713) 703-3340

8.0 Right of Withdrawal and Termination.

DSA or the Authority shall have the absolute right to withdraw, without any liability, from this agreement upon thirty (30) days written notice.

In the event of withdrawal, the parties agree that the Authority remains fully liable for all accrued but unpaid fees, expenses, and interest through the date of such withdrawal.

9.0 Document/Evidence Retention.

All documents and work product produced by DSA under this agreement (the "Documents") shall be the property of the Authority. It is mutually agreed that the Authority will use such Documents solely in connection with the project covered by the agreement and for no other purposes, except with the express written consent of DSA, which consent will not be unreasonably withheld. Any use of the Documents without the express written consent of DSA shall be at the Authority's sole risk.

DSA shall have no duty to retain any documents, reports, evidence, transcripts, exhibits, e-mails, electronic files or other materials relating to this project for more than thirty (30) days following the termination of this agreement unless required by legal or professional requirements including but not limited to TALCB, TREC, USPAP and AI.

DSA shall return (at the Authority's expense) all records and evidence relating to this project to the Authority if a written request to do so is received by DSA within the thirty (30) days following the termination of this agreement unless retention of such documents is required by legal or professional requirements including but not limited to TALCB, TREC, USPAP and AI.

10.0 Insurance.

DSA shall procure and maintain throughout the term of this Agreement, at its sole cost and expense, insurance of the types and in the minimum amounts set forth below. Upon execution of this Agreement, DSA shall furnish to the Authority certificates of insurance and any endorsement required hereunder issued by the insurance carrier evidencing compliance with the insurance requirements hereof. Certificates shall list DSA, the name of the insurance company, the policy number, the term of coverage, and the limits of coverage. DSA shall cause its insurance companies to provide the Authority with at least thirty (30) days prior written notice of any reduction in the limit of liability by endorsement of the policy, cancellation, or non-renewal of the insurance coverage required under this Agreement. DSA shall obtain such insurance from such companies having a Bests rating of B+/VII or better, licensed to transact business in the State of Texas, and shall obtain such insurance of the following types and minimum limits:

- a. Worker's Compensation insurance in accordance with the laws of the State of Texas, and Employer's Liability coverage with a limit of not less than \$500,000 each employee for Occupational Disease; \$500,000 policy limit for Occupational Disease; and Employer's Liability of \$500,000 each accident.

- b. Commercial General Liability insurance, including coverage for Products/Completed Operation, Blanket Contractual, Contractors' Protective Liability Broad Form Property Damage, Personal Injury / Advertising Liability, and Bodily Injury and Property Damage with limits of not less than
- | | |
|-------------|---|
| \$1,000,000 | general aggregate limit |
| \$500,000 | each occurrence, combined single limit |
| \$500,000 | aggregate Products, combined single limit |
| \$500,000 | aggregate Personal Injury/Advertising Liability |
- c. Business Automobile Liability coverage applying to owned, non-owned and hired automobiles, with limits of not less than \$1,000,000 each occurrence combined single limit for Bodily Injury and Property Damage combined.
- d. Umbrella Excess Liability insurance written as excess of Employer's Liability, with limits not less than \$1,000,000 each occurrence combined single limit.
- e. Professional Liability insurance with limits not less than \$1,000,000 each claim/annual aggregate.

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverages required under this Agreement except for worker's compensation insurance and professional liability insurance, using ISO form CG 2010 (07 04) or equivalent. All policies written on behalf of DSA shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees, with the exception of professional liability insurance. In addition, all of the aforesaid policies shall be endorsed to provide that they are primary coverages and not in excess of any other insurance available to the Authority, and without rights of contribution or recovery against the Authority or from any such other insurance available to the Authority. DSA, and not the Authority, shall be responsible for paying the premiums and deductibles, if any, that may from time to time be due under all of the insurance policies required of DSA.

DSA SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE AUTHORITY, ITS DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND ASSIGNS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES AND EXPENSES, COURT COSTS, AND OTHER EXPENSES INCURRED IN ENFORCING THIS INDEMNITY PROVISION) OR FROM ANY OTHER LOSS OR CLAIM ARISING FROM THIRD PARTY PERSONAL INJURY OR PROPERTY DAMAGE BROUGHT BY DSA OR ANY OF DSA'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENT ACT OR, OMISSION, OR MISCONDUCT OF DSA'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES.

11.0 Miscellaneous.

- a. Each party agrees that it may not assign its interest, rights or duties under this Contract to any other person or entity without the other party's prior approval. (DSA is under no duty to work for successor law firms on the underlying legal matter.)
- b. The performance of this contract by either party is subject to acts of God, death, disability, government authority, disaster or other emergencies, any of which make it illegal or impossible to carry out the agreement.
- c. It is provided that this contract may be terminated for any one or more of such reasons by written notice from one party to the other without liability.
- d. If either party agrees to waive its right to enforce any term of this contract, it does not waive its right to enforce any other terms of this contract.
- e. This written contract represents the entire understanding between DSA and the Authority.
- f. The individual signing this contract on behalf of the Authority represents and warrants that he/she is duly authorized to bind the Authority.
- g. DSA's engagement and fees for this assignment are not contingent upon DSA's opinions to be formulated and reported.

If this agreement is acceptable, please execute this contract and return the original to Deal Sikes & Associates.

Thank you for the opportunity to be of service. Please contact me if you have any questions. We look forward to working with you on this assignment.

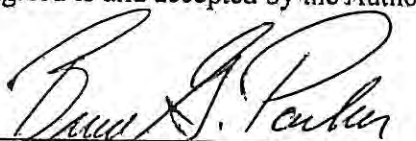
Sincerely,

DEAL SIKES & ASSOCIATES


Matthew C. Deal, CRE

September 29, 2010
Date

Agreed to and accepted by the Authority:


Signature

10-13-10
Date

Bruce Parker
Print Name
Authorized Representative of:
West Harris County Regional Water Authority

- Exhibits: A) Second Source Line Project Route Map
 B) Deal Sikes & Associates Hourly Rates

Reference No.: 2010-1197

EXHIBIT A

Second Source Line Project Route Map

EXHIBIT B

Deal Sikes & Associates Hourly Rate Schedule

DEAL SIKES & ASSOCIATES HOURLY RATE SCHEDULE

September 24, 2010

Matthew C. Deal, CRE	\$260.00
Mark O. Sikes	\$230.00
State Certified Appraiser/Consultant	\$180.00
Associate Appraiser/Consultant	\$130.00
Research Assistant	\$80.00

These hourly rates are subject to change upon written notice and approval by Deal Sikes & Associates and the Authority.

**ADDENDUM No. 1 TO MASTER SERVICES AGREEMENT FOR
PROFESSIONAL SERVICES
(Deal Sikes & Associates)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Appraisal Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Deal Sikes & Associates ("Contractor"), to be effective the 8th day of December, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services dated October 13, 2010 (the "Agreement") to perform appraisal services and other related professional services that may be required; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

DEAL SIKES & ASSOCIATES


Bruce G. Parker, President Date: 12/8/10


Matthew C. Deal, Owner Date: 11/5/10

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$50,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 2 TO MASTER SERVICES AGREEMENT FOR
PROFESSIONAL SERVICES
(Deal Sikes & Associates)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Appraisal Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Deal Sikes & Associates ("Contractor"), to be effective the 14th day of August, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services dated October 13, 2010 (the "Agreement") to perform appraisal services and other related professional services that may be required; and amended on December 8, 2010 by Addendum No. 1 to increase the potential maximum amount that Contractor may earn for all Work Authorizations, and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

DEAL SIKES & ASSOCIATES


Date: 8/14/13
Bruce G. Parker, President


Date: 8/7/13
Matthew C. Deal, Owner

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Fox Appraisal Company, LLC
(formerly Fox & Bubela, Inc.)

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into as of this 11th day of December, 2013, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Fox Appraisal Company, LLC, a Texas limited liability company (the "Contractor").

RECITALS

WHEREAS, the Authority previously engaged Fox & Bubela, Inc. pursuant to a Master Services Agreement dated October 13, 2010 (the "Fox & Bubela Agreement"), as amended, which corporation has since been dissolved, and this Agreement shall supersede and replace the Fox & Bubela Agreement; and

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain appraisal services described in **Exhibit A** (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement, and in accordance with **Exhibit B**. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders

and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit B** and shall be dated when approved. All fees described in the Work Authorization shall include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Contractor shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority,

that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III.

GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against

Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having either (i) a Best's rating of B+ or better and licensed to transact business in the State of Texas, or (ii) a Best's rating of A- or better and admitted to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$500,000
 - b. General aggregate - \$1,000,000
 - c. Products-Completed Operations Aggregate - \$500,000
 - d. Personal & Advertising Injury - \$500,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$1,000,000/\$1,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF

EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control. Notwithstanding anything contained in any attachments or exhibits hereto, the Authority shall not be required to provide insurance for the Contractor or indemnify the Contractor.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time.

Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of

the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST

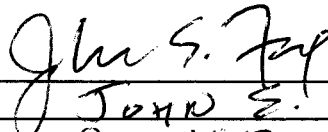


Secretary, Board of Directors

(SEAL)



FOX APPRAISAL COMPANY, LLC
a Texas limited liability company

By: 

Name: John E. Fox
Title: OWNER

EXHIBIT A



December 3, 2013

Board of Directors
West Harris County Regional Water Authority
c/o: Ms. Alia Vinson
Allen Boone Humphries Robinson LLP
3200 Southwest Freeway, Ste 2600
Houston, TX 77027

RE: *Second Source Water Line Appraisal Proposal*

To Whom It May Concern:

At your request, my firm can provide appraisal services as they relate to the above referenced project. We will provide appraisal services in connection with the acquisition of certain parcels to be designated by the West Harris County Regional Water Authority (the "Authority") that are related to the Authority's water line facilities, and other related facilities, along the route known as the "Second Source Line". "Upon identification of the parcel to be appraised, we will provide a lump-sum fee proposal for the preparation and completion of an appraisal report determining the compensation owed for the proposed acquisition of the parcel."

Although appraisal fees can vary depending on if we are valuing improvements or not, the typical appraisal fee for a project of this type would be \$3,500 and range up to \$5,500. We would be providing a summary type report in duplicate to meet the timing requirements set by the "Authority". If work outside the scope of an appraisal is needed, my hourly rate is \$200 per hour, and my associates rates are \$100 per hour.

Fox Appraisal Company currently has seven appraisers including myself. We have worked on multi-parcel projects for various authorities, including TxDot, METRO, and Fort Bend County. Attached is my qualifications and state certification. Information regarding the firm can be found on our website at www.foxappraisalco.com. Please contact me if there is any additional information that you would need.

Very truly yours,

A handwritten signature in black ink, appearing to read 'John E. Fox'.

John E. Fox
State Certified
TX-1321057-G

JF/13-209-att

EXHIBIT B

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$50,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "A". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Fugro Consultants, Inc.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into this 14th day of May, 2014, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Fugro Consultants, Inc. (the "Contractor").

WR
1 May 2014

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain geotechnical engineering services, further described in the Work Authorizations (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical numerical order beginning with Exhibit A or Exhibit WA-01 and shall be dated when approved. All fees described in

WR

the Work Authorization shall include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$50,000.00, unless otherwise amended.

Option 1 - Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 - Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit B**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

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Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied ("Funds"), unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. All Services shall be of good quality and shall be performed in a professional manner. Contractor covenants with the Authority to furnish its skill and judgment in performing the Services for the Authority with a standard of care commensurate with the professional standards for services of a similar nature under similar conditions at the same time and in the same general locality. Contractor agrees to furnish efficient business administration and superintendence and to use reasonable efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that

the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled without at least seven days prior written notice to the Authority. If such coverages are modified, Contractor shall give Authority at least seven days prior written notice, including details of the proposed modification. Renewal certificates shall be provided prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury - \$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000"

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's compensation insurance, employer's liability insurance, and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, TO THE PROPORTIONATE EXTENT WHICH ARISE DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement according to the specifications and requirements of this Agreement.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]



WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)



CONTRACTOR: FUGRO CONSULTANTS, INC.

By: *Robert P. Ringholz*
Name: Robert P. Ringholz
Title: V.P.

/6 Apr 2014



PROFESSIONAL AND TECHNICAL FEES

1.0 Analysis, Consultation, and Report Preparation. Fees for our professional services, including project administration, are based on the time of professional, technical, and other support personnel directly applied to the project. Personnel participating in judicial proceedings, whether it be expert or witness testimony, delivery of depositions, consultation to legal counsel, or preparation for such, will be billed at 1.5 times the standard rates quoted below. Rates for overtime, weekend work, and emergency response will be quoted on request.

	<u>Title</u>	<u>Hourly Rate</u>
1.1	Principal.....	\$215
1.2	Sr. Project Manager / Senior Consultant.....	\$190
1.3	Consultant.....	\$165
1.4	Project Manager.....	\$160
1.5	Senior Professional.....	\$140
1.6	Project Professional.....	\$125
1.7	Technical Designer.....	\$110
1.8	Staff Professional.....	\$ 90
1.9	Specialist Technician.....	\$ 80
1.10	Senior Technician.....	\$ 70
1.11	Technician.....	\$ 55
1.12	CAD Specialist.....	\$ 80
1.13	Word Processor/Engineering Aide/Office Assistant.....	\$ 60
1.14	Aide.....	\$ 50

2.0 Reimbursable Expenses. Expenses, other than salary costs, that are directly attributable to the performance of our professional services are billed either under separate fee schedules or as follows:

- 2.1 Transportation in leased or company vehicles is \$125/day (1/2-day minimum) plus \$0.60/mile over 20 miles per day. Transportation in our personal automobiles is provided at cost plus 15 percent.
- 2.2 Direct project expenses including, but not limited to, authorized travel, sample shipment, subcontracts, long distance communications, outside reproduction, and mailing expense, cost plus 15 percent.
- 2.3 Time of external personnel retained for the project is charged at an assigned billing rate comparable to others in our company of corresponding expertise and experience.

3.0 Other Services. Projects may require other services, such as: field exploration, field or laboratory testing, reproduction, or computer services, which are not covered by this schedule. Fee schedules for other services can be provided upon request.

4.0 International Projects. The above hourly rates apply for U.S.A. based personnel. Rates for non-U.S.A. personnel will be provided as needed.



Fulbright

FULBRIGHT & JAWORSKI L.L.P.

A REGISTERED LIMITED LIABILITY PARTNERSHIP

1301 MCKINNEY, SUITE 5100
HOUSTON, TEXAS 77010-3095
WWW.FULBRIGHT.COM

SCARROLL@FULBRIGHT.COM
DIRECT DIAL: (713) 651-5699

TELEPHONE: (713) 651-5151
FACSIMILE: (713) 651-5246

July 2, 2010

West Harris County Regional Water Authority
c/o Katie Dorfman
Allen Boone Humphries Robinson LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Re: Legal Representation of West Harris County Regional Water Authority in connection with the acquisition of certain parcels to be designated by the Authority that are related to the Authority's water line facilities along the route shown on Exhibit A attached hereto (the "Second Source Line")

Dear Sirs:

This letter confirms that Fulbright & Jaworski L.L.P. will represent West Harris County Regional Water Authority (the "Authority") in connection with the acquisition of certain parcels to be designated by the Authority that are related to the Authority's water line facilities along the route shown on Exhibit A attached hereto (the "Second Source Line") (the "Matter"). Our acceptance of that representation (the "Representation") becomes effective upon the execution and return of the enclosed copy of this letter.

Terms of Engagement

This letter sets out the terms of our engagement in the Representation. Certain of those terms are included in the body of this letter, and additional terms are contained in the attached document, entitled *Additional Terms of Engagement*. That document is expressly incorporated into this letter, and it should be read carefully. The execution and return of the enclosed copy of this letter constitutes an unqualified agreement to all the terms set forth in this letter and in the attached *Additional Terms of Engagement*.

It is understood and agreed that our engagement is limited to the Representation. We are not being retained as general counsel, and our acceptance of this engagement does not imply any undertaking to provide legal services other than those set forth in this letter.

Our Personnel Who Will Be Working on the Matter

Stephen K. Carroll will be working on the Matter, and West Harris County Regional Water Authority may call, write, or e-mail Stephen K. Carroll whenever West Harris County Regional Water Authority has any questions about the Representation. Other firm personnel,

including firm lawyers and legal assistants, will participate in the Representation if, in our judgment, their participation is necessary or appropriate.

Our Legal Fees and Other Charges

Legal fees and costs are difficult to estimate. Accordingly, we have made no commitment concerning the maximum fees and charges that will be necessary to resolve or complete the Representation.

It is expressly understood that payment of our fees and charges is in no way contingent on the ultimate outcome of the Representation.

Our fees in the Matter will be based on the time spent by firm personnel, primarily firm lawyers or legal assistants, who participate in the Representation. We will charge for all time spent by such personnel in the Representation in increments of quarters of an hour. For example, we charge for time spent in the following: telephone and office conferences with clients, representatives of clients, opposing counsel, and others; conferences among our attorneys and legal assistants; factual investigation if needed; legal research; responding to requests from West Harris County Regional Water Authority that we provide information to West Harris County Regional Water Authority or West Harris County Regional Water Authority auditors; drafting letters and other documents; and travel, if needed.

The time of Stephen K. Carroll is currently billed at \$680 an hour. The following are other lawyers who may work on this matter and their current billing rates:

Alaina K. Benford	\$475/hr.
Melanie B. Rother	\$415/hr.
Nicholas A. Morrow	\$375/hr.
Cristina K. Lunders	\$350/hr.
Seth Isgur	\$315/hr.
Peter C. Tipps	\$230/hr.
Sheila Shaw	\$245/hr.

Other lawyers, legal assistants, and other personnel may be assigned as necessary to achieve proper staffing. Billing rates for attorneys, legal assistants, and other personnel are reviewed annually and generally are revised at the beginning of each year to reflect the increased experience of our personnel, and West Harris County Regional Water Authority agrees to pay such yearly standard increases. In light of the expected start date for this work beginning in 2011, we anticipate that a rate increase will be required for our firm beginning in 2011. We will provide West Harris County Regional Water Authority thirty (30) days advance notice of any rate increase.

Conflicts of Interest

Before accepting the Representation, we have undertaken reasonable and customary efforts to determine whether there are any potential conflicts of interest that would bar our firm from representing West Harris County Regional Water Authority in the Matter. Based on the information available to us, we are not aware of any potential disqualification. We reviewed that issue in accordance with the rules of professional responsibility adopted in Texas. We believe

that those rules, rather than the rules of any other jurisdiction, are applicable to the Representation; and the execution and return of the enclosed copy of this letter by West Harris County Regional Water Authority represents an express agreement to the applicability of those rules.

Furthermore, it is Fulbright & Jaworski, L.L.P.'s policy that the entity we are representing is the West Harris County Regional Water Authority, and that our attorney-client relationship does not include any other governmental entities, including but not limited to Harris County, and any other governmental entities in Harris County. It is understood and agreed by the West Harris County Regional Water Authority that Fulbright & Jaworski, L.L.P. may represent another client with interests adverse to any such other governmental entities.

Conclusion

This letter and the attached *Additional Terms of Engagement* constitute the entire terms of the engagement of Fulbright & Jaworski L.L.P. in the Representation. These written terms of engagement are not subject to any oral agreements or understandings, and they can be modified only by further written agreement signed both by West Harris County Regional Water Authority and Fulbright & Jaworski L.L.P. Unless expressly stated in these terms of engagement, no obligation or undertaking shall be implied on the part of either West Harris County Regional Water Authority or Fulbright & Jaworski L.L.P.

Please carefully review this letter and the attached *Additional Terms of Engagement*. If there are any questions about these terms of engagement, or if these terms are inaccurate in any way, please let me know immediately. If both documents are acceptable, please sign and return the enclosed copy of this letter so that we may commence the Representation.

Very truly yours,

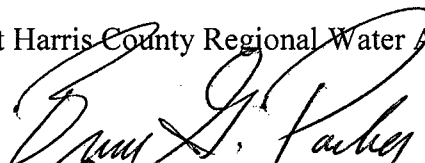


Stephen K. Carroll

SKC/pg

West Harris County Regional Water Authority
Agrees to and Accepts this Letter and the
Attached Terms of Engagement:

West Harris County Regional Water Authority

By: 
Title: President
Date: 7-14-10

FULBRIGHT & JAWORSKI L.L.P.

A REGISTERED LIMITED LIABILITY PARTNERSHIP

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FACSIMILE: (713) 651-5246

FULBRIGHT & JAWORSKI L.L.P.

Additional Terms of Engagement

This is a supplement to our engagement letter, dated July 2, 2010. The purpose of this document is to set out additional terms of our agreement to provide the representation described in our engagement letter (the "Representation") in connection with the acquisition of certain parcels to be designated by the Authority that are related to the Authority's water line facilities along the route shown on Exhibit A attached hereto (the "Second Source Line") (the "Matter"). Because these additional terms of engagement are a part of our agreement to provide legal services, West Harris County Regional Water Authority should review them carefully and should promptly communicate to us any questions concerning this document. We suggest that West Harris County Regional Water Authority retain this statement of additional terms along with our engagement letter and any related documents.

The Scope of the Representation

As lawyers, we undertake to provide representation and advice on the legal matters for which we are engaged. It is important for our clients to have a clear understanding of the legal services that we have agreed to provide. Thus, if there are any questions about the scope of the Representation that we are to provide in the Matter, please raise those questions promptly, so that we may resolve them at the outset of the Representation.

Any expressions on our part concerning the outcome of the Representation, or any other legal matters, are based on our professional judgment and are not guarantees. Such expressions, even when described as opinions, are necessarily limited by our knowledge of the facts and are based on our views of the state of the law at the time they are expressed.

Upon accepting this engagement on West Harris County Regional Water Authority's behalf, Fulbright & Jaworski L.L.P. agrees to do the following: (1) provide legal counsel in accordance with these terms of engagement and the related engagement letter, and in reliance upon information and guidance provided by West Harris County Regional Water Authority; and (2) keep West Harris County Regional Water Authority reasonably informed about the status and progress of the Representation.

To enable us to provide effective representation, West Harris County Regional Water Authority agrees to do the following: (1) disclose to us, fully and accurately and on a timely basis, all facts and documents that are or might be material or that we may request, (2) keep us apprised on a timely basis of all developments relating to the Representation that are or might be material, (3) attend meetings, conferences, and other proceedings when it is reasonable to do so, and (4) otherwise cooperate fully with us.

Our firm has been engaged to provide legal services in connection with the Representation in the Matter, as specifically defined in our engagement letter. After completion of the Representation,

changes may occur in the applicable laws or regulations that could affect West Harris County Regional Water Authority future rights and liabilities in regard to the Matter. Unless we are actually engaged after the completion of the Representation to provide additional advice on such issues, the firm has no continuing obligation to give advice with respect to any future legal developments that may pertain to the Matter.

It is our policy and West Harris County Regional Water Authority's agreement that the only person or entity that we represent is the one identified in our engagement letter, i.e, West Harris County Regional Water Authority, and that our attorney-client relationship does not include any related persons or entities, or any other governmental units, specifically including but not limited to Harris County. Accordingly, it is understood that we may represent another client with interests adverse to any affiliated or related person or entity or governmental unit, without first obtaining consent from West Harris County Regional Water Authority.

It is further agreed that the attorney-client relationship terminates upon our completion of the services for which we have been retained in the Representation.

Who Will Provide the Legal Services

As our engagement letter confirms, Fulbright & Jaworski L.L.P. will represent West Harris County Regional Water Authority in the Matter. Fulbright & Jaworski L.L.P. is a registered limited liability partnership that has elected to adopt the Texas Revised Partnership Act.

Although our firm will be providing legal services, each client of the firm customarily has a relationship principally with one attorney, or perhaps a few attorneys. At the same time, however, the work required in the Representation, or parts of it, may be performed by other firm personnel, including lawyers and legal assistants. Such delegation may be for the purpose of involving other firm personnel with experience in a given area or for the purpose of providing services on an efficient and timely basis.

Our Relationships With Others

Our law firm represents many companies and individuals. In some instances, the applicable rules of professional conduct may limit our ability to represent clients with conflicting or potentially conflicting interests. Those rules of conduct often allow us to exercise our independent judgment in determining whether our relationship with one client prevents us from representing another. In other situations, we may be permitted to represent a client only if the other clients consent to that representation.

Rules concerning conflicts of interest vary with the jurisdiction. In order to avoid any uncertainty, it is our policy that the governing rules will be those applicable to the particular office of our firm that prepares the engagement letter for a particular matter. The acceptance by West Harris County Regional Water Authority of our engagement letter constitutes an express agreement with that policy, unless the engagement letter specifically states that some other rules of professional responsibility will govern our attorney-client relationship.

If a controversy unrelated to the Matter develops between West Harris County Regional Water Authority and any other client of the firm, we will follow the applicable rules of professional

responsibility to determine whether we may represent either West Harris County Regional Water Authority or the other client in the unrelated controversy.

In addition to our representation of other companies and individuals, we also regularly represent lawyers and law firms. As a result, opposing counsel in the Matter may be a lawyer or law firm that we may represent now or in the future. Likewise, opposing counsel in the Matter may represent our firm now or in the future. Further, we have professional and personal relationships with many other attorneys, often because of our participation in bar associations and other professional organizations. It is our professional judgment that such relationships with other attorneys do not adversely affect our ability to represent any client. The acceptance of these terms of engagement represents an unqualified consent to any such relationships between our firm and other lawyers or law firms, even counsel who is representing a party that is adverse to West Harris County Regional Water Authority in the Matter that is the subject of this engagement or in some other matter.

Communications and Confidentiality

We have available Internet communication procedures that allow our attorneys to use e-mail for client communications in many instances. Accordingly, unless West Harris County Regional Water Authority specifically directs us otherwise, we may use unencrypted e-mail sent on the Internet to communicate with West Harris County Regional Water Authority and to send documents we have prepared or reviewed.

We recognize our obligation to preserve the confidentiality of attorney-client communications as well as client confidences, as required by the governing rules of professional responsibility. If the Matter involves transactions, litigation or administrative proceedings or like proceedings in which our firm appears as counsel of record for West Harris County Regional Water Authority in publicly available records, we reserve the right to inform others of the fact of our representation of West Harris County Regional Water Authority in the Matter and (if likewise reflected of record in publicly available records) the results obtained, unless West Harris County Regional Water Authority specifically directs otherwise.

Disclaimer

Fulbright & Jaworski L.L.P. has made no promises or guarantees to West Harris County Regional Water Authority about the outcome of the Representation or the Matter, and nothing in these terms of engagement shall be construed as such a promise or guarantee.

Termination

At any time, West Harris County Regional Water Authority may, with or without cause, terminate the Representation by notifying us of West Harris County Regional Water Authority's intention to do so. Any such termination of services will not affect the obligation to pay for legal services rendered and expenses and charges incurred before termination, as well as additional services and charges incurred in connection with an orderly transition of the Matter.

We are subject to the codes or rules of professional responsibility for the jurisdictions in which we practice. There are several types of conduct or circumstances that could result in our

withdrawing from representing a client, including, for example, the following: non-payment of fees or charges; misrepresentation or failure to disclose material facts; fraudulent or criminal conduct; action contrary to our advice; and conflict of interest with another client. We try to identify in advance and discuss with our clients any situation that may lead to our withdrawal.

A failure by West Harris County Regional Water Authority to meet any obligations under these terms of engagement shall entitle Fulbright & Jaworski L.L.P. to terminate the Representation. In that event, West Harris County Regional Water Authority will take all steps necessary to release Fulbright & Jaworski L.L.P. of any further obligations in the Representation or the Matter, including without limitation the execution of any documents necessary to effectuate our withdrawal from the Representation or the Matter. The right of Fulbright & Jaworski L.L.P. to withdraw in such circumstances is in addition to any rights created by statute or recognized by the governing rules of professional conduct.

Billing Arrangements and Terms of Payment

Our engagement letter specifically explains our fees for services in the Matter. We will bill on a regular basis, normally each month, for fees and expenses and charges. It is agreed that West Harris County Regional Water Authority will make full payment within 30 days of receiving our statement. We will give notice if an account becomes delinquent, and it is further agreed that any delinquent account must be paid upon the giving of such notice. If the delinquency continues and West Harris County Regional Water Authority do not arrange satisfactory payment terms, we may withdraw from the Representation and pursue collection of our account.

Document Retention

At the close of any matter, we send our files in that matter to a storage facility for storage at our expense. The attorney closing the file determines how long we will maintain the files in storage. After that time, we will destroy the documents in the stored files.

At the conclusion of the Representation, we return to the client any documents that are specifically requested to be returned. As to any documents so returned, we may elect to keep a copy of the documents in our stored files.

Charges for Other Expenses and Services

Typically, our invoices will include amounts, not only for legal services rendered, but also for other expenses and services. Examples include charges for photocopying, long-distance telephone calls, travel and conference expenses, messenger deliveries, computerized research, and facsimile and other electronic transmissions. In addition, we reserve the right to send to West Harris County Regional Water Authority for direct payment any invoices delivered to us by others, including experts and any vendors.

In situations where we can readily determine the exact amount of expenses for products and services provided by third parties to be charged to West Harris County Regional Water Authority account, our invoices will reflect the cost to us of the products and services. In many situations, however, the precise total cost of providing a product or service is difficult to establish, in which case we will use our professional judgment on the charges to be made for such product or

service, which charges may vary from or exceed our direct cost of such product or service. In some situations, we can arrange for ancillary services to be provided by third parties with direct billing to the client. Attached is a copy of our current recharge schedule for expenses and services, which is subject to change from time to time.

Standards of Professionalism and Attorney Complaint Information

Pursuant to rules promulgated by the Texas Supreme Court and the State Bar of Texas, we are to advise our clients of the contents of the Texas Lawyer's Creed, a copy of which is attached. In addition, we are to advise clients that the State Bar of Texas investigates and prosecutes complaints of professional misconduct against attorneys licensed in Texas. A brochure entitled *Attorney Complaint Information* is available at all of our Texas offices and is likewise available upon request. A client that has any questions about State Bar's disciplinary process should call the Office of the General Counsel of the State Bar of Texas at 1-800-932-1900 toll free.

THE TEXAS LAWYER'S CREED — A MANDATE FOR PROFESSIONALISM

The Texas Supreme Court and the Texas Court of Criminal Appeals adopted this Creed, with the requirement that lawyers advise their clients of its contents when undertaking representation.

I am a lawyer; I am entrusted by the People of Texas to preserve and improve our legal system. I am licensed by the Supreme Court of Texas. I must therefore abide by the Texas Disciplinary Rules of Professional Conduct, but I know that Professionalism requires more than merely avoiding the violation of laws and rules. I am committed to this Creed for no other reason than it is right.

I. OUR LEGAL SYSTEM. A lawyer owes to the administration of justice personal dignity, integrity, and independence. A lawyer should always adhere to the highest principles of professionalism. I am passionately proud of my profession. Therefore, "My word is my bond." I am responsible to assure that all persons have access to competent representation regardless of wealth or position in life. I commit myself to an adequate and effective pro bono program. I am obligated to educate my clients, the public, and other lawyers regarding the spirit and letter of this Creed. I will always be conscious of my duty to the judicial system.

II. LAWYER TO CLIENT. A lawyer owes to a client allegiance, learning, skill, and industry. A lawyer shall employ all appropriate means to protect and advance the client's legitimate rights, claims, and objectives. A lawyer shall not be deterred by any real or imagined fear of judicial disfavor or public unpopularity, nor be influenced by mere self-interest. I will advise my client of the contents of this Creed when undertaking representation. I will endeavor to achieve my client's lawful objectives in legal transactions and in litigation as quickly and economically as possible. I will be loyal and committed to my client's lawful objectives, but I will not permit that loyalty and commitment to interfere with my duty to provide objective and independent advice. I will advise my client that civility and courtesy are expected and are not a sign of weakness. I will advise my client of proper and expected behavior. I will treat adverse parties and witnesses with fairness and due consideration. A client has no right to demand that I abuse anyone or indulge in any offensive conduct. I will advise my client that we will not pursue conduct which is intended primarily to harass or drain the financial resources of the opposing party. I will advise my client that we will not pursue tactics which are intended primarily for delay. I will advise my client that we will not pursue any course of action which is without merit. I will advise my client that I reserve the right to determine whether to grant accommodations to opposing counsel in all matters that do not adversely affect my client's lawful objectives. A client has no right to instruct me to refuse reasonable requests made by other counsel. I will advise my client regarding the availability of mediation, arbitration, and other alternative methods of resolving and settling disputes.

III. LAWYER TO LAWYER. A lawyer owes to opposing counsel, in the conduct of legal transactions and the pursuit of litigation, courtesy, candor, cooperation, and scrupulous observance of all agreements and mutual understandings. Ill feelings between clients shall not influence a lawyer's conduct, attitude, or demeanor toward opposing counsel. A lawyer shall not engage in unprofessional conduct in retaliation against other unprofessional conduct. I will be courteous, civil, and prompt in oral and written communications. I will not quarrel over matters of form or

style, but I will concentrate on matters of substance. I will identify for other counsel or parties all changes I have made in documents submitted for review. I will attempt to prepare documents which correctly reflect the agreement of the parties. I will not include provisions which have not been agreed upon or omit provisions which are necessary to reflect the agreement of the parties. I will notify opposing counsel, and, if appropriate, the Court or other persons, as soon as practicable, when hearings, depositions, meetings, conferences or closings are canceled. I will agree to reasonable requests for extensions of time and for waiver of procedural formalities, provided legitimate objectives of my client will not be adversely affected. I will not serve motions or pleadings in any manner that unfairly limits another party's opportunity to respond. I will attempt to resolve by agreement my objections to matters contained in pleadings and discovery requests and responses. I can disagree without being disagreeable. I recognize that effective representation does not require antagonistic or obnoxious behavior. I will neither encourage nor knowingly permit my client or anyone under my control to do anything which would be unethical or improper if done by me. I will not, without good cause, attribute bad motives or unethical conduct to opposing counsel nor bring the profession into disrepute by unfounded accusations of impropriety. I will avoid disparaging personal remarks or acrimony towards opposing counsel, parties and witnesses. I will not be influenced by any ill feeling between clients. I will abstain from any allusion to personal peculiarities or idiosyncrasies of opposing counsel. I will not take advantage, by causing any default or dismissal to be rendered, when I know the identity of an opposing counsel, without first inquiring about that counsel's intention to proceed. I will promptly submit orders to the Court. I will deliver copies to opposing counsel before or contemporaneously with submission to the court. I will promptly approve the form of orders which accurately reflect the substance of the rulings of the Court. I will not attempt to gain an unfair advantage by sending the Court or its staff correspondence or copies of correspondence. I will not arbitrarily schedule a deposition, Court appearance, or hearing until a good faith effort has been made to schedule it by agreement. I will readily stipulate to undisputed facts in order to avoid needless costs or inconvenience for any party. I will refrain from excessive and abusive discovery. I will comply with all reasonable discovery requests. I will not resist discovery requests which are not objectionable. I will not make objections nor give instructions to a witness for the purpose of delaying or obstructing the discovery process. I will encourage witnesses to respond to all deposition questions which are reasonably understandable. I will neither encourage nor permit my witness to quibble about words where their meaning is reasonably clear. I will not seek Court intervention to obtain discovery which is clearly improper and not discoverable. I will not seek sanctions or disqualification unless it is necessary for protection of my client's lawful objectives or is fully justified by the circumstances.

IV. LAWYER AND JUDGE. Lawyers and judges owe each other respect, diligence, candor, punctuality, and protection against unjust and improper criticism and attack. Lawyers and judges are equally responsible to protect the dignity and

independence of the Court and the profession. I will always recognize that the position of judge is the symbol of both the judicial system and administration of justice. I will refrain from conduct that degrades this symbol. I will conduct myself in court in a professional manner and demonstrate my respect for the Court and the law. I will treat counsel, opposing parties, the Court, and members of the Court staff with courtesy and civility. I will be punctual. I will not engage in any conduct which offends the dignity and

decorum of proceedings. I will not knowingly misrepresent, mischaracterize, misquote or miscite facts or authorities to gain an advantage. I will respect the rulings of the Court. I will give the issues in controversy deliberate, impartial and studied analysis and consideration. I will be considerate of the time constraints and pressures imposed upon the Court, Court staff and counsel in efforts to administer justice and resolve disputes.

FULBRIGHT & JAWORSKI L.L.P.
(Houston)

EXPENSES AND SERVICES SUMMARY

<i>EXPENSE/SERVICE</i>	<i>CHARGE</i>
Binding	\$1.65 per book (Pricing varies in other office locations)
Data Base Research Lexis, Westlaw, Information America	Costs allocated by the firm
Deliveries	
Overnight/Express	Direct Cost
Outside Courier	Direct Cost
In-House	N/A (Pricing varies in other office locations)
Courthouse Messengers	\$50.00/Hour plus Transportation (Pricing varies in other office locations)
Document Scanning	\$.12 per page – Direct Cost
Duplicating	
Photocopy	\$0.15 per page
Color photocopy	\$0.85 per page
Microfilm/Microfiche	\$0.50 per page
Videography (duplication)	\$5.00/tape plus \$20.00/duplication
Electronic Mail (via Internet)	No Charge
Library Research by Library Staff	\$125.00 - \$190.00 per hour
Weekend & Late Evening Air Conditioning	\$25.00 per hour (Only if necessitated by client requirements) (Pricing varies in other office locations)
Postage	Direct Cost on any item or group of items which cost \$1.00 or more
Secretarial Overtime	\$28.00 per hour (Pricing varies in other office locations)
Facsimile (Outgoing)	\$0.80 per page plus applicable LD charges

Expenses and Services Summary
Page 2

<i>EXPENSE/SERVICE</i>	<i>CHARGE</i>
Telephone	
Long Distance (Domestic)	\$0.30 per minute
Long Distance (International)	80% of direct dial rate
File Storage Retrieval	\$10.00 per box (Pricing varies in other office locations)
Transportation	
Mileage (personal automobile)	Applicable IRS allowable rate per mile
Lodging	Direct Cost
Meals	Direct Cost
Car Rental/Airline/Rail/Etc.	Direct Cost
CD-ROM Research	\$30.00 - \$50.00 per Search (rate varies based on length of search)
Graphic Arts	\$150.00 - \$175.00 per hour, plus direct cost of supplies
Practice Support	\$200.00 per gigabyte per month
E-Discovery	Direct Cost
Firm hosting of on-site document review performed by outside contract attorneys	\$10.00 per hour



1 inch = 12,000 feet

Nor
Region

Northeast Water
Purification Plant

*West Harris County
Regional Water Authority*

West Authority
West Pump Station
Location at Fry Rd.



291

59

90

10

10

610

East Water
Purification Plant

*North Fort Bend
Water Authority*

D158

EXHIBIT A
Second Source
Water Line Project

Legend

- City of Houston Facilities
- WHCRWA Pump Station No. 1
- Possible West Authority RePump Station
- Possible West Authority West Pump Station
- WHCRWA Boundary
- NHCROWA Boundary
- NFBWA Boundary



**DANNENBAUM
ENGINEERING CORPORATION**

DISCLAIMER: THE ROUTING, TIMING, AND ALL OTHER MATTERS SHOWN HEREIN, ARE PRELIMINARY ONLY AND SHOULD NOT BE RELIED UPON AS DEFINITE, COMPLETE OR ACCURATE. THEY ARE SUBJECT TO CHANGE AT ANY TIME, WITHOUT ANY NOTICE.

FULBRIGHT & JAWORSKI L.L.P.

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JANA B. COGBURN
SENIOR COUNSEL
JCOGBURN@FULBRIGHT.COM

DIRECT DIAL: (713) 651-3751
TELEPHONE: (713) 651-5151
FACSIMILE: (713) 651-5246

December 9, 2009

Board of Directors
West Harris County Regional Water Authority
c/o Allen Boone Humphries Robinson L.L.P.
3200 Southwest Freeway
Phoenix Tower, Suite 2600
Houston, Texas 77027-7528

Re: Legal Representation of West Harris County Regional Water Authority
in Connection with Negotiation of Contracts with North Fort Bend Water
Authority

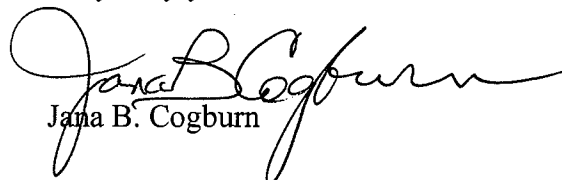
Dear Sirs:

The purpose of this letter is to supplement the engagement letter between West Harris County Regional Water Authority and Fulbright & Jaworski L.L.P. in general condemnation matters, entered into on or about August 9, 2004, to expand the scope of the representation to include assisting in the negotiation of contracts with the North Fort Bend Water Authority for (1) an approximately 40-mile long shared water line across Harris County, Texas and (2) a shared pump station and associated water lines in the Mission Bend area. Jana Cogburn will be working on such matters and her billing rate will be \$550 an hour.

The other terms of the engagement letter will remain in full force and effect.

We appreciate the opportunity to be of service to the West Harris County Regional Water Authority.

Very truly yours,



Jana B. Cogburn

JBC/tek

Board of Directors
West Harris County Regional Water Authority
c/o Allen Boone Humphries Robinson L.L.P.
December 9, 2009
Page 2

West Harris County Regional Water Authority
Agrees to and Accepts this Letter:

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

By: 
Title: President
Date: 12-9-09

FULBRIGHT & JAWORSKI L.L.P.

A REGISTERED LIMITED LIABILITY PARTNERSHIP

FULBRIGHT TOWER
1301 MCKINNEY, SUITE 5100
HOUSTON, TEXAS 77010-3095
WWW.FULBRIGHT.COM

STEPHEN K. CARROLL
PARTNER
SCARROLL@FULBRIGHT.COM

DIRECT DIAL: (713) 651-5699
TELEPHONE: (713) 651-5151
FACSIMILE: (713) 651-5246

January 2, 2008

West Harris County Regional Water Authority
c/o David Oliver
Allen Boone Humphries Robinson, LLP
3200 Southwest Freeway, Suite 2600
Houston, TX 77027

Re: Legal Representation of West Harris County Regional Water Authority in General
Condemnation Matters

Dear Sirs:

The purpose of this letter is to supplement the engagement letter between West Harris County Regional Water Authority and Fulbright & Jaworski L.L.P. in general condemnation matters, entered into on or about August 9, 2004. As reflected in such engagement letter, billing rates for attorneys, legal assistants and other personnel are revised annually at the beginning of each year to reflect the increased experience of personnel. In that regard, Stephen K. Carroll's billing rates have been increased since 2004, and his 2008 rate is \$630 an hour. Similar to our prior agreement, we are willing to discount his rate for 2008 to \$550 an hour. Other lawyers, legal assistants and other personnel may be assigned as necessary to provide proper staffing. The following are other lawyers who may work on this matter and their current billing rates:

Jason Rother	\$430/hr.
Alaina King Benford	\$405/hr.
Mindy Harper	\$380/hr.
C. Anderson Parker	\$325/hr.
Nicholas A. Morrow	\$305/hr.
Cristina Lunders	\$275/hr.
Seth Isgur	\$230/hr.

Our current charges for expenses and services are indicated on the attached exhibit.

Other than these increases, the other terms of the engagement letter remain in full force and effect.

West Harris County Regional Water Authority
January 2, 2008
Page 2

We appreciate the opportunity to be of service to the West Harris County Regional Water Authority.

Very truly yours,




Stephen K. Carroll

AKB/pg
Enclosure

West Harris County Regional Water Authority
Agrees to and Accepts this Letter and the
Attached Terms of Engagement:

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

By: 
Title: PLS S2207
Date: 1-9-08

FULBRIGHT & JAWORSKI L.L.P.
(Houston)

EXPENSES AND SERVICES SUMMARY

<i>EXPENSE/SERVICE</i>	<i>CHARGE</i>
Binding	\$1.65 per book (Pricing varies in other office locations)
Data Base Research Lexis, Westlaw, Information America	Costs allocated by the firm
Deliveries	
Overnight/Express	Direct Cost
Outside Courier	Direct Cost
In-House	N/A (Pricing varies in other office locations)
Courthouse Messengers	\$50.00/Hour plus Transportation (Pricing varies in other office locations)
Document Scanning	\$.12 per page – Direct Cost
Duplicating	
Photocopy	\$0.15 per page
Color photocopy	\$0.85 per page
Microfilm/Microfiche	\$0.50 per page
Videography (duplication)	\$5.00/tape plus \$20.00/duplication
Electronic Mail (via Internet)	No Charge
Library Research by Library Staff	\$125.00 - \$190.00 per hour
Weekend & Late Evening Air Conditioning	\$25.00 per hour (Only if necessitated by client requirements) (Pricing varies in other office locations)
Postage	Direct Cost on any item or group of items which cost \$1.00 or more
Secretarial Overtime	\$28.00 per hour plus supper allowance paid for overtime in excess of 2 hours per day during the week and 6 hours per day on weekends (Pricing varies in other office locations)
Facsimile (Outgoing)	\$0.80 per page plus applicable LD charges

Expenses and Services Summary

Page 2

<i>EXPENSE/SERVICE</i>	<i>CHARGE</i>
Telephone	
Long Distance (Domestic)	\$0.30 per minute
Long Distance (International)	80% of direct dial rate
File Storage Retrieval	\$10.00 per box (Pricing varies in other office locations)
Transportation	
Mileage (personal automobile)	Applicable IRS allowable rate per mile
Lodging	Direct Cost
Meals	Direct Cost
Car Rental/Airline/Rail/Etc.	Direct Cost
CD-ROM Research	\$30.00 - \$50.00 per Search (rate varies based on length of search)
Graphic Arts	\$120.00 - \$150.00 per hour, plus direct cost of supplies
Practice Support	\$60.00 - \$215.00 per hour
E-Discovery	Direct Cost

FULBRIGHT & JAWORSKI L.L.P.

A REGISTERED LIMITED LIABILITY PARTNERSHIP

1301 MCKINNEY, SUITE 5100
HOUSTON, TEXAS 77010-3095
WWW.FULBRIGHT.COM

SCARROLL@FULBRIGHT.COM
DIRECT DIAL: (713) 651-5699

TELEPHONE: (713) 651-5151
FACSIMILE: (713) 651-5246

August 9, 2004

West Harris County Regional Water Authority
c/o Alex E. Garcia
Allen Boone Humphries, LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

**Re: Legal Representation of West Harris County Regional Water Authority in
General Condemnation Matters**

Dear Sirs:

This letter confirms that Fulbright & Jaworski L.L.P. will represent West Harris County Regional Water Authority in general condemnation matters (the "Matter"). Our acceptance of that representation (the "Representation") becomes effective upon the execution and return of the enclosed copy of this letter.

Terms of Engagement

This letter sets out the terms of our engagement in the Representation. Certain of those terms are included in the body of this letter, and additional terms are contained in the attached document, entitled *Additional Terms of Engagement*. That document is expressly incorporated into this letter, and it should be read carefully. The execution and return of the enclosed copy of this letter constitutes an unqualified agreement to all the terms set forth in this letter and in the attached *Additional Terms of Engagement*.

It is understood and agreed that our engagement is limited to the Representation. We are not being retained as general counsel, and our acceptance of this engagement does not imply any undertaking to provide legal services other than those set forth in this letter.

Our Personnel Who Will Be Working on the Matter

Stephen K. Carroll will be working on the Matter, and West Harris County Regional Water Authority may call, write, or e-mail Stephen K. Carroll whenever West Harris County Regional Water Authority has any questions about the Representation. Other firm personnel, including firm lawyers and legal assistants, will participate in the Representation if, in our judgment, their participation is necessary or appropriate.

Our Legal Fees and Other Charges

Legal fees and costs are difficult to estimate. Accordingly, we have made no commitment concerning the maximum fees and charges that will be necessary to resolve or complete the Representation.

It is expressly understood that payment of our fees and charges is in no way contingent on the ultimate outcome of the Representation.

Our fees in the Matter will be based on the time spent by firm personnel, primarily firm lawyers or legal assistants, who participate in the Representation. We will charge for all time spent by such personnel in the Representation in increments of quarters of an hour. For example, we charge for time spent in the following: telephone and office conferences with clients, representatives of clients, opposing counsel, and others; conferences among our attorneys and legal assistants; factual investigation if needed; legal research; responding to requests from West Harris County Regional Water Authority that we provide information to West Harris County Regional Water Authority or West Harris County Regional Water Authority auditors; drafting letters and other documents; and travel, if needed.

The time of Stephen K. Carroll will be billed at \$400 an hour. It is anticipated that John E. Cyr and Jennifer O'Sullivan will participate in the Representation, and their current billing rates per hour are \$265.00, and, \$190.00, respectively. Other lawyers, legal assistants, and other personnel may be assigned as necessary to achieve proper staffing. Billing rates for attorneys, legal assistants, and other personnel are reviewed annually and generally are revised at the beginning of each year to reflect the increased experience of our personnel, and West Harris County Regional Water Authority agrees to pay such yearly standard increases. We will provide West Harris County Regional Water Authority thirty (30) days advance written notice of any rate increase.

Conflicts of Interest

Before accepting the Representation, we have undertaken reasonable and customary efforts to determine whether there are any potential conflicts of interest that would bar our firm from representing West Harris County Regional Water Authority in the Matter. Based on the information available to us, we are not aware of any potential disqualification. We reviewed that issue in accordance with the rules of professional responsibility adopted in Texas. We believe that those rules, rather than the rules of any other jurisdiction, are applicable to the Representation; and the execution and return of the enclosed copy of this letter by West Harris County Regional Water Authority represents an express agreement to the applicability of those rules.

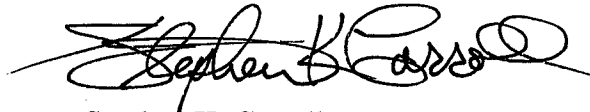
Furthermore, it is Fulbright & Jaworski, L.L.P.'s policy that the entity we are representing is the West Harris County Regional Water Authority, and that our attorney-client relationship does not include any other governmental entities, including but not limited to Harris County, and any other governmental entities in Harris County. It is understood and agreed by the West Harris County Regional Water Authority that Fulbright & Jaworski, L.L.P. may represent another client with interests adverse to any such other governmental entities.

Conclusion

This letter and the attached *Additional Terms of Engagement* constitute the entire terms of the engagement of Fulbright & Jaworski L.L.P. in the Representation. These written terms of engagement are not subject to any oral agreements or understandings, and they can be modified only by further written agreement signed both by West Harris County Regional Water Authority and Fulbright & Jaworski L.L.P. Unless expressly stated in these terms of engagement, no obligation or undertaking shall be implied on the part of either West Harris County Regional Water Authority or Fulbright & Jaworski L.L.P.

Please carefully review this letter and the attached *Additional Terms of Engagement*. If there are any questions about these terms of engagement, or if these terms are inaccurate in any way, please let me know immediately. If both documents are acceptable, please sign and return the enclosed copy of this letter so that we may commence the Representation.

Very truly yours,



Stephen K. Carroll

SKC/bb

West Harris County Regional Water Authority
Agrees to and Accepts this Letter and the
Attached Terms of Engagement:

West Harris County Regional Water Authority

By: _____
Title: _____
Date: _____



Fulbright & Jaworski I.l.p.

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1301 McKinney, Suite 5100
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scarroll@fulbright.com
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telephone: (713) 651-5151
facsimile: (713) 651-5246

FULBRIGHT & JAWORSKI L.L.P.

Additional Terms of Engagement

This is a supplement to our engagement letter, dated August 9, 2004. The purpose of this document is to set out additional terms of our agreement to provide the representation described in our engagement letter (the "Representation") concerning general condemnation matters for West Harris County Regional Water Authority (the "Matter"). Because these additional terms of engagement are a part of our agreement to provide legal services, West Harris County Regional Water Authority should review them carefully and should promptly communicate to us any questions concerning this document. We suggest that West Harris County Regional Water Authority retain this statement of additional terms along with our engagement letter and any related documents.

The Scope of the Representation

As lawyers, we undertake to provide representation and advice on the legal matters for which we are engaged. It is important for our clients to have a clear understanding of the legal services that we have agreed to provide. Thus, if there are any questions about the scope of the Representation that we are to provide in the Matter, please raise those questions promptly, so that we may resolve them at the outset of the Representation.

Any expressions on our part concerning the outcome of the Representation, or any other legal matters, are based on our professional judgment and are not guarantees. Such expressions, even when described as opinions, are necessarily limited by our knowledge of the facts and are based on our views of the state of the law at the time they are expressed.

Upon accepting this engagement on West Harris County Regional Water Authority's behalf, Fulbright & Jaworski L.L.P. agrees to do the following: (1) provide legal counsel in accordance with these terms of engagement and the related engagement letter, and in reliance upon information and guidance provided by West Harris County Regional Water Authority; and (2) keep West Harris County Regional Water Authority reasonably informed about the status and progress of the Representation.

To enable us to provide effective representation, West Harris County Regional Water Authority agrees to do the following: (1) disclose to us, fully and accurately and on a timely basis, all facts and documents that are or might be material or that we may request, (2) keep us apprised on a timely basis of all developments relating to the Representation that are or might be material, (3) attend meetings, conferences, and other proceedings when it is reasonable to do so, and (4) otherwise cooperate fully with us.

Our firm has been engaged to provide legal services in connection with the Representation in the Matter, as specifically defined in our engagement letter. After completion of the Representation, changes may occur in the applicable laws or regulations that could affect West Harris County Regional Water Authority future rights and liabilities in regard to the Matter. Unless we are

actually engaged after the completion of the Representation to provide additional advice on such issues, the firm has no continuing obligation to give advice with respect to any future legal developments that may pertain to the Matter.

It is our policy and West Harris County Regional Water Authority's agreement that the only person or entity that we represent is the one identified in our engagement letter, i.e, West Harris County Regional Water Authority, and that our attorney-client relationship does not include any related persons or entities, or any other governmental units, specifically including but not limited to Harris County. Accordingly, it is understood that we may represent another client with interests adverse to any affiliated or related person or entity or governmental unit, without first obtaining consent from West Harris County Regional Water Authority.

It is further agreed that the attorney-client relationship terminates upon our completion of the services for which we have been retained in the Representation.

Who Will Provide the Legal Services

As our engagement letter confirms, Fulbright & Jaworski L.L.P. will represent West Harris County Regional Water Authority in the Matter. Fulbright & Jaworski L.L.P. is a registered limited liability partnership that has elected to adopt the Texas Revised Partnership Act.

Although our firm will be providing legal services, each client of the firm customarily has a relationship principally with one attorney, or perhaps a few attorneys. At the same time, however, the work required in the Representation, or parts of it, may be performed by other firm personnel, including lawyers and legal assistants. Such delegation may be for the purpose of involving other firm personnel with experience in a given area or for the purpose of providing services on an efficient and timely basis.

Our Relationships With Others

Our law firm represents many companies and individuals. In some instances, the applicable rules of professional conduct may limit our ability to represent clients with conflicting or potentially conflicting interests. Those rules of conduct often allow us to exercise our independent judgment in determining whether our relationship with one client prevents us from representing another. In other situations, we may be permitted to represent a client only if the other clients consent to that representation.

Rules concerning conflicts of interest vary with the jurisdiction. In order to avoid any uncertainty, it is our policy that the governing rules will be those applicable to the particular office of our firm that prepares the engagement letter for a particular matter. The acceptance by West Harris County Regional Water Authority of our engagement letter constitutes an express agreement with that policy, unless the engagement letter specifically states that some other rules of professional responsibility will govern our attorney-client relationship.

If a controversy unrelated to the Matter develops between West Harris County Regional Water Authority and any other client of the firm, we will follow the applicable rules of professional responsibility to determine whether we may represent either West Harris County Regional Water Authority or the other client in the unrelated controversy.

In addition to our representation of other companies and individuals, we also regularly represent lawyers and law firms. As a result, opposing counsel in the Matter may be a lawyer or law firm that we may represent now or in the future. Likewise, opposing counsel in the Matter may represent our firm now or in the future. Further, we have professional and personal relationships with many other attorneys, often because of our participation in bar associations and other professional organizations. It is our professional judgment that such relationships with other attorneys do not adversely affect our ability to represent any client. The acceptance of these terms of engagement represents an unqualified consent to any such relationships between our firm and other lawyers or law firms, even counsel who is representing a party that is adverse to West Harris County Regional Water Authority in the Matter that is the subject of this engagement or in some other matter.

Communications and Confidentiality

We have available Internet communication procedures that allow our attorneys to use e-mail for client communications in many instances. Accordingly, unless West Harris County Regional Water Authority specifically directs us otherwise, we may use unencrypted e-mail sent on the Internet to communicate with West Harris County Regional Water Authority and to send documents we have prepared or reviewed.

We recognize our obligation to preserve the confidentiality of attorney-client communications as well as client confidences, as required by the governing rules of professional responsibility. If the Matter involves transactions, litigation or administrative proceedings or like proceedings in which our firm appears as counsel of record for West Harris County Regional Water Authority in publicly available records, we reserve the right to inform others of the fact of our representation of West Harris County Regional Water Authority in the Matter and (if likewise reflected of record in publicly available records) the results obtained, unless West Harris County Regional Water Authority specifically directs otherwise.

Disclaimer

Fulbright & Jaworski L.L.P. has made no promises or guarantees to West Harris County Regional Water Authority about the outcome of the Representation or the Matter, and nothing in these terms of engagement shall be construed as such a promise or guarantee.

Termination

This is not an exclusive engagement and the West Harris County Regional Water Authority is free to retain any other counsel for any aspect of this Matter. At any time, West Harris County Regional Water Authority may, with or without cause, terminate the Representation by notifying us of West Harris County Regional Water Authority's intention to do so. Any such termination of services will not affect the obligation to pay for legal services rendered and expenses and charges incurred before termination, as well as additional services and charges incurred in connection with an orderly transition of the Matter.

We are subject to the codes or rules of professional responsibility for the jurisdictions in which we practice. There are several types of conduct or circumstances that could result in our withdrawing from representing a client, including, for example, the following: non-payment of

fees or charges; misrepresentation or failure to disclose material facts; fraudulent or criminal conduct; action contrary to our advice; and conflict of interest with another client. We try to identify in advance and discuss with our clients any situation that may lead to our withdrawal.

A failure by West Harris County Regional Water Authority to meet any obligations under these terms of engagement shall entitle Fulbright & Jaworski L.L.P. to terminate the Representation. In that event, West Harris County Regional Water Authority will take all steps necessary to release Fulbright & Jaworski L.L.P. of any further obligations in the Representation or the Matter, including without limitation the execution of any documents necessary to effectuate our withdrawal from the Representation or the Matter. The right of Fulbright & Jaworski L.L.P. to withdraw in such circumstances is in addition to any rights created by statute or recognized by the governing rules of professional conduct.

Billing Arrangements and Terms of Payment

Our engagement letter specifically explains our fees for services in the Matter. We will bill on a regular basis, normally each month, for fees and expenses and charges. It is agreed that West Harris County Regional Water Authority will make full payment within 30 days of receiving our statement. We will give notice if an account becomes delinquent, and it is further agreed that any delinquent account must be paid upon the giving of such notice. If the delinquency continues and West Harris County Regional Water Authority do not arrange satisfactory payment terms, we may withdraw from the Representation and pursue collection of our account.

Document Retention

At the close of any matter, we send our files in that matter to a storage facility for storage at our expense. The attorney closing the file determines how long we will maintain the files in storage. After that time, we will destroy the documents in the stored files.

At the conclusion of the Representation, we return to the client any documents that are specifically requested to be returned. As to any documents so returned, we may elect to keep a copy of the documents in our stored files.

Charges for Other Expenses and Services

Typically, our invoices will include amounts, not only for legal services rendered, but also for other expenses and services. Examples include charges for photocopying, long-distance telephone calls, travel and conference expenses, messenger deliveries, computerized research, and facsimile and other electronic transmissions. In addition, we reserve the right to send to West Harris County Regional Water Authority for direct payment any invoices delivered to us by others, including experts and any vendors.

In situations where we can readily determine the exact amount of expenses for products and services provided by third parties to be charged to West Harris County Regional Water Authority account, our invoices will reflect the cost to us of the products and services. In many situations, however, the precise total cost of providing a product or service is difficult to establish, in which case we will use our professional judgment on the charges to be made for such product or service, which charges may vary from or exceed our direct cost of such product or service. In

some situations, we can arrange for ancillary services to be provided by third parties with direct billing to the client. Attached is a copy of our current recharge schedule for expenses and services, which is subject to change from time to time.

Standards of Professionalism and Attorney Complaint Information

Pursuant to rules promulgated by the Texas Supreme Court and the State Bar of Texas, we are to advise our clients of the contents of the Texas Lawyer's Creed, a copy of which is attached. In addition, we are to advise clients that the State Bar of Texas investigates and prosecutes complaints of professional misconduct against attorneys licensed in Texas. A brochure entitled *Attorney Complaint Information* is available at all of our Texas offices and is likewise available upon request. A client that has any questions about State Bar's disciplinary process should call the Office of the General Counsel of the State Bar of Texas at 1-800-932-1900 toll free.

THE TEXAS LAWYER'S CREED — A MANDATE FOR PROFESSIONALISM

The Texas Supreme Court and the Texas Court of Criminal Appeals adopted this Creed, with the requirement that lawyers advise their clients of its contents when undertaking representation.

I am a lawyer; I am entrusted by the People of Texas to preserve and improve our legal system. I am licensed by the Supreme Court of Texas. I must therefore abide by the Texas Disciplinary Rules of Professional Conduct, but I know that Professionalism requires more than merely avoiding the violation of laws and rules. I am committed to this Creed for no other reason than it is right.

I. OUR LEGAL SYSTEM. A lawyer owes to the administration of justice personal dignity, integrity, and independence. A lawyer should always adhere to the highest principles of professionalism. I am passionately proud of my profession. Therefore, "My word is my bond." I am responsible to assure that all persons have access to competent representation regardless of wealth or position in life. I commit myself to an adequate and effective pro bono program. I am obligated to educate my clients, the public, and other lawyers regarding the spirit and letter of this Creed. I will always be conscious of my duty to the judicial system.

II. LAWYER TO CLIENT. A lawyer owes to a client allegiance, learning, skill, and industry. A lawyer shall employ all appropriate means to protect and advance the client's legitimate rights, claims, and objectives. A lawyer shall not be deterred by any real or imagined fear of judicial disfavor or public unpopularity, nor be influenced by mere self-interest. I will advise my client of the contents of this Creed when undertaking representation. I will endeavor to achieve my client's lawful objectives in legal transactions and in litigation as quickly and economically as possible. I will be loyal and committed to my client's lawful objectives, but I will not permit that loyalty and commitment to interfere with my duty to provide objective and independent advice. I will advise my client that civility and courtesy are expected and are not a sign of weakness. I will advise my client of proper and expected behavior. I will treat adverse parties and witnesses with fairness and due consideration. A client has no right to demand that I abuse anyone or indulge in any offensive conduct. I will advise my client that we will not pursue conduct which is intended primarily to harass or drain the financial resources of the opposing party. I will advise my client that we will not pursue tactics which are intended primarily for delay. I will advise my client that we will not pursue any course of action which is without merit. I will advise my client that I reserve the right to determine whether to grant accommodations to opposing counsel in all matters that do not adversely affect my client's lawful objectives. A client has no right to instruct me to refuse reasonable requests made by other counsel. I will advise my client regarding the availability of mediation, arbitration, and other alternative methods of resolving and settling disputes.

III. LAWYER TO LAWYER. A lawyer owes to opposing counsel, in the conduct of legal transactions and the pursuit of litigation, courtesy, candor, cooperation, and scrupulous observance of all agreements and mutual understandings. Ill feelings between clients shall not influence a lawyer's conduct, attitude, or demeanor toward opposing counsel. A lawyer shall not engage in unprofessional conduct in retaliation against other unprofessional conduct. I will be courteous, civil, and prompt in oral and written

communications. I will not quarrel over matters of form or style, but I will concentrate on matters of substance. I will identify for other counsel or parties all changes I have made in documents submitted for review. I will attempt to prepare documents which correctly reflect the agreement of the parties. I will not include provisions which have not been agreed upon or omit provisions which are necessary to reflect the agreement of the parties. I will notify opposing counsel, and, if appropriate, the Court or other persons, as soon as practicable, when hearings, depositions, meetings, conferences or closings are canceled. I will agree to reasonable requests for extensions of time and for waiver of procedural formalities, provided legitimate objectives of my client will not be adversely affected. I will not serve motions or pleadings in any manner that unfairly limits another party's opportunity to respond. I will attempt to resolve by agreement my objections to matters contained in pleadings and discovery requests and responses. I can disagree without being disagreeable. I recognize that effective representation does not require antagonistic or obnoxious behavior. I will neither encourage nor knowingly permit my client or anyone under my control to do anything which would be unethical or improper if done by me. I will not, without good cause, attribute bad motives or unethical conduct to opposing counsel nor bring the profession into disrepute by unfounded accusations of impropriety. I will avoid disparaging personal remarks or acrimony towards opposing counsel, parties and witnesses. I will not be influenced by any ill feeling between clients. I will abstain from any allusion to personal peculiarities or idiosyncrasies of opposing counsel. I will not take advantage, by causing any default or dismissal to be rendered, when I know the identity of an opposing counsel, without first inquiring about that counsel's intention to proceed. I will promptly submit orders to the Court. I will deliver copies to opposing counsel before or contemporaneously with submission to the court. I will promptly approve the form of orders which accurately reflect the substance of the rulings of the Court. I will not attempt to gain an unfair advantage by sending the Court or its staff correspondence or copies of correspondence. I will not arbitrarily schedule a deposition, Court appearance, or hearing until a good faith effort has been made to schedule it by agreement. I will readily stipulate to undisputed facts in order to avoid needless costs or inconvenience for any party. I will refrain from excessive and abusive discovery. I will comply with all reasonable discovery requests. I will not resist discovery requests which are not objectionable. I will not make objections nor give instructions to a witness for the purpose of delaying or obstructing the discovery process. I will encourage witnesses to respond to all deposition questions which are reasonably understandable. I will neither encourage nor permit my witness to quibble about words where their meaning is reasonably clear. I will not seek Court intervention to obtain discovery which is clearly improper and not discoverable. I will not seek sanctions or disqualification unless it is necessary for protection of my client's lawful objectives or is fully justified by the circumstances.

IV. LAWYER AND JUDGE. Lawyers and judges owe each other respect, diligence, candor, punctuality, and protection against unjust and improper criticism and attack. Lawyers and judges are equally responsible to protect the dignity and independence of the Court and the profession. I will always recognize that the position of judge is the symbol of both the judicial system and administration of justice. I will refrain from conduct that degrades this symbol. I will conduct myself in court in a professional manner and demonstrate my respect for the Court and the law. I will treat counsel, opposing parties, the Court, and members of the Court staff

with courtesy and civility. I will be punctual. I will not engage in any conduct which offends the dignity and decorum of proceedings. I will not knowingly misrepresent, mischaracterize, misquote or miscite facts or authorities to gain an advantage. I will respect the rulings of the Court. I will give the issues in controversy deliberate, impartial and studied analysis and consideration. I will be considerate of the time constraints and pressures imposed upon the Court, Court staff and counsel in efforts to administer justice and resolve disputes.

FULBRIGHT & JAWORSKI L.L.P.
(Houston)

EXPENSES AND SERVICES SUMMARY

<i>EXPENSE/SERVICE</i>	<i>CHARGE</i>
Binding	\$1.65 per book (Pricing varies in other office locations)
Data Base Research Lexis, Westlaw, Information America	Costs allocated by the firm
Deliveries	
Overnight/Express	Direct Cost
Outside Courier	Direct Cost
In-House	N/A (Pricing varies in other office locations)
Courthouse Messengers	\$50.00/Hour plus Transportation (Pricing varies in other office locations)
Document Scanning	\$1.50 per page
Duplicating	
Photocopy	\$0.15 per page
Microfilm/Microfiche	\$0.50 per page
Videography (duplication)	\$5.00/tape plus \$20.00/duplication
Electronic Mail (via Internet)	No Charge
Library Research by Library Staff	\$105.00 - \$160.00 per hour
Weekend & Late Evening Air Conditioning	\$25.00 per hour (Only if necessitated by client requirements) (Pricing varies in other office locations)
Postage	Direct Cost on any item or group of items which cost \$1.00 or more
Secretarial Overtime	\$28.00 per hour plus supper allowance paid for overtime in excess of 2 hours per day during the week and 6 hours per day on weekends (Pricing varies in other office locations)
Facsimile (Outgoing)	\$0.80 per page plus applicable LD charges
Telephone	
Long Distance (Domestic)	\$0.30 per minute
Long Distance (International)	80% of direct dial rate

Expenses and Services Summary

Page 2

EXPENSE/SERVICE

CHARGE

File Storage Retrieval

\$10.00 per box
(Pricing varies in other office locations)

Transportation

Mileage (personal automobile)

Applicable IRS allowable rate per mile

Lodging

Direct Cost

Meals

Direct Cost

Car Rental/Airline/Rail/Etc.

Direct Cost

CD-ROM Research

\$30.00 - \$50.00 per Search
(rate varies based on length of search)

Graphic Arts

\$70.00 - \$120.00 per hour, plus direct cost of supplies

Gary Grote Attorney At Law

Gary E. Grote
ATTORNEY AT LAW
Total Plaza
1201 Louisiana, Suite 550
Houston, Texas 77002
Telephone (713) 650-3131
Telecopier (713) 650-8444
E-Mail GaryG@grotelaw.com

PART A6

September 23, 2009

West Harris County Regional Water Authority
Mr. Dan Sallee
c/o Alex Garcia
Allen Boone Humphries Robinson LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Re: Agreement for legal representation related to (i) the purchase from Exxon of various legal interests in a certain pipeline corridor in Harris County, Texas and (ii) certain matters relating to such pipeline corridor arising following the closing of the purchase of such legal interests

Dear Mr. Sallee:

This letter will confirm the agreement we have entered into regarding the undersigned's representation of West Harris County Regional Water Authority (the "Authority") related to (i) the purchase from Exxon of various legal interests in a certain pipeline corridor in Harris County, Texas and (ii) certain matters relating to such pipeline corridor arising following the closing of the purchase of such legal interests. This letter will amend and restate in its entirety that certain letter agreement between the undersigned and the Authority dated April 20, 2004.

More specifically, in connection with the undersigned's representation, we have agreed to the following fee agreement:

1. The Authority will pay attorneys fees incurred in the above referenced transaction of \$165.00 per hour for Nathan E. Grote, my associate, and \$195.00 per hour for the undersigned and approximately \$175.00 - \$200.00 an hour for other attorneys engaged by the undersigned to assist in the transaction. The engagement of such other attorneys will be approved in advance by a director of the Authority.


2. The Authority will be responsible for payment on a timely basis of reimbursable expenses, such as filing fees, travel expenses, facsimile, copies, and long distance. We will advance certain of these expenses, and send you invoices for reimbursement on a timely basis.
3. The Authority will be responsible for payment of the fees of certain other persons engaged by the undersigned to assist in the due diligence investigations with respect to the title, documentation and other real estate connected matters with respect to the above referenced transaction. The engagement of such other persons will be approved in advance by a director of the Authority.
4. The fees and reimbursable expenses due hereunder shall be paid by the Authority no later than 45 days after the Authority's receipt from the undersigned of an invoice for same.
5. The undersigned, the other attorneys engaged by it and the other persons engaged by it will represent the Authority with respect to the negotiation and execution of a purchase and sale agreement, the due diligence investigations with respect to the real estate aspects of the transaction and the proper documentation of the purchase of the assets acquired in the transaction. The undersigned will cooperate with Vinson & Elkins, L.L.P. with respect to the environmental aspects of the transaction and will report to Mr. Alex Garcia or Mr. David Oliver of Allen Boone Humphries Robinson LLP at regular intervals regarding the progress in representing the Authority in the above referenced transaction. The undersigned acknowledges that Vinson & Elkins, L.L.P. is also available to assist the undersigned in connection with the real estate of said transaction if necessary.
6. Our relationship is based upon mutual consent and you may terminate our representation at any time, with or without cause, by notifying the undersigned. Your termination of the legal services described herein will not affect your responsibility for payment of fees for legal services rendered and of other charges incurred before termination and in connection with an orderly transition of the matter.

If the foregoing is acceptable to you, please confirm so by signing this letter below and returning it to me.

Dan Sallee
September 23, 2009
Page 3 of 3

Thank you for engaging our firm in this matter. We look forward to working with you towards a successful resolution of this case.


Very truly yours,

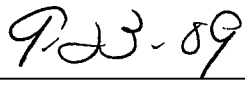


Gary E. Grote

AGREED AND ACCEPTED:

West Harris County Regional Water Authority

By: 
Name: DAN SALLEE
Title: PRESIDENT



Date

Heidaker Land Services, Inc.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into this 13th day of July, 2011, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Heidaker Land Services, Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I. SERVICES

Section 1.01. Services and Fees. Contractor shall perform certain land acquisition services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority. Charges for Services will be made in accordance with the Schedule of Rates and Expense Reimbursements attached hereto as **Exhibit A**.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The

Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit B** and shall be dated when approved. All fees described in the Work Authorization shall include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.02. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000, unless otherwise amended.

Option 1 – Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit A**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III. GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this

Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's

compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being

provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military

authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

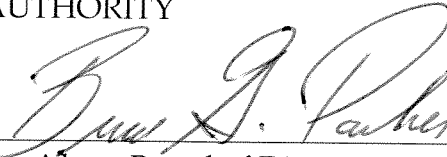
Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)



HEIDAKER LAND SERVICES, INC.

By: _____



Paul Heidaker, President

EXHIBIT A

Schedule of Rates and Expense Reimbursements

The Rates and reimbursements set forth in this Exhibit A are subject to annual adjustment by Contractor provided Contractor gives WHCRWA a minimum of sixty (60) days written notice of any such adjustment.

Consultant will submit monthly invoices for services provided through the last day of each month to WHCRWA, accompanied by an explanation of charges, professional fees, services, and expenses. WHCRWA will pay such invoices according to its normal payment procedures, but in no event shall such payment be later than thirty days after receipt of the invoice by WHCRWA.

ACQUISITION FEE PER PARCEL

Acquisition Price \$2,500.00 per/parcel

Milestone Billing

Initial Offer 50% per parcel price
Closing Package or Submission of Condemnation Package 50% per parcel price

CONSULTANT FEE

The Hourly Rate Schedule is based on a per hour basis respectively. Consultant will be paid at the rates per service or employee shown below. WHCRWA will reimburse Consultant for *actual*, project-related expenses at the rates set forth below.

HOURLY RATE SCHEDULE

Project Manager..... \$ 90.00 / hr
Right of Way Agent..... \$ 75.00 / hr
Title Coordinator / Examiner..... \$ 75.00 / hr
Right of Way Assistant..... \$ 45.00 / hr

All salary classifications may not be necessary on every project.

REIMBURSABLE PROJECT EXPENSES

TITLE SERVICES

If Title services are required, Contractor will obtain Title Certificate or Title Policy and WHCRWA will have the right to approve per parcel fee prior to the hiring of the abstractor. All Title fees will be billed to the WHCRWA at their actual cost.

APPRAISAL FEES

If appraisals are required, Contractor will obtain appraisals from a licensed appraisal service and WHCRWA will have the right to approve appraisal fees prior to the hiring of the appraiser. All appraisal fees will be billed to WHCRWA at their actual cost.

MISCELLANEOUS PROJECT RELATED EXPENSES

- a) Reproduction, duplicating and blueprinting service
- b) Recording fees
- c) Other expenses authorized by WHCRWA in the performance of the Scope of Services.

**ADDENDUM No. 1 TO MASTER SERVICES AGREEMENT
(Heidaker Land Services, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Heidaker Land Services, Inc. ("Contractor"), to be effective the 8th day of May, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated July 13, 2011 (the "Agreement") to perform certain professional services or such other related services that may be required; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

HEIDAKER LAND SERVICES, INC.


Bruce G. Parker, President Date: 5/8/13



Paul A. Heidaker, President Date: 5/15/13

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$400,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Integra Realty Resources-Houston, LLC

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into as of this 13th day of October, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Integra Realty Resources-Houston, LLC, a Texas limited liability company (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain appraisal services described in Exhibit A (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when

approved. All fees described in the Work Authorization shall include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Contractor shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS,**

REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.

III. GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having either (i) a Best's rating of B+ or better and

licensed to transact business in the State of Texas, or (ii) a Best's rating of A- or better and admitted to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$500,000
 - b. General aggregate - \$1,000,000
 - c. Products-Completed Operations Aggregate - \$500,000
 - d. Personal & Advertising Injury - \$500,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$1,000,000/\$1,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD

HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control. Notwithstanding anything contained in any attachments or exhibits hereto, the Authority shall not be required to provide insurance for the Contractor or indemnify the Contractor.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the

other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY

James G. Pauler
President, Board of Directors

ATTEST

Dylan
Secretary, Board of Directors

(SEAL)



INTEGRA REALTY RESOURCES-HOUSTON, LLC,
a Texas limited liability company

By: *Michael W. Welch*
Name: MICHAEL W. WELCH
Title: PARTNER

EXHIBIT A



September 24, 2010

West Harris County Regional Water Authority
C/o Allen Boone Humphries Robinson LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Attention: Ms. Katie Dorfman

Re: Request for proposal for real estate appraisal
and consulting services for the West Harris
County Regional Water Authority.

Dear Ms. Dorfman,

This letter is in response to your request for a proposal for real estate appraisal and consulting services pertaining to potential acquisitions by the West Harris County Regional Water Authority. The preliminary scope of services is as follows:

Integra Realty Resources – Houston (“IRR – Houston”) will provide appraisal and real estate related services in connection with the acquisition of certain parcels to be designated by the West Harris County Regional Water Authority (the “Authority”) that are related to the Authority’s water line facilities, and other related facilities, along the route shown on Exhibit A attached hereto (the “Second Source Line”).

Fees for service will be determined through interaction with the Authority’s Board and its attorneys to determine a specific scope for each segment of the Second Source Line. As discussed with the Board, IRR - Houston will provide cost estimates for the Board for full appraisals of every property along the route as well as a value range methodology that could provide significant savings to the Board. Once the final methodology is agreed upon, IRR - Houston will provide hard cost estimates to the Board. Once the methodology and cost has been agreed upon, IRR - Houston will commence work immediately.

LOCAL EXPERTISE... NATIONALLY

5718 Westheimer , S. 1100 • Houston, TX 77057 • Phone 713-243-3300 • Fax 713 243-3301 • internet: www.irr.com

Upon identification of the parcel to be appraised, we will provide a lump-sum fee proposal for the preparation and completion of an appraisal report determining the compensation owed for the proposed acquisition of the parcel.

In the event that the Authority is unable to reach agreements with landowners, IRR - Houston is available to provide testimony at commissioners' hearings and trial. Our preparation of the court exhibits, trial preparation and testimony will be billed at the hourly rates of \$250 per hour for principals, \$125 per hour for analyst and \$75 per hour for support staff.

I appreciate the opportunity to be of service to the Authority. I am confident that we can provide a product that will satisfy the needs of the Authority and facilitate your attempts to acquire the properties in an expeditious manner.

If these terms are acceptable to you, please complete a notice to proceed and fax (713-243-3345) to my attention. In the mean time, should you have any questions or require any additional information, please do not hesitate to contact me at (713) 243-3344.

Sincerely,

INTEGRA REALTY RESOURCES, HOUSTON
BY:



Michael W. Welch
Partner
TX-1323054-G

Exhibit A

**ADDENDUM No. 2 TO MASTER SERVICES AGREEMENT FOR
PROFESSIONAL SERVICES
(Integra Realty Resources-Houston, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Appraisal Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Integra Realty Resources-Houston, LLC ("Contractor"), to be effective the 13th day of August, 2014.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services dated October 13, 2010 (the "Agreement") to perform appraisal services and other related professional services that may be required; and amended by Addendum No. 1 on December 8, 2010 to establish the potential maximum amount that Contractor may earn for all Work Authorizations; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

INTEGRA REALTY RESOURCES-
HOUSTON, LLC.



Bruce G. Parker, President

Date: 8/13/14



Michael W. Welch, Partner

Date: 8-19-2014

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$150,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 1 TO MASTER SERVICES AGREEMENT FOR
PROFESSIONAL SERVICES
(Integra Realty Resources-Houston, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Appraisal Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Integra Realty Resources-Houston, LLC ("Contractor"), to be effective the 8th day of December, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services dated October 13, 2010 (the "Agreement") to perform appraisal services and other related professional services that may be required; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

INTEGRA REALTY RESOURCES-
HOUSTON, LLC.



Bruce G. Parker, President

Date: 12/8/10



Michael W. Welch, Partner

Date: 12/16/10

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$50,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

KDM Acquisition Services, Inc.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into this 13th day of July, 2011, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and KDM Acquisition Services, Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I. SERVICES

Section 1.01. Services and Fees. Contractor shall perform certain land acquisition services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority. Charges for Services will be made in accordance with the Schedule of Rates and Expense Reimbursements attached hereto as **Exhibit A**.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The

Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit B** and shall be dated when approved. All fees described in the Work Authorization shall include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.02. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000, unless otherwise amended.

Option 1 - Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 - Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit A**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority

c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III. GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and

the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

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inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

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Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests;

civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

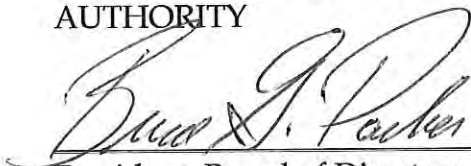
Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)

KDM ACQUISITION SERVICES, INC.

By: Kevin Arnett
Kevin Arnett, President

EXHIBIT A

Schedule of Rates and Expense Reimbursements

The Rates and reimbursements set forth in this Exhibit B are subject to annual adjustment by Contractor provided Contractor gives WHCRWA a minimum of sixty (60) days written notice of any such adjustment.

Consultant will submit monthly invoices for services provided through the last day of each month to WHCRWA, accompanied by an explanation of charges, professional fees, services, and expenses. WHCRWA will pay such invoices according to its normal payment procedures, but in no event shall such payment be later than thirty days after receipt of the invoice by WHCRWA.

ACQUISITION FEE PER PARCEL

Acquisition Price \$3,000.00 per/parcel

Milestone Billing

Initial Offer 40% per parcel price
Submission of Deed or Final Offer Letter 40% per parcel price
Closing Package or Submission of Condemnation Package 20% per parcel price

CONSULTANT FEE

The Hourly Rate Schedule is based on a per hour basis respectively. Consultant will be paid at the rates per service or employee shown below. WHCRWA will reimburse Consultant for *actual*, project-related expenses at the rates set forth below.

HOURLY RATE SCHEDULE

Project Manager..... \$ 95.00 / hr
Right of Way Agent..... \$ 65.00 / hr
Title Coordinator / Examiner..... \$ 65.00 / hr
Right of Way Assistant..... \$ 40.00 / hr

All salary classifications may not be necessary on every project.

REIMBURSABLE PROJECT EXPENSES

TITLE SERVICES

If Title services are required, Contractor will obtain Title Certificate or Title Policy and WHCRWA will have the right to approve per parcel fee prior to the hiring of the abstractor. All Title fees will be billed to the WHCRWA at their actual cost.

APPRAISAL FEES

If appraisals are required, Contractor will obtain appraisals from a licensed appraisal service and WHCRWA will have the right to approve appraisal fees prior to the hiring of the appraiser. All appraisal fees will be billed to WHCRWA at their actual cost.

MISCELLANEOUS PROJECT RELATED EXPENSES

- a) Reproduction, duplicating and blueprinting service
- b) Recording fees
- c) Other expenses authorized by WHCRWA in the performance of the Scope of Services.

**ADDENDUM No. 1 TO MASTER SERVICES AGREEMENT
(KDM Acquisition Services, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and KDM Acquisition Services, Inc. ("Contractor"), to be effective the 8th day of October, 2014.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated July 13, 2011 (the "Agreement") to perform certain professional services or such other related services that may be required;


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

KDM ACQUISITION SERVICES, INC.



Bruce G. Parker, President

Date: 10/8/2014



Kevin W. Arnett

Date: 9-29-2014

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$200,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Myrtle Cruz, Inc.

AGREEMENT

**Lump Sum or Specified Rate
Work Authorizations Used**

This Agreement ("Agreement") is entered into as of August 8, 2007, between **West Harris County Regional Water Authority ("WHCRWA")** and **Kuo & Associates, Inc. (Contractor)**.

WITNESSETH:

WHEREAS, WHCRWA desires to obtain professional services pursuant to the terms and conditions of this Agreement; and

WHEREAS, Contractor desires to provide such services in exchange for the fees hereinafter specified.

NOW, THEREFORE, for and in consideration of the promises and mutual covenants contained herein, the parties hereto agree as follows:

1. General.

1.1 WHCRWA hereby retains Contractor and Contractor hereby agrees to perform the services and to develop the work product described on Exhibit "A" attached and incorporated hereto and specified on future written Work Authorizations (the "Work").

1.2 The relationship of Contractor to WHCRWA under this Agreement and otherwise shall be that of independent contractor. Contractor shall take no action which is likely to lead third parties to believe that it is a partner or venturer with WHCRWA in connection with the performance of the Work. Contractor is not, by the terms of this Agreement or otherwise, an agent, employee, or representative of WHCRWA. While Contractor shall be responsible to perform the duties and obligations owed to WHCRWA under this Agreement, WHCRWA shall not control or have the right to control the manner or methods employed by Contractor in the performance of its Work hereunder.

2. Certain Duties of Contractor.

In addition to its other duties under this Agreement, Contractor shall comply with the following:

2.1 Contractor agrees to provide prompt and efficient professional services as herein described for the fees hereinafter specified. Contractor shall coordinate its performance of the services hereunder with WHCRWA. Contractor shall make periodic oral or written reports and recommendations to WHCRWA with respect to conditions,

transactions, situations, or circumstances encountered by Contractor relating to the services to be performed under this Agreement.

2.2 Contractor shall make timely payments to all persons and entities supplying labor, materials, or equipment in connection with the Work to be performed under of this Agreement. **CONTRACTOR SHALL PROTECT, INDEMNIFY AND HOLD HARMLESS, WHCRWA, ITS DIRECTORS, OFFICERS, AGENTS AND EMPLOYEES FROM ANY AND EVERY KIND AND CHARACTER OF DAMAGES, LAWSUITS, EXPENSES, DEMANDS, CLAIMS AND CAUSES OF ACTION ARISING AGAINST WHCRWA, ITS OFFICERS, AGENTS OR EMPLOYEES, OR ITS SUBCONTRACTORS, THEIR OFFICERS, AGENTS AND EMPLOYEES, OR OTHER PERSONS, FIRMS, OR CORPORATIONS WHATSOEVER ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

2.3 Contractor shall obtain, maintain, and pay for all licenses, permits, and certificates, including all professional licenses that are required by any statute, ordinance, rule, or regulation to be obtained by Contractor in connection with the performance of the Work under this Agreement. Contractor shall immediately notify WHCRWA of any suspension, revocation, or other detrimental action against any license, permit or certification required hereunder.

2.4 Contractor shall replace any of its personnel or consultants whose work product is deemed unsatisfactory by WHCRWA, in the WHCRWA's sole and absolute discretion.

2.5 Contractor expressly represents and warrants that all the Work to be performed by Contractor shall be of good quality and shall be performed in a professional manner using that degree of care and skill ordinarily exercised by and consistent with the standards of competent professionals providing similar services in connection with the same or similar projects, and that all work products provided by Contractor to WHCRWA shall be fit for the purposes intended by WHCRWA. Contractor's Work shall comply with all applicable federal, state and local laws, codes, rules and regulations.

2.6 Contractor agrees that it shall perform its obligations to WHCRWA under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of WHCRWA.

2.7 No Work of any nature shall be undertaken by Contractor under this Agreement until a written Work Authorization is executed and a notice to proceed is issued by WHCRWA.

3. Contractor's Compensation:

3.1 In complete compensation and satisfaction for all services to be provided by Contractor under this Agreement, WHCRWA shall pay the fees set forth in each Work Authorization and per rates included in Exhibit "B", attached and incorporated

hereto. In the event the Work is delayed by Contractor, Contractor shall provide such overtime and additional manpower and equipment as is required to overcome such delays, and Contractor shall not be entitled to additional compensation to pay for any additional costs incurred in overcoming such delays. It is agreed that the fees specified in the Work Authorizations shall not be exceeded under any circumstances without prior written approval from WHCRWA.

3.2 Contractor shall invoice WHCRWA monthly in the proper amounts based on the services performed by Contractor. Dependant upon the payment option referenced on each Work Authorization, Contractor shall provide invoices as detailed in Exhibit "B" for the applicable payment option. All invoices are subject to approval by WHCRWA. WHCRWA shall approve, in whole or in part, or disapprove Contractor's invoices within 45 calendar days of receipt. Contractor will be notified if the invoice or any portion thereof is rejected by WHCRWA or is delayed for any reason.

3.3 WHCRWA shall pay Contractor within the above-mentioned 45 calendar day period the amount of any approved invoice. All remittances by WHCRWA of such compensation shall be made by check. Such checks will be made payable to Contractor and payments will be addressed to Contractor at its address specified herein for notices. Neither partial payments made hereunder nor approval of invoices or Work by WHCRWA shall be construed as final acceptance or approval of that part of Contractor's Work to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

3.4 Monthly invoices shall be submitted as follows:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
West Harris County Regional Water Authority
1621 Milam, 3rd Floor
Houston, Texas 77002-8017

Copies to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

West Harris County Regional Water Authority
c/o Cam Postle
Postle Property Services, Inc.
1300 Post Oak Boulevard, Suite 1110
Houston, Texas 77056

4. **Insurance:**

4.1 Contractor must obtain the types and limits of insurance, including special provisions as provided below:

COVERAGE	LIMITS OF LIABILITY
Workers' Compensation	Statutory for Workers' Compensation
Employer's Liability	Bodily Injury by Accident \$500,000 (each accident) Bodily Injury by Disease \$500,000 (policy limit) Bodily Injury by Disease \$500,000 (each employee)
Commercial General Liability	Bodily and Personal Injury; Products and Completed Operations, Bodily Injury and Property Damage, and Contractual Liability Combined Limits of \$1,000,000 each Occurrence, and \$2,000,000 aggregate
Excess/Umbrella Coverage	\$1,000,000 each occurrence, and \$1,000,000 aggregate
Automobile Liability	\$500,000 combined single limit
Professional Liability Coverage	\$1,000,000 per claim/\$1,000,000 aggregate

4.2 **Issuers of Policies.** The issuer of any policy (1) shall have a Certificate of Authority to transact insurance business in Texas and (2) shall be an admitted insurer in the State of Texas and have a Best's rating of at least A and a Best's Financial size Category of Class VIII or better, according to the most current edition of *Best's Key Rating Guide*.

4.3 **Insured Parties.** Each policy, except those for Workers' Compensation, Employer's Liability, and Professional Liability, must name WHCRWA (and their officers, agents, and employees) as additional insured parties on the original policy and all renewals or replacements.

4.4 **Deductibles.** Contractor shall be responsible for and bear any claims or losses to the extent of any deductible amounts and waives any claim it may have for the same against WHCRWA and their officers, agents, or employees.

4.5 **Cancellation:**

(1) Each policy, with the exception of Professional Liability, must state that it may not be canceled, materially modified, or nonrenewed unless the

insurance company gives WHCRWA 30 days' advance written notice. Professional liability policies must state that they may not be canceled, non-renewed, or have their limit of liability or types of coverage reduced by endorsement unless the insurance company gives WHCRWA 30 days advance written notice.

(2) Contractor shall give written notice to WHCRWA within 5 days of the date on which total claims by any party against Contractor reduce the aggregate amount of coverage below the amounts required by this Agreement.

4.6 **Subrogation.** Each policy, except Professional Liability, must contain an endorsement to the effect that the insurer waives any claim or right of subrogation to recover against WHCRWA and their officers, agents, or employees.

4.7 **Endorsement of Primary Insurance.** Each policy, except Worker's Compensation and Professional Liability, must contain an endorsement that the policy is primary to any other insurance available to the additional insureds with respect to claims arising under this Agreement.

4.8 **Liability for Premium.** Contractor shall pay all insurance premiums.

4.9 **Delivery of Policies.** Contractor shall provide certificates of insurance in accordance with the requirements of the Agreement and prior to the start of the Work.

4.10 **Indemnification.** CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS WHCRWA, ITS DIRECTORS, OFFICERS, AGENTS, AND EMPLOYEES FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING REASONABLE ATTORNEY'S FEES AND EXPENSES, COURT COSTS, AND OTHER EXPENSES INCURRED IN ENFORCING THIS INDEMNITY PROVISION) BROUGHT BY CONTRACTOR OR ANY OF CONTRACTOR'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENCE OR MISCONDUCT OF CONTRACTOR, OR CONTRACTOR'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES.

5. **Term and Termination.**

5.1 This Agreement shall be effective upon the date of execution by WHCRWA, and shall continue thereafter, subject to the notice to proceed and issuance of a Work Authorization, unless otherwise terminated as hereinafter provided.

5.2 WHCRWA may terminate, with or without cause, this Agreement, resultant Work Authorizations and Contractor's performance of the Work hereunder at any time by giving 14 calendar days written notice to the Contractor. As soon as possible, but

not later than the effective date of such notice, the Contractor shall, unless the notice directs otherwise, immediately discontinue all Work in connection with this Agreement and shall proceed to promptly cancel all existing orders and subcontracts insofar as such orders or subcontracts are chargeable to this Agreement. Within 30 calendar days after the effective date of the notice of termination, Contractor shall deliver to WHCRWA all work products obtained by or prepared by Contractor as part of its Work hereunder (including but not limited to all reports, schedules, charts, analysis, maps, letters, notes, manuals, plans, models and photographs), and shall submit an invoice showing in detail Work performed under this Agreement to the date of termination. WHCRWA shall then pay the prescribed fees to the Contractor for Work actually performed under this Agreement up to the date of termination, less any previous payments, in the same manner as prescribed in Section 3. The Contractor may, if necessary, submit invoices for vendor and subcontractor charges which are incurred in connection with this Agreement prior to the effective date of termination and received by the Contractor after the termination invoice. WHCRWA shall not be obligated to pay Contractor any other termination expenses.

5.3 Contractor may terminate its performance under this Agreement if WHCRWA fails to pay the compensation owed to Contractor pursuant to the terms of this Agreement. Should such default occur, Contractor shall have the right to terminate all or part of its duties under this Agreement as of the 30th calendar day following the receipt by WHCRWA of a notice from Contractor describing such default and intended termination, provided: (i) such termination shall be ineffective if within the 30 calendar day period WHCRWA cures the default, and (ii) such termination may be stayed beyond such 30 calendar day period, at the sole option of the Contractor, pending cure of the default.

5.4 Contractor may terminate Contractor's performance under this Agreement, with or without cause, by giving 14 calendar days written notice to the WHCRWA.

5.5 Should WHCRWA desire to suspend or terminate a Work Authorization but not terminate the Agreement, WHCRWA may orally notify the Contractor followed by written confirmation, giving fourteen (14) days notice. Both parties may waive the fourteen day notice in writing. A Work Authorization may be reinstated and resumed in full force and effect upon written notice from WHCRWA to resume the work. If WHCRWA suspends a Work Authorization, the Work Authorization will terminate on the date specified unless the Work Authorization is amended to authorize additional time. WHCRWA shall have no liability for Work performed or costs incurred prior to the date authorized by WHCRWA to begin Work, during periods when Work is suspended, or after the completion date of the Work Authorization or termination of the Agreement.

5.6 No allowance for an extension of time for any cause whatsoever, shall be claimed by, or given to, Contractor unless Contractor shall have made written request upon WHCRWA for such extension within forty-eight (48) hours after the cause of such extension occurred.

6. The Ownership of Work Product.

6.1 WHCRWA shall be the Owner of all ideas and information created, developed or obtained by Contractor in the performance of the Work hereunder. Contractor shall furnish to WHCRWA all field notes, reports, the original tracings of all drawings, plans, maps, photographs, and other materials (including, if requested by WHCRWA, design computations, design sketches, and review drawings) prepared pursuant to this Agreement. The originals of all such documents shall be and remain the property of WHCRWA. With respect to the forms of expression of ideas reduced to a tangible medium of expression, such as engineering drawings, plans, maps, and the like, which are covered by federal copyright laws, WHCRWA shall be the Owner of such works and all exclusive rights of copyright therein. It is agreed that all such works shall be deemed to be "works made for hire," as that term is defined in 17 U.S.C. 101. However, in the event it should be determined that any of such works is not a "work made for hire," then Contractor agrees to assign, and does hereby assign unto WHCRWA all right, title, and interest in and to such works, including all right, title, and interest in and to all exclusive rights of copyright therein.

6.2 Notwithstanding the foregoing, Contractor may retain copies of such documents and shall have the right to use such copies for its own internal purposes, but Contractor may not provide such documents to others or sell, license, or otherwise market to others such documents or the information contained therein.

6.3 Contractor shall take all steps which may be necessary or appropriate to ensure that it or its nominee (which shall be WHCRWA) obtains title to the work product that may be created or developed by its employees and its subcontractors who assist in the performance of the Work hereunder. For example, in all Agreements entered into between Contractor and subcontractors, it shall be provided that the subcontractor assigns to Contractor or its nominee (which shall be WHCRWA) all of the subcontractor's rights in and to the Work and all exclusive rights of copyright herein.

7. Confidential Information.

7.1 During the term of this Agreement, Contractor may acquire from WHCRWA, or obtain or develop in connection with the performance of its Work hereunder, confidential information belonging to WHCRWA. As used herein, the term "confidential information" shall mean any information, written or oral, relating to the Work and which gives WHCRWA a business advantage over others, including but not limited to, processes, techniques, procedures, designs, drawings, plans, diagrams, specifications, computer programs, systems, know-how, trade secrets and other technical data, project information, policies and agreements, including this Agreement. Contractor shall not, without the prior written consent of WHCRWA, disclose or make available to any person, or use, directly or indirectly, except in connection with the performance of its Work hereunder, any of such confidential information. This obligation shall not apply to such portions of WHCRWA's confidential information which: (a) was previously known to Contractor (as evidenced by

its written records) prior to obtaining the same from WHCRWA or developing the same for WHCRWA while performing the Work hereunder; or (b) was in the public domain prior to the time of disclosure by WHCRWA to the Contractor or prior to the time such information was developed by Contractor for WHCRWA under this Agreement; or (c) the information is later disclosed to Contractor by a third party who did not receive the same, directly or indirectly, from WHCRWA or who had no obligation of secrecy with respect thereto. No provision of this Agreement shall be construed to impose any confidentiality obligation or requirement upon the WHCRWA and the WHCRWA may (at its discretion) disclose to whomever any information or documents deemed appropriate by the WHCRWA.

7.2 Contractor further agrees that it shall not make any announcements or release any information or photographs concerning this Agreement or the Work or any part thereof to any member of the public or to the press or to any official body, unless prior written consent is obtained from WHCRWA.

7.3 Contractor shall take all steps which may be necessary or appropriate in order that its employees and its vendors and consultants are bound by and adhere to the confidentiality provisions of this Agreement (including but not limited to, the inclusion of appropriate clauses to carry out the purpose and intent hereof in all subcontracts, purchase orders and consulting agreements entered into by Contractor pursuant to the performance of this Agreement).

8. Miscellaneous.

8.1 This Agreement shall be construed and enforced for all purposes pursuant to the laws of the State of Texas and, to the extent applicable, all federal laws and all rules and regulations of any regulatory body or officer having jurisdiction. The parties agree that this Agreement is to be performed at least in part in Harris County, Texas and therefore the federal and state courts in Houston, Harris County, Texas shall have in personam jurisdiction over the parties to resolve any disputes between them arising out of this Agreement.

8.2 This Agreement shall inure to the benefit of WHCRWA and Contractor. This Agreement is personal to Contractor and may not be assigned or transferred without the written permission of WHCRWA. This Agreement shall not be construed in favor or against either party on the basis that such party did nor did not draft the Agreement.

8.3 This Agreement (including all documents incorporated by reference or attached as exhibits hereto) represents the entire Agreement between WHCRWA and Contractor with respect to the subject matter hereof and supersedes and merges all prior negotiations, representations, discussions or agreements, either written or oral, with respect to the subject matter hereof. This Agreement may be amended only by written instrument signed by duly authorized representatives of both WHCRWA and Contractor.

8.4 All Work Authorizations issued pursuant to this Agreement shall be incorporated herein by reference, be subject to the terms and conditions set forth herein and shall follow the format set forth in Exhibit "A-1".

8.5 All notices required or permitted hereunder shall be in writing and shall be deemed delivered on the date of delivery if by personal delivery or, if by mail, three days after deposit with the United States Postal Service (certified mail, return receipt requested) addressed to the respective other party at the addresses shown below:

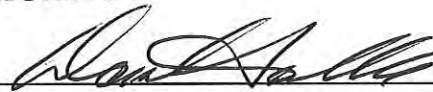
West Harris County Regional
Water Authority
c/o Allen Boone Humphries Robinson LLP
3200 Southwest Freeway
Suite 2600
Houston, Texas 77027

Kuo & Associates, Inc.
10700 Richmond Avenue
Suite, 113
Houston, Texas 77042

8.6 The failure of either party to insist on performance of any of the provisions of this Agreement shall not be construed as a waiver of the requirements of such provision.

IN WITNESS WHEREOF, this Agreement is executed in duplicate originals by WHCRWA and Contractor.

**WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY**

By: 
Name: DAN H. SALLEE
Title: PRESIDENT
Date: 8-8-2007

KUO & ASSOCIATES, INC.

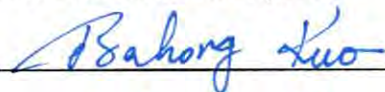
By: 
Name: BAHONG KUO
Title: PRESIDENT
Date: 8-10-2007

EXHIBIT "A"

SCOPE OF WORK

Contractor agrees to furnish all supervision, labor, materials, supplies and equipment, and other items necessary to perform professional surveying services as directed, set forth and specified in individual Work Authorizations to be issued periodically pursuant to this agreement.

WHCRWA will issue Work Authorization(s) to authorize all work under this contract. The Contractor must sign and return a Work Authorization within seven (7) working days after receipt. Refusal to accept a Work Authorization may be grounds for termination of the Agreement. WHCRWA shall not be responsible for any action by the Contractor or any costs incurred by the Contractor relating to work not directly associated with or begun prior to the execution of a Work Authorization.

Work Authorizations are issued at the discretion of WHCRWA. While it is WHCRWA's intent to issue Work Authorizations hereunder, the **Contractor shall have no cause of action conditioned upon the lack of quantity or dollar amount of Work Authorizations issued. Contractor is not guaranteed Work Authorizations in the maximum total amount set forth in Exhibit "B", nor in any amount whatsoever. The amount set forth in Exhibit "B" represents the potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement.** Each Work Authorization shall be signed by both parties and become a part of the Agreement. No Work Authorization will waive WHCRWA's or the Contractor's responsibilities and obligations established in this Agreement. The Contractor shall promptly notify WHCRWA of any event that will affect completion of a Work Authorization.

Before additional Work may be performed or additional costs incurred a written Supplemental Work Authorization must be issued. Both parties must execute a Supplemental Work Authorization within the period of performance specified in the original Work Authorization. WHCRWA shall not be responsible for actions by the Contractor or any costs incurred by Contractor for work begun prior to the execution of the Supplemental Work Authorization. If the Contractor determines or reasonably anticipates that a Work Authorization cannot be completed before the specified completion date, the Contractor shall promptly notify WHCRWA. WHCRWA may, at its sole discretion, extend the work authorization period by execution of a Supplemental Work Authorization.

EXHIBIT "A-1"

WORK AUTHORIZATION NO. ____

West Harris County Regional Water Authority District

Contractor: Kuo & Associates, Inc.
10700 Richmond Avenue, Suite 113
Houston, Texas 77042

THIS WORK AUTHORIZATION is made pursuant to and is subject to the terms and conditions of the Agreement dated as of August 17, 2004 entered into by and between West Harris County Regional Water Authority (WHCRWA), and Kuo & Associates, Inc. (Contractor).

Description of Work: The Contractor will perform surveying services generally described as _____ in accordance with the project description referenced above. The responsibilities of the Contractor as well as the work schedule are further detailed in the attached Exhibit WA__-A which is made a part of this Work Authorization.

Total Authorization: The maximum amount payable under this Work Authorization is \$_____. This amount is based upon fees set forth in Exhibit B-1, Rate Schedule, of the Agreement.

Payment: Payment to the Contractor for the services established under this Work Authorization shall be made in accordance with Option 1 – Lump Sum Basis or Option 2 – Specified Rate Basis (pick one and omit other option) of the Agreement.

Work Period: This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on _____, 200__, unless extended by a supplemental Work Authorization.

Miscellaneous: This Work Authorization does not waive the parties' responsibilities and obligations provided under the original Agreement.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

Engineer: West Harris County Regional
Water Authority

Contractor: Kuo & Associates, Inc.

Signature: _____

Signature: _____

Name/Title: _____

Name/Title: _____

Date: _____

Date: _____

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and expenses and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost or expenses.

Option 2 – Specified Rate and Expenses Basis

The specified rates for each classification are shown in the attached Rate Schedule, Exhibit "B-1". Payment shall be based on: (i) actual reimbursable expenses incurred (without any mark-up); plus (ii) actual hours worked multiplied by the specified personnel rate.

EXHIBIT "B-1"

Hourly Rate Schednle

Office Personnel

Principal (PE/RPLS)	\$150.00/hr
Senior Engineer/PM (PE)	\$125.00/hr
RPLS	\$110.00/hr
Civil Engineer (PE)	\$115.00/hr
Structural Engineer (PE)	\$110.00/hr
Design Engineer (EIT)	\$80.00/hr
Survey Technician	\$75.00/hr
CAD Supervisor	\$75.00/hr
CAD Operator	\$60.00/hr
Clerical/Administrator	\$40.00/hr

Survey Field Personnel

4-man Field Crew	\$140.00/hr
3-man Field Crew	\$125.00/hr
2-man Field Crew	\$95.00/hr
GPS Unit	\$28.00/hr.

Lina T. Ramey & Associates, Inc.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into this 12 day of June, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Lina T. Ramey & Associates, Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the surveying services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain surveying services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with Exhibit A and shall be dated when approved. All fees described in the Work Authorization shall

include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Contractor shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY,**

COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of B+/VII or better and licensed to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS

ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is enforceable in Harris County.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of

subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

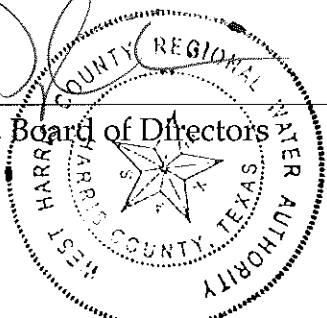
Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY

David A. Parker
President, Board of Directors

ATTEST

[Signature]
Secretary, Board of Directors
(SEAL) 

LINA T. RAMEY & ASSOCIATES, INC.

By: *[Signature]*
Name: *Lina Ramey*
Title: *President*

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Lina T. Ramey & Associates, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Lina T. Ramey & Associates, Inc. ("Contractor"), to be effective the 11th day of August, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated June 9, 2010 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.


WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

LINA T. RAMEY & ASSOCIATES, INC.



Bruce G. Parker, President

Date: 8/11/2010



Lina T. Ramey, President

Date: 8-20-10

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$300,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Lina T. Ramey & Associates, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Lina T. Ramey & Associates, Inc. ("Contractor"), to be effective the 11th day of July, 2012.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated June 9, 2010 (the "Agreement") to perform certain professional surveying services or such other related services that may be required, and amended on August 11, 2010 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

LINA T. RAMEY & ASSOCIATES, INC.



Bruce G. Parker, President Date: 7/11/12



Lina T. Ramey, President Date: 7-17-12

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$350,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Lockwood, Andrews and Newman

PROFESSIONAL ENGINEERING SERVICES AGREEMENT

This Professional Engineering Services Agreement (this "Agreement") is by and between West Harris County Regional Water Authority (the "Authority") and Lockwood, Andrews & Newnam, Inc. ("Engineer") and is effective as of this 11th day of March, 2015 (the "Effective Date").

RECITALS

WHEREAS, the Authority wishes to engage Engineer to perform certain professional engineering services set forth herein ("Services"); and

WHEREAS, Engineer desires to provide Services in exchange for the fees hereinafter described;

NOW, THEREFORE, for the mutual promises and benefits contained herein, the parties agree as follows:

AGREEMENT

I. ENGINEER'S RESPONSIBILITIES. Engineer agrees to perform or furnish professional engineering services for the Authority as set out herein and to give professional engineering consultation and advice to the Authority in its capacity as the Authority's Engineer for the compensation set forth herein.

A. SCOPE OF SERVICES. There are two types of Services provided under this Agreement: General Engineering Services and Construction Management Services.

1. General Engineering Services.

The Authority and Engineer understand and agree that general engineering services ("General Engineering Services") shall include the following:

- a. Attending meetings of the Authority and representing the Authority at meetings and conferences;
- b. Managing design consultants, including attending design meetings;
- c. Performing surge analysis;
- d. Capital improvement planning;
- e. Performing cost estimates;

- f. Route studies;
- g. Population projections;
- h. Water modeling;
- i. Cathodic protection coordination;
- j. GIS support;
- k. Assist Authority regarding expansion of the City of Houston's Northeast Water Purification Plant, including attending related committee meetings ("Plant Expansion Services");
- l. As directed by the Authority, review and comment on design plans prepared for Coastal Water Authority's Capers Ridge Pump Station ("Capers Ridge Pump Station Services"); and
- m. Other miscellaneous items of work relating to routine operations and business of the Authority.

Engineer shall attend the regular monthly meetings of the Authority.

2. Construction Management Services.

The Authority and Engineer understand and agree that routine construction management services ("Construction Management Services") shall include the following:

- a. Coordination between local municipal authorities, governmental agencies, utility companies, pipeline companies, and others involved in each project;
- b. Confirm, renew, and/or amend required permits, licenses, and certificates;
- c. Monitor progress daily;
- d. Track cost and schedule information;
- e. Prepare monthly progress reports;
- f. Receive and process contractor submittals and shop drawings;
- g. Receive and evaluate requests for information (RFI);

- h. Receive and evaluate proposals, work change directives, and change orders;
- i. Review monthly pay estimates;
- j. Maintain records of material testing;
- k. Investigate customer complaints within 24 hours;
- l. Maintain files for construction-related project documents, including contracts, drawings, specifications, correspondence, RFIs, submittals, show drawings, and financial records;
- m. Incorporate information from contractors' "as-built" drawings into record drawings;
- n. Provide resident engineering and inspection services;
- o. Coordinate sampling and testing of materials;
- p. Review contractors' traffic control methods and identify any non-compliance;
- q. Prepare daily reports of quantities completed and materials received;
- r. Provide substantial completion inspection and prepare certificate for the Authority approval and list of work to be completed or corrected;
- s. Provide final inspection and prepare a certificate of final completion and other close-out documentation for the Authority's approval;
- t. Direct and control the construction management services performed;
- u. Plan, conduct and document internal and external meetings;
- v. Establish quality assurance (QA), coordination, and control procedures;
- w. Provide copies of reports, cost estimates, construction documents, and recommendations;

- x. Conduct monthly program meetings with the Authority staff and the Authority's designated Program Manager ("Program Manager") and prepare status reports;
 - y. Monitor program expenditures and individual project schedules;
 - z. Perform reviews at the 50%, 70%, and 90% design phases of each project;
 - aa. Perform QA reviews of each final design submitted;
 - bb. Perform 5-year system inspection; and
 - cc. Perform other miscellaneous items of work relating to routine construction management activities.
3. Except as described in the following sentence, Engineer shall coordinate with and be overseen by the Program Manager for all Services. For all Plant Expansion Services and Capers Ridge Pump Station Services: (i) Engineer shall coordinate with and be overseen by the Authority's Board of Directors (or other person designated in writing by the Board); and (ii) in no event shall Engineer coordinate with or be overseen by Dannenbaum Engineering Corp. ("DEC") or any employees of DEC. Engineer represents and warrants that, as of the Effective Date, Engineer has no agreement with DEC for work or services related to the Authority.

B. WORK AUTHORIZATIONS. All Services, other than General Engineering Services and Construction Management Services as defined above, shall require a written work authorization ("Work Authorization"), and each Work Authorization shall include:

- a. Description of work;
- b. Basis of compensation;
- c. Budget of estimated fees;
- d. Completion schedule;
- e. Statement that performance of the work will be in accordance with this Agreement;
- f. Proposed project manager or administrator, if applicable;
- g. Special provisions applicable to the Work Authorization;
- h. Engineer's signature and date;
- i. Approval and signature block for Authority; and
- j. Effective date of Authority's acceptance and date of authorization.

II. COMPENSATION, BILLING, AND PAYMENT. The Authority shall pay Engineer for Services in accordance with the following:

A. GENERAL ENGINEERING SERVICES AND CONSTRUCTION MANAGEMENT SERVICES. The Authority shall pay Engineer for General Engineering Services and Construction Management Services based on time and materials plus reimbursable expenses in accordance with the Rate Schedule attached hereto as **Exhibit A**.

B. ADDITIONAL SERVICES. The Authority shall pay Engineer for Services that are in addition to General Engineering Services and Construction Management Services based either on (i) time and materials plus reimbursable expenses in accordance with the Rate Schedule attached hereto as **Exhibit A** or (ii) a lump sum basis, each as determined in the applicable Work Authorization. In the event the Authority engages Engineer to perform design services, such engagement shall be set forth in a separate written agreement between Engineer and the Authority.

C. PAYMENTS. Engineer shall submit monthly written invoices for services performed during the preceding month to the Authority's bookkeeper, and the Authority will use its best efforts to make payment within forty-five (45) days of receipt of invoice. Unless special arrangements are made, if the Authority fails to make payment within 45 days after receipt of Engineer's invoice therefor, the amounts due Engineer will be subject to the late interest charges set forth in Chapter 2251, Texas Government Code, starting on the 46th day. In the event of disputed or contested billing, only that portion so contested may be withheld from payment, and the undisputed portion will be paid. No interest will accrue on any contested portion of the billing until mutually resolved.

III. STANDARD TERMS AND CONDITIONS.

A. STANDARD OF CARE. Engineer's services shall be performed in accordance with the standard of professional practice ordinarily exercised by professional engineers at the time and within the locality where the Services are performed commensurate with the requirements of the civil engineering profession and through persons ordinarily engaged therein.

B. DELAYS. If events beyond the control of the Authority or Engineer, including, but not limited to, fire, flood, explosion, riot, strike, war, process shutdown, act of God or the public enemy, and act or regulation of any government agency, result in delay to any schedule established in this Agreement, such schedule shall be amended to the extent necessary to address such delay. In the event such delay exceeds ninety (90) days, Engineer shall be entitled to an equitable adjustment in compensation if mutually agreed to in writing by the Engineer and the Authority.

C. TERM AND TERMINATION/SUSPENSION. The term of this Agreement is one year from the Effective Date, and shall automatically renew thereafter from year-to-year unless either party provides the other party with written notice of non-renewal at least thirty (30) days prior to the renewal date. Either party may terminate this Agreement for any reason at any time by giving thirty-five (35) days written notice to the other party. The Authority shall pay Engineer for all Services rendered prior to termination. Copies of all completed or partially completed designs, drawings, specifications, reports or any other document prepared by Engineer pursuant to this Agreement shall be delivered to the Authority within fourteen (14) days of the effective date of termination, at no additional cost to the Authority. In addition to the right of termination set forth in this paragraph, in the event either party defaults in its obligations under this Agreement (including Authority's obligation to make the payments required hereunder), the non-defaulting party may suspend performance under this Agreement after providing the defaulting party with at least seven (7) days written notice stating its intention to suspend performance under the Agreement if cure of such default is not commenced and diligently continued.

D. OPINIONS OF CONSTRUCTION COST. Any opinion of probable construction costs prepared by Engineer is supplied for the general guidance of the Authority only. Because Engineer has no control over competitive bidding or market conditions, Engineer cannot guarantee the accuracy of such opinions as compared to contract bids or actual costs to the Authority.

E. RELATIONSHIP WITH CONTRACTORS. Engineer shall serve as the Authority's professional representative for the Services, and may make recommendations to the Authority concerning actions relating to the Authority's contractors, but Engineer specifically disclaims any authority to direct or supervise the means, methods, techniques, sequences or procedures of construction selected by the Authority's contractors.

F. INSURANCE. Engineer shall furnish certificates of insurance to the Authority evidencing compliance with the insurance requirements hereof. Certificates shall name Engineer, name of insurance company, policy number, term of coverage, and limits of coverage. Engineer, shall cause its insurance companies by endorsement of the policy to provide the Authority with at least thirty (30) days prior written notice of any reduction in the limit of liability, cancellation or non-renewal of the insurance coverage required under this Agreement. Engineer shall obtain such insurance from such companies having a Bests rating of B+/VII or better, licensed or approved to transact business in the state in which the Services shall be performed, and shall obtain such insurance of the following types and minimum limits:

1. Worker's Compensation insurance in accordance with the laws of the

State of Texas, and Employers' liability coverage with a limit of not less than \$500,000 each employee for Occupational Disease: \$500,000 policy limit for Occupational Disease; and Employer's Liability of \$500,000 each accident.

2. Commercial General Liability insurance including coverage for Products/Completed Operation, Blanket Contractual, Contractors' Protective Liability Broad Form Property Damage, Personal Injury/Advertising Liability, and Bodily Injury and Property Damage with limits of not less than

\$2,000,000	general aggregate limit
\$1,000,000	each occurrence, combined single limit
\$1,000,000	aggregate Products, combined single limit
\$1,000,000	aggregate Personal Injury/Advertising Liability

3. Business Automobile Liability coverage applying to owned, non-owned and hired automobiles with limits not less than \$1,000,000 each occurrence combined single limit for Bodily Injury and Property Damage combined.
4. Umbrella Excess Liability insurance written as excess of Employer's Liability, with limits not less than \$2,000,000 each occurrence combined single limit.
5. Professional Liability insurance with limits not less than \$2,000,000 each claim/annual aggregate.

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverages required above, except those in paragraphs (1) and (5). All policies written on behalf of Engineer shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees, with the exception of insurance required under paragraph (5). In addition, all of the aforesaid policies with the exception of paragraph 5 shall be endorsed to provide that they are primary coverages and not in excess of any other insurance available to the Authority, and without rights of contribution or recovery against the Authority or from any such other insurance available to the Authority. The Engineer, and not the Authority, shall be responsible for paying the premiums and deductibles, if any, that may from time to time be due under all of the insurance policies required of the Engineer.

G. INDEMNITY. ENGINEER SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE AUTHORITY, ITS DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND ASSIGNS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES AND EXPENSES,

COURT COSTS, AND OTHER EXPENSES INCURRED IN ENFORCING THIS INDEMNITY PROVISION) OR FROM ANY OTHER LOSS OR CLAIM ARISING FROM THIRD PARTY PERSONAL INJURY OR DEATH OR PROPERTY DAMAGE BROUGHT BY ENGINEER OR ANY OF ENGINEER'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENT ACT OR, OMISSION, OR MISCONDUCT OF ENGINEER'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, SUBCONTRACTORS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES.

THIS INDEMNIFICATION OBLIGATION IS IN ADDITION TO ALL OTHER LEGAL, EQUITABLE, OR INDEMNIFICATION REMEDIES AVAILABLE TO THE AUTHORITY. THIS INDEMNIFICATION OBLIGATION SURVIVES THE TERMINATION OR EXPIRATION OF THIS AGREEMENT.

H. INDEPENDENT CONTRACTOR. In the performance of work or Services herein agreed to, Engineer shall be deemed an independent contractor, and any of its employees performing work required hereunder shall be deemed solely employees of Engineer, or its subcontractors where appropriate.

I. OWNERSHIP OF DOCUMENTS. All documents, including original drawings, estimates, specifications, periodic construction progress notes, and data (collectively, the "Documents") shall be the property of the Authority, provided that Engineer has received full compensation for same due pursuant to the terms of this Agreement, in consideration of which it is mutually agreed that the Authority will use them solely in connection with the project for which such documents were designed, except with the express consent of Engineer, which consent will not be unreasonable withheld. Engineer may retain reproducible copies of such documents at Engineer's sole cost and expense. The Engineer agrees that it shall not reuse any portion of the Documents that is unique to the Authority's projects or projects for any other client, without the express written consent of the Authority, which consent will not be unreasonably withheld.

J. ADDRESS OF NOTICE AND COMMUNICATIONS. All notices and communications under this Agreement to be mailed or delivered to the Engineer shall be to the following address:

Lockwood, Andrews & Newnam, Inc.
2925 Briarpark Drive, Fourth Floor
Houston, Texas 77042
Attn: Ms. Shelley Serres, P.E.

All notices and communications under this Agreement to be mailed or delivered to the Authority shall be to the following address:

West Harris County Regional Water Authority
c/o Allen Boone Humphries Robinson LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027
Attn: Mr. Alex Garcia

K. AMENDMENT. This Agreement, upon execution by both parties hereto, can be amended only by a written instrument signed by both parties.

L. ASSIGNMENT. The rights and obligations of this Agreement may assigned by either party only upon written agreement of the other party. This Agreement shall be binding upon and inure to the benefit of any permitted assigns.

M. NO WAIVER. No waiver by either party or any default by the other party in the performance of any particular section of this Agreement shall invalidate any other section of this Agreement or operate as a waiver of any future default, whether like or different in character.

N. NO THIRD-PARTY BENEFICIARY. Nothing contained in this Agreement, nor the performance of the parties hereunder, is intended to benefit, nor shall inure to the benefit of, any third party, including the Authority's contractors, if any.

O. SEVERABILITY. The various terms, provisions and covenants herein contained shall be deemed to be separate and severable, and the invalidity or unenforceability of any of them shall not affect or impair the validity or enforceability of the remainder.

P. RECITALS. The recitals written above are hereby found to be true and correct and incorporated in this Agreement for all purposes.

Q. AUTHORITY. The persons signing this Agreement warrant that they have the authority to sign as, or on behalf of, the party for whom they are signing.

R. SUBCONTRACTING. Engineer agrees that it shall not subcontract any of the work or Services to be performed under this Agreement without the written consent of the Authority.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY
REGIONAL WATER AUTHORITY

By: Bruce Parker

Bruce Parker

President, Board of Directors

LOCKWOOD, ANDREWS & NEWNAM,
INC.

By: E. Tyson Thomas

Name: E. Tyson Thomas

Title: Vice President

EXHIBIT A
RATE SCHEDULE

March 2015

RANGE OF CLASSIFICATION

BILLING RATE PER HOUR

Clerks, Printers, etc.	40.00
Secretaries	70.00
Executive Secretary, Administrative Asst. , Proposal Asst.	95.00
CAD Manager	119.00
System Analyst, Computer Operators	108.00
Computer Technicians I, Draftsmen I	54.00
Computer Technicians II & III , Draftsmen II & III	87.00
Designers, Grade I & II	87.00
Designers, Grade III	130.00
Inspectors, Project Representatives	75.00
Senior Project Representative	104.00
Right-of-Way Manager	165.00
Engineers I & II, Engineering Assistant	92.00
Engineers III, Engineering Associate	115.00
Engineers IV	144.00
Engineers V	170.00
Engineers VI	225.00
Principal, Project Director	300.00

IN HOUSE REPRODUCTION COSTS (NO MARK-UP INCLUDED):

Xerox	\$ 0.05 per Copy (8½" X 11")
Bluelines	\$ 0.20 per Square Foot
Sepias	\$ 1.50 per Square Foot
Mylars	\$ 3.75 per Square Foot
Vellum	\$ 2.30 per Square Foot

Lupher, LLC

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into June 13, 2012, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and LUPHER, LLC (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall

include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.02. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000.00, unless otherwise amended.

Option 1 - Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 - Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit B**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III. GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this

Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000"

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability

arising out of Contractor' work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)

CONTRACTOR: LUPHER,LLC

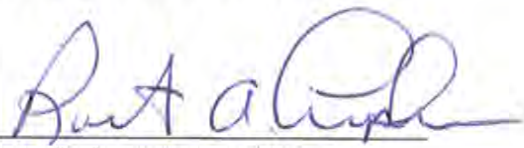
By: 
Name: Robert A. Luper
Title: Executive Vice President

EXHIBIT B
LUPHER, LLC
HOURLY BILLING RATE SCHEDULE

	<u>*2012</u>	<u>*2013</u>	<u>*2014</u>
<u>Surveying Rates</u>			
SR. Project Manager, RPLS	\$171.00	\$176.13	\$181.41
Project Manager, RPLS	\$135.00	\$139.05	\$143.22
Project Surveyor, RPLS	\$114.00	\$117.42	\$120.94
SIT (TBPLS Certified)	\$90.00	\$92.70	\$95.48
Survey Technician	\$83.00	\$85.49	\$88.05
Sr. CAD Operator	\$87.00	\$89.61	\$92.30
CAD Operator	\$72.00	\$74.16	\$76.38
1-Person Survey Crew	\$90.00	\$92.70	\$95.48
2-Man Survey Crew	\$135.00	\$139.05	\$143.22
3-Man Survey Crew	\$185.00	\$190.55	\$196.27
Administrative Assistant	\$66.00	\$67.98	\$70.02
<u>Misc. Reimbursables and Expenses</u>			
Mileage (Per Mile/Per Vehicle)	IRS Rate	IRS Rate	IRS Rate
Map Record Copies (Per Map)	\$25.00	\$25.75	\$26.52
Deed Record Copies (Per Page)	\$1.25	\$1.29	\$1.33
GPS/RTK (Per Hour/Unit)	\$15.00	\$15.45	\$15.91
Reproduction	Cost	Cost	Cost
Deliveries	Cost	Cost	Cost
Parking	Cost	Cost	Cost
As-Bulits Utility Maps	Cost	Cost	Cost
SubConsultants	Cost + 10%	Cost + 10%	Cost + 10%

* 3% Rate Increases on January 1st of each year

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(LUPHER, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Lupher, LLC ("Contractor"), to be effective the 11th day of July, 2012.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated June 13, 2012 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

LUPHER, LLC


Bruce G. Parker, President Date: 7/11/12


Robert A. Lupher, Executive Vice President Date: 7/12/2012

EXHIBIT "B"
BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$200,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(LUPHER, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Lupher, LLC ("Contractor"), to be effective the 13th day of March, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated June 13, 2012 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and amended by Addendum No. 1 on July 11, 2012 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

LUPHER, LLC


Bruce G. Parker, President Date: 3-13-13


Robert A. Lupher, Executive Vice President Date: 3-18-13

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$300,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 3 TO AGREEMENT FOR PROFESSIONAL SERVICES
(LUPHER, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Lupher, LLC ("Contractor"), to be effective the 12th day of June, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated June 13, 2012 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and amended by Addendum No. 1 on July 11, 2012 and Addendum No. 2 on March 13, 2013 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

LUPHER, LLC


Bruce G. Parker, President Date: 6/12/13


Robert A. Lupher, Executive Vice President Date: 6/14/2013

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$600,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 4 TO AGREEMENT FOR PROFESSIONAL SERVICES
(LUPHER, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Lupher, LLC ("Contractor"), to be effective the 12th day of March, 2014.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated June 13, 2012 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and amended by Addendum No. 1 on July 11, 2012, Addendum No. 2 on March 13, 2013, and Addendum No. 3 on June 12, 2013 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

LUPHER, LLC


Bruce G. Parker, President Date: 3/12/14


Robert A. Lupher, Executive Vice President Date: 3/20/14

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$700,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 5 TO AGREEMENT FOR PROFESSIONAL SERVICES
(LUPHER, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Luper, LLC ("Contractor"), to be effective the 11th day of June, 2014.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated June 13, 2012 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and amended by Addendum No. 1 on July 11, 2012, Addendum No. 2 on March 13, 2013, Addendum No. 3 on June 12, 2013, and Addendum No. 4 on March 12, 2014 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

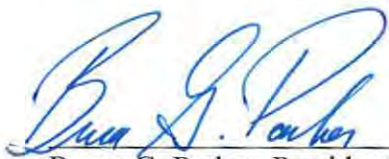
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

LUPHER, LLC


Bruce G. Parker, President

Date: 6/11/14


Robert A. Luper, Executive Vice President

Date: 6/17/14

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$1,100,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Part A6

MUNSCH HARDT KOPF & HARR



700 Milam Street
Suite 2700
Houston, Texas 77002-2806
Main 713.222.1470
Fax 713.222.1475
munsch.com

Direct Dial 713.222.4081
Direct Fax 713.222.5894
tbarber@munsch.com

October 14, 2015

Via Email: agarcia@abhr.com

West Harris County Regional Water Authority
c/o ALLEN BOONE HUMPHRIES ROBINSON, LLP
ATTN: ALEX GARCIA
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Via Email: doliver@abhr.com

North Fort Bend Water Authority
c/o ALLEN BOONE HUMPHRIES ROBINSON, LLP
ATTN: DAVID OLIVER
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Re: Special Counsel Services, Northeast Water Purification Plant Contract Document
Review and Advice

Boards of Directors:

This letter confirms that Munsch, Hardt, Kopf & Harr, P.C. ("Munsch, Hardt") will represent the West Harris County Regional Water Authority ("WHCRWA") and North Fort Bend Water Authority ("NFBWA") (collectively "Our Client") in connection with the above referenced matter. Our acceptance of the representation (the "Representation") will be effective October 10, 2015.

Terms of Engagement

This letter sets out the terms of our engagement in the Representation. Certain defined terms are included in the body of this letter, and additional terms are contained in the attached document, entitled Engagement Letter - Exhibit A. The execution and return of this letter constitutes an unqualified agreement to all the terms set forth in this letter and in the attached Engagement Letter - Exhibit A.

Our Personnel Who Will Be Working on the Matter

I will be working on the Representation and representatives of Our Client may call, write, or e-mail me whenever anyone has any questions about the Representation. Other firm personnel, including firm lawyers and legal assistants, will participate in the Representation when in our judgment their participation is necessary or appropriate.

Our Legal Fees and Costs

Legal fees and costs are difficult to estimate. Accordingly, we have made no commitment concerning the maximum fees and costs that will be necessary to resolve or complete the Representation. From time to time, we may furnish estimates of legal fees and other charges that we anticipate will be incurred in connection with the Matter. Such estimates are by their nature inexact because of the potential for unforeseeable circumstances; and therefore, our actual fees and other charges may vary from such estimates.

It is expressly understood that payment of our fees and costs is in no way contingent on the ultimate outcome of the Representation. All fees and costs associated with the Representation will be paid by Our Client within thirty (30) days of invoice, including without limitation: copy costs; messenger fees; long distance telephone charges; expert witness fees; all travel expenses, including air, hotel, meals and ground transportation; court reporter's charges; Westlaw or other outside computerized research; filing fees; records service charges; and any other costs needed to carry out the Representation. No air or hotel expenses shall be charged to Our Client without Our Client's prior written approval.

Generally, our hourly billing rates range from \$300.00 to \$450.00 for directors; from \$200.00 to \$300.00 for senior associates; from \$160.00 to \$200.00 for associates; and from \$90.00 to \$160.00 for legal assistants. I charge \$390.00 per hour. Other associates and directors working on the Representation will range from \$275.00 to \$390.00. These rates may be adjusted upward from time to time to account for inflation and other market forces without advanced notice to Our Client.

Conflicts of Interest

Before accepting the Representation, we have undertaken reasonable and customary efforts to determine whether there are any potential conflicts of interest that would bar our firm from representing Our Client. Based on the information available to us, we are not aware of any potential disqualification. We reviewed potential conflicts in accordance with the rules of professional responsibility adopted in Texas. We believe that those rules, rather than the rules of any other jurisdiction, are applicable to the Representation, and the execution and return of the enclosed copy of this letter by Our Client represents an express agreement to the applicability of Texas rules. If you are aware, or become aware, of any actual or potential conflicts of interest, please let us know in writing immediately.

Joint Representation

The Representation is a joint representation of both WHCRWA and NFBWA. As such, any written communications with one shall be copied to or otherwise provided to the other. Both WHCRWA and NFBWA shall be invited to participate in phone conferences and meetings. In the event either decides not to participate in such calls or meetings, the Firm may rely on any representation by one concerning the position of the other. The withdrawal of one of the clients to the joint representation shall not in and of itself constitute grounds for disqualification of the Firm, unless the Firm is required to withdraw from the representation of the remaining client under the applicable rules of professional responsibility adopted in Texas.

October 14, 2015

Page 3

As the Representation involves payment on an agreed 50%/50% split of fees and expenses between WHCRWA and NFBWA, the Firm has agreed, for the convenience of WHCRWA and NFBWA, to render two monthly statements, in accordance with the agreed split arrangement. However, in the event of any failure of payment by either WHCRWA or NFBWA, both agree to be jointly and severally liable for the payment of the total of any unpaid fees and expenses billed or incurred by the Firm.


In the event of any dispute between WHCRWA and NFBWA relating to the Representation, the Firm will not undertake the representation of either in respect to such dispute, but shall not also be precluded from continuing the Representation as to one or both, unless required under the applicable rules of professional responsibility adopted in Texas.

Conclusion

This letter and the attached Engagement Letter - Exhibit A are the entire terms of the engagement of Munsch, Hardt in the Representation. These written terms of engagement are not subject to any oral agreements or understandings, and they can only be modified by written agreement signed both by Munsch, Hardt and Our Client. Unless expressly stated in these terms of engagement, no obligation or undertaking shall be implied on the part of either Munsch, Hardt or Our Client.

Please carefully review this letter and the attached Engagement Letter - Exhibit A. If there are any questions about these terms of engagement, or if these terms are inaccurate in any way, please let me know immediately. If both documents are acceptable, please sign and return this letter. Thank you very much for this opportunity to be of service to you.

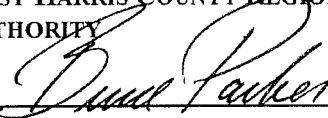
Very truly yours,



Tom R. Barber

Our Client agrees to and accepts this letter and the attached Engagement Letter - Exhibit A:

**WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY**

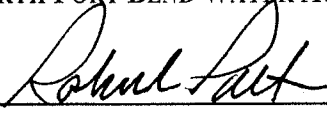
By: 

Printed Name: BRUCE PARKER

Title: PRESIDENT

Date: 10-14-2015

NORTH FORT BEND WATER AUTHORITY

By: 

Printed Name: Robert Patton

Title: Vice President, Board of Directors

Date: October 14, 2015

Engagement Letter - Exhibit A

This is a supplement to our engagement letter. The purpose of this document is to set out additional terms of our agreement to provide the representation described in our engagement letter (the "Representation") concerning the matter referenced in the engagement letter (the "Matter"). Because these additional terms of engagement are a part of our agreement to provide legal services to Our Client, you should review them carefully and should promptly communicate to us any questions concerning this document. We suggest that Our Client retain a copy of this statement of additional terms along with the engagement letter and any related documents.

The Scope of the Representation

As lawyers, we undertake to provide representation and advice on the legal matters for which we are engaged. If there are any questions about the scope of the Representation, please raise those questions promptly, so that we may resolve them at the outset.

Any expressions on our part concerning the outcome of the Representation, or any other matters, are based on our professional judgment and are not guarantees. Such expressions, even when described as opinions, are necessarily limited by our knowledge of the facts and are based on our views of the state of the law at the time they are expressed. Munsch, Hardt has made no guarantees or promises to Our Client about the outcome of the Representation or the Matter, and nothing in the terms of engagement shall be construed as a guarantee or promise.

Upon accepting this engagement on Our Client's behalf, Munsch, Hardt agrees to do the following: (1) provide legal counsel in accordance with these terms of engagement and the related engagement letter, and in reliance upon information and guidance provided by Our Client; and (2) keep Our Client reasonably informed about the status and progress of the Representation.

To enable us to provide effective representation, Our Client agrees to do the following: (1) disclose to us, fully and accurately and on a timely basis, all facts and documents that are or might be related to the Representation or that we may request, (2) keep us apprised on a timely basis of all developments relating to the Representation that are or might be important, (3) attend meetings, conferences, and other proceedings when it is reasonable to do so, and (4) otherwise fully cooperate with us.

Munsch, Hardt does not represent itself as experts or advisors in the area of taxation. If Our Client has tax questions, Munsch, Hardt advises Our Client to consult with an accountant or tax expert.

Who Will Provide the Legal Services

Munsch, Hardt, Kopf, & Harr, P.C. will represent Our Client in the Matter. Although our firm will be providing legal services, each client of the firm customarily has a relationship principally with one attorney, or perhaps a few attorneys. At the same time, however, the work required in the Representation, or parts of it, may be performed by other firm personnel, including lawyers and legal assistants.

Our Relationships With Others

Our law firm represents many companies and individuals. In some instances, the applicable rules of professional conduct may limit our ability to represent clients with conflicting or potentially conflicting interests. Those rules of conduct often allow us to exercise our independent judgment in determining whether our relationship with one client prevents us from representing another. In other situations, we may be permitted to represent a client only if the other client consents to that representation.

Records Retention

Our law firm has a records retention policy that allows us to destroy files within a reasonable time after the Representation has been concluded. Generally, we destroy files four years after representation on a matter has ceased or the file has been sent to our closed files. A copy of our records retention policy is attached.

Termination

At any time, Our Client may, with or without cause, terminate the Representation by notifying us of Our Client's intention to do so. Any such termination of services will not affect the obligation to pay legal services rendered and expenses incurred before termination, as well as additional services and charges incurred in connection with an orderly transition of the Matter.

There are several types of conduct or circumstances that could result in our withdrawing from representing a client, including, for example, the following: non-payment of fees or costs; misrepresentation or failure to disclose important information; fraudulent or criminal conduct; action contrary to our advice; failure to develop a workable relationship with Our Client; and conflict of interest with another client.

A failure by Our Client to meet any obligations under these terms of engagement shall entitle Munsch, Hardt to terminate the Representation. In that event, Our Client will take all steps necessary to release Munsch, Hardt of any further obligations in the Representation or the Matter, including without limitation the execution of any documents necessary to effectuate our withdrawal from the Representation or the Matter. The right of Munsch, Hardt to withdraw in such circumstances is in addition to any rights created by law, statute or recognized by the governing rules of professional conduct.

Billing Arrangements and Terms of Payment

Our engagement letter specifically explains our fees for services in the Matter. We will bill on a regular basis, normally each month, for both fees and expenses, and it is agreed that Our Client will make full payment within 30 days of receiving our statement.

It is further agreed that any delinquent account must be promptly paid, and if the delinquency continues, we may withdraw from the Representation and pursue collection of our account.

October 14, 2015

Page 7

Typically, our invoices will include amounts, not only for legal services rendered, but also for other expenses and services. Examples include charges for photocopying, long-distance telephone calls, travel and conference expenses, messenger deliveries, computerized research, and facsimile and other electronic transmissions, expert witness fees; all travel expenses, including air, hotel, meals and ground transportation; court reporter's charges; Westlaw or other outside computerized research; filing fees; records service charges; and any other costs needed to carry out the Representation. In addition, we reserve the right to send to Our Client for direct payment any invoices delivered to us by others, including experts and any vendors relating to the Representation.

Attorney Complaint Information

The State Bar of Texas investigates and prosecutes complaints of professional misconduct against attorneys licensed in Texas. A brochure entitled Attorney Complaint Information is available at our office and is likewise available upon request. A client that has any questions about State Bar's disciplinary process should call the Office of the General Counsel of the State Bar of Texas at 1-877-953-5535 toll free.

MUNSCH, HARDT, KOPF & HARR, P.C.

RECORDS RETENTION POLICY

LEGAL FILES

It is the policy of the Firm to retain records in storage relating to representation of a client in a matter for a period not to exceed four (4) years following the end of the representation. At any time after the file is closed, the client may request the closed file be transferred to the client. The file may contain original documents which will be destroyed with the file. Clients who wish files to be retained will be charged the storage expense.

At the end of every year, the attorneys will be given a list of those files which have been closed for a period in excess of four (4) years. In the event the files listed for destruction need to be retained for a period longer than four (4) years, the attorney in charge of the file is to notify the Records Retention Committee that the file should be retained and the reasons the file should be retained. In such event, the file will be retained for another four (4) years at the client's expense.

NOTIFICATION TO CLIENTS OF RECORDS RETENTION POLICY

Upon assumption of the representation of a client in a matter and upon the conclusion of the representation, efforts should be made to inform the client of this Records Retention Policy.

In the event no notification is received from the client that the client wants the file within thirty (30) days of the mailing of notice to the client of the Firm's record retention policy, the file will be destroyed in accordance with this policy.

ADMINISTRATIVE FILES

It is the policy of the Firm to destroy administrative non-financial records after a period of two (2) years. It is the policy of the Firm to retain administrative financial records, including records relating to client billings and to bank and trust accounts, for a period not to exceed seven (7) years at which time they will be destroyed.

PERSONAL FILES

It is the policy of the Firm not to store non-client files. At the end of every year any attorney or employee having personal files in Firm storage will be given a list of those files. Within thirty (30) days of receipt of the list, the attorney or employee shall notify the Records Retention Committee whether the files are to be returned, otherwise they will be destroyed.

Sharon M. Mattox Attorney At Law

Sharon M. Mattox, PLLC

Attorney At Law
1414 West Clay
Houston, Texas 77019

Telephone: (713) 874-9696 / Facsimile: (713) 874-9695
Email: s.mattox@smattoxlaw.com

January 20, 2014

Attn: Katie Sherborne
West Harris County Regional Water Authority
c/o ABHR, LLP
3200 Southwest Freeway
Suite 2600
Houston, Texas 77027

Gentlemen:

We appreciate being asked to provide legal services in this matter. The purpose of this letter and the attached Additional Terms of Engagement is to set out the roles and responsibilities of our law firm and yours as the client.

Client

The client for this engagement is West Harris County Regional Water Authority. ("WHCRWA" or "you"). This engagement does not create an attorney-client relationship with or duties owed to any other persons or entities, including parents, subsidiaries, affiliates, joint ventures or similar entities, successors, acquirers, employees, officers, directors, shareholders, partners, members, or trustees, even if you exercise control over any of them or they exercise control over you.

Scope of Engagement

As your counsel, we will provide environmental advice and counsel on the development of infrastructure included in the Second Source Project. This engagement will include only the matter described in this paragraph. If you engage us for any related or additional matters, we will describe them in a separate engagement letter or in a written supplement to this letter.

Fees and Other Charges

Our fees will be based on the time spent by the attorneys and other timekeepers who work on the matter. Billing rates vary according to the experience of the individuals and the nature or location of the work. My billing rate for this matter will be \$400 per hour. Contract associates that may work on this matter will be billed at \$150 per hour.

Our billing rates are generally set in United States dollars ("USD"). Unless we agree otherwise in writing, for this matter we will bill in USD and you agree to pay us in USD to the account specified in our invoices to you. We generally review our billing rates annually, and we may adjust them with or without advance notice. Without regard to the currency in which we bill or where the timekeepers for this matter are located, you agree to pay our invoices in full and be responsible for paying any taxes required by law to the taxing authorities.

In addition to fees for our legal services, we will charge you for photocopying, reprographics, couriers, travel, certain long distance telephone calls, faxes, postage, overtime for non-legal staff, certain computerized legal research, practice support, records retrieval, filing fees, and other items associated with representing you in this matter. We may charge for those items whether that work is performed by outside vendors or in-house.

Other Clients and Consent to Adverse Representation

You have given us the names of all persons and entities that you believe are or might become involved in this matter. We have run a conflicts check on those names and believe that we are free to represent you. You agree to promptly tell us if you learn of any other person or entity that might become involved in this matter so that we can do additional checking for conflicts.

We represent many other clients. It is possible that, during the time we are representing you, some of our current or future clients might have dealings, transactions, disputes, or litigation with you. Those clients could have interests different from yours, and their actions could adversely affect your business, legal, or financial interests.

By engaging us, you agree that, during the time we are representing you, we also may represent other current and future clients in any other matter, including in litigation, unless we conclude that (i) the other matter would be substantially related to the matters in which we are representing you or (ii) undertaking the other matter would materially limit our ability to represent you. For purposes of this agreement, two matters are substantially related if the facts in the first matter are so closely related to the facts in the second matter that a genuine threat exists that confidential information revealed by the client in the first matter will be divulged to that client's adversary in the second matter. We would be materially limited only when our representation of another client or our relationship with someone else would materially affect our ability to represent you competently and diligently.

Accordingly, you agree that our representation of you in this matter will not disqualify us from representing other clients in other matters that are not substantially related to this one or where our ability to represent you would not be materially limited, even if the interests of those other clients are directly adverse to yours. In those situations, we will not use to your disadvantage any of your confidential information that we acquire while representing you. Likewise, we will not share with you or use for your benefit confidential information that we receive from other clients.

Finally, if one of our other clients (for example, a lender) hires another law firm and becomes adverse to you in this matter, you consent to our representation of that client in other matters. If that situation arises, we will continue to competently and diligently represent you and take appropriate steps to protect your confidential information.

Termination

This engagement and the attorney-client relationship created by this matter will end when we have completed the legal services covered by this engagement letter. If you later engage us for any related or additional matter, that engagement and its scope must be confirmed in a separate engagement letter or in a written supplement to this letter.

You may terminate the engagement at any time and for any reason by informing us in writing. Similarly, we may terminate or withdraw from our representation of you at any time for any reason (including non-payment of fees), provided we comply with the applicable rules of professional conduct. If we decide to withdraw for any reason, you agree to take all steps necessary to release us from any further obligation to represent you, including signing any documents necessary to complete our withdrawal. In the event of a termination or our withdrawal, you will pay us any outstanding fees and other charges.

Finally, after the conclusion of this matter, you might ask us, or we might be compelled, to undertake certain post-engagement tasks relating to this matter, such as responding and objecting to subpoenas, searching for and producing documents, preparing for testimony, performing transition work, and other similar activities. In such case, we will promptly notify you, and you agree to compensate us for the fees and expenses we incur, including payment for the time spent by our attorneys and other timekeepers calculated at our then-current hourly rates. However, nothing in this letter or engagement obligates our attorneys or personnel to submit to interviews or to provide testimony, and any post-engagement work will not constitute the performance of legal services for you or create or revive an attorney-client relationship between us.

Other

You are encouraged to consult with other counsel of your choosing regarding the terms and conditions of our engagement, particularly those regarding multiple and adverse representation and conflict issues.

This letter, including the provisions in the attached Additional Terms of Engagement, sets forth the complete agreement between us. No other agreements, promises, understandings, or representations, except for our discussion about the risks of conflicts and adverse representation, have been made or relied upon in reaching this agreement. If you, an insurance carrier, or anyone else provides us with outside counsel guidelines, electronic billing requirements, or other similar documents at the outset of this engagement, we will abide by them to the extent practicable. However, this agreement cannot be modified in any material respect by the tender of such guidelines, without a writing signed by both of us.

If this letter, including the provisions in the attached Additional Terms of Engagement, correctly reflects your understanding of the terms and conditions of our representation, please

sign the enclosed copy of this letter in the space provided and return it to me. If you ask us to begin work before you return the signed letter to us, or if we do not hear from you promptly (in no event longer than 14 days), we will consider that you have agreed to and accepted the terms of this engagement letter and the attached Additional Terms of Engagement.

We are pleased to have this opportunity to be of service, and we look forward to working with you. Please contact me if you have any questions.

Very truly yours,

Sharon M. Mattox, PLLC

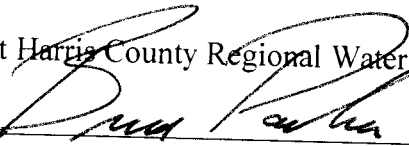
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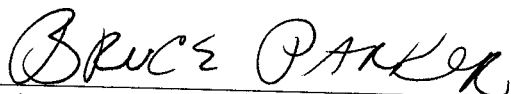
Sharon M. Mattox

Attachments

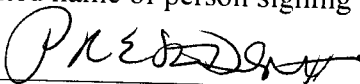
AGREED TO AND ACCEPTED:

West Harris County Regional Water Authority

By: 



Printed name of person signing



Title

Sharon M. Mattox, PLLC

Additional Terms of Engagement

This attachment contains additional terms of engagement that are an integral part of our agreement with you. Please review these additional terms and contact us promptly if you have any questions. You should keep this attachment in your file with the engagement letter.

The Scope of Our Work

We provide only legal services. We do not provide business, investment, insurance, underwriting, translation, accounting, financial, or technical services or advice, and you may not rely on us for such advice. Similarly, we do not make business decisions for you, and we do not investigate the character or credit of persons with whom you may be dealing.

Unless specifically included under "Scope of Engagement" in the attached engagement letter, this engagement does not include advice about (i) your disclosure obligations concerning the matter under any applicable law or regulation, including the federal securities laws or (ii) the tax consequences concerning the matter. We also are not responsible for review of your insurance policies to determine the possibility of coverage for any claim asserted in this matter or for notification of your insurance carriers about the matter. We encourage you to address those matters with other advisers or professionals.

You agree that we have no attorney-client relationship with and owe no duties to persons or entities not expressly identified by name as clients in the engagement letter, even if you might owe them fiduciary or other duties. This agreement has no third-party beneficiaries, including trust or estate beneficiaries, trustees, partners, limited partners, members, corporate shareholders and owners, successors, principals, agents, officers, directors, employees, representatives, your clients, and/or your insurers, insureds, indemnitors, or indemnitees.

You also agree that we will not provide any contractual indemnity to you, any corporate constituent, related entity, co-counsel, outside contractor, service provider, consultant, expert, or any other person or entity in connection with this matter.

You are engaging us to provide legal services in connection with the specific matter described in the "Scope of Engagement" paragraph in the engagement letter. After the end of the matter, circumstances might change, and changes might occur in the applicable laws or regulations that could affect your future rights and obligations. Unless you engage us after completion of the matter to provide additional legal services on issues arising from the matter, we have no obligation to advise you about future legal developments or your future rights and obligations.

Cooperation and No Guarantees

To help us provide legal services, you agree to cooperate fully with us, tell us the facts accurately and completely, give us all relevant documents and information, respond promptly to our requests, and inform us of all information and developments relating to this matter. We necessarily rely on the accuracy and completeness of the information that you provide us, and we

may rely on that information without independently verifying it. You also agree to make yourself or your representatives available to attend or participate in conference calls, meetings, conferences, discovery proceedings, hearings, and any other proceedings related to this matter.

We will try to achieve a result in this matter that is satisfactory to you. But we make no promises or guarantees concerning the outcome, whether it involves business, tax, or regulatory advice, a transaction, or an adversarial proceeding such as litigation. For example, we cannot assure you that negotiations will be successful, a proposed transaction will be completed, or the conclusion of this matter will result in an outcome that is favorable to you. Outcomes in litigation are especially hard to predict because of many factors that are beyond the control of clients or counsel. Any statements we make concerning possible outcomes of this matter, the legal significance of possible outcomes, or any other legal matters reflect our professional judgment at that time, but they are not guarantees. Those statements necessarily are limited by our knowledge of the facts and are based on the state of the law at the time they are made.

Billing Arrangements and Terms

Our billing rates are based on the assumption of prompt payment. Unless we agree otherwise in writing, we will bill for our legal services monthly, and our invoices are payable in USD within thirty days of receipt to the account specified in the invoices. If you are required by law to deduct or withhold any taxes from payments due the Firm, or if the Firm or its lawyers are required to pay any taxes directly to any taxing authority, you agree to pay us the additional amounts necessary to compensate the Firm for the withholding or additional cost so that, after the withholding or payment of the taxes, the Firm receives the full amount due under its invoices.

By engaging us, you acknowledge that you are responsible for payment of our fees, expenses, and other charges, and you agree that, if you do not pay them, we may withdraw from representing you provided that we comply with the applicable rules of professional conduct. In appropriate matters, as an accommodation to you, we may agree to send our invoices to third-party payors (*e.g.*, an insurer, indemnitor, or borrower). But you agree that you will remain fully responsible for timely payment of our invoices if for any reason the third-party payor does not timely pay them. Likewise, even when a third party pays our fees, we owe our professional obligations to you, and not to that third party.

Advances

We might ask you to make an advance payment as security for the payment of our fees. In some instances, we may hold the entire advance until the end of the engagement as security for our fees. However, unless both of us agree to that approach in writing, we will charge our fees for legal services and additional charges against the advance and credit them on our billing invoices. If the fees for legal services and other charges exceed the advance deposited with us, we will bill you monthly for the excess or we may request additional advances based on estimates of future work. At the end of the matter, we will refund, without interest, any unused portion of amounts advanced.

Effect of Merger or Other Reorganization

If you acquire, are acquired by, merge, or affiliate with another company, you will provide us with sufficient notice to permit us to decide whether to continue as your or the entity's attorneys in this matter (which must be confirmed in writing) or to withdraw if we determine that such acquisition, merger, or affiliation creates a conflict of interest with any of our clients or it is not in our best interests to represent the entity.

Law Firm Privilege and Possible Conflict of Interest

Although unlikely, an occasion might arise while representing you when it is appropriate for us to consult with our own counsel. We will do this at our own expense. To the extent that we are addressing our duties, obligations, or responsibilities to you, it is possible that a conflict of interest might exist between you and the Firm regarding our discussions with counsel. Such a conflict is more likely if a dispute were to arise between us regarding this matter. If there is such a conflict, and if we have not obtained your consent, we might have to choose between continuing to represent you in this matter and consulting with our own counsel. Thus, as a condition of this engagement, you agree that we may consult with our own counsel, and you waive any claim of conflict of interest that might arise out of those consultations. You agree that our communications with our own counsel are protected from disclosure to you and others by the Firm's attorney-client privilege and that you will not seek to discover or inquire into those communications.

Confidentiality

Just as we will protect confidential information that you provide us, you acknowledge that we will not share with you information that we obtain in confidence from others, even if such information might help you in this matter, and you waive any objection or conflict of interest that might result.

You agree that we may disclose the existence of our attorney-client relationship with you and, subject to our confidentiality and professional responsibility obligations, certain other limited information about our representation of you in order to obtain consent or a conflicts waiver from another client.

In Firm brochures and other materials or information about our practice, you agree that we may identify you as a Firm client, indicate the general nature of our representation of you, and provide examples of engagements handled on your behalf (including this matter). If you do not wish to have your name mentioned in those materials, please inform us in writing.

might translate all or parts of those documents or draft documents in one language, anticipating that they will be translated into another language. Our attorneys, however, are not professional translators, and thus they are not in a position to consider particular meanings, nuances, or legal significance that some foreign words might have under the laws of foreign.

Electronic Communications

During this engagement, we likely will exchange electronic documents and emails with you and others. Such communications are occasionally attacked by computer viruses or other destructive electronic programs. Our software may occasionally reject a communication that you send to us, or your system might reject something that we send you. We believe these relatively infrequent occurrences are part of the ordinary course of business. Many—but not all—of the emails that we send to major commercial email servers that provide service to the U.S. and many other parts of the industrialized world are automatically encrypted. If you would prefer that we not use electronic communications or that we follow special instructions for encrypting email or other communications, promptly inform us in writing of your preferences or requirements so that we can determine if we can accommodate your requests.

Document Retention and Destruction

We will keep the documents and materials that you give us in the files that we will create for this matter. While representing you, we likely will receive or create documents and materials such as correspondence, research memoranda, pleadings, exhibits, transcripts, physical evidence, various agreements, transaction documents, and other documents and materials directly and substantively related to the representation (collectively, “Client Materials”). We may maintain some or all of those Client Materials solely in electronic form, and you agree that we may do so.

We also may create and maintain our own materials related to this matter which will belong to and will be retained by us (“Firm Materials”). Firm Materials are prepared for our internal use and include, for example, Firm administrative records, conflicts and new business intake materials and reports, time and billing reports, personnel and staffing materials, credit, expense, and accounting records, administrative and routine internal documents, Firm form files (even if referred to in the course of this matter), and other materials and internal communications not directly and substantially related to the representation.

After the conclusion of the matter, upon your request, we will send you the Client Materials at your expense. You must tell us which Client Materials you wish to receive, and you agree to cooperate with us regarding their delivery. We will send those materials after we receive payment of all outstanding fees and other charges, unless our professional obligations require us to do so sooner. We reserve the right to retain a copy of the Client Materials. If you ask us to send you paper copies of documents that we maintain solely in electronic form, scan paper documents into an electronic format, or convert electronic documents from one electronic format into another, you agree to pay the costs of printing those documents, scanning them, or converting them to a different electronic format.

If you do not request the Client Materials when this matter ends, we will keep them for a period of time after the conclusion of the matter. In so doing, we will follow our own records retention policy, not yours. Retaining those or other materials does not constitute the performance of legal services for you and does not create or revive an attorney-client relationship between us.

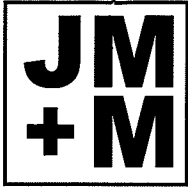
Ultimately, unless you request the Client Materials, we may destroy the Client Materials, without any additional notice to you, in accordance with our records retention schedule then in effect.

Outside Contractors and Service Providers

Like many law firms and other organizations, from time to time we use or deal with outside contractors, third-party service providers, and others in connection with certain areas of our practice or operations. These persons may include vendors, consultants, advisors, experts, investigators, court reporters, translators, registered agents, local counsel, or other service providers in areas such as litigation support, filing or document services, document management, storage, cloud computing, information technology, hardware and software systems, law firm practice management, accounting and financial matters, electronic billing vendors, and the like. Additionally, we may use temporary or contract attorneys and paralegals in certain situations. In performing their services, those persons may have some access to confidential information, and we will take appropriate steps obligating them to preserve the confidentiality of any such information. You consent to our allowing outside contractors and service providers access to such information as described.

Unless special arrangements are made, you are responsible for paying the bills from outside contractors and service providers used on this matter. We will instruct them to bill you directly for their services. Unless otherwise agreed, those outside contractors and service providers are deemed to be directly engaged by you even if their bills or invoices are addressed to us. If they send bills or invoices to us, we will re-direct them to you for payment. In our discretion, we may pay outside bills or invoices for small amounts and include those sums in our invoices to you, although we will seldom do this for sums greater than \$500.

McFARLAND + McFARLAND, LLP



JOYCE, McFARLAND + McFARLAND LLP

Charles B. McFarland cmcfarland@jmmllp.com
Direct Dial 713.222.1115

One Shell Plaza
910 Louisiana St., Suite 5000
Houston, TX 77002-4995

Main 713.222.1112
Fax 713.513.5577
jmmllp.com

July 6, 2010

West Harris County Regional Water Authority
c/o Katie Dorfman
Allen, Boone Humphries Robinson LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Re: *West Harris County Regional Water Authority* – Second Source Line: Condemnation
and Acquisition Matters

Gentlemen:

We appreciate being asked to represent West Harris County Regional Water Authority in connection with the above-referenced acquisition matters. Our experience has been that it is mutually beneficial to set forth, at the outset of our representation, the role and responsibilities of both our law firm and the client.

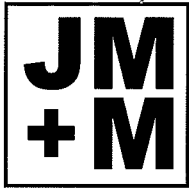
Client

The client for this engagement is West Harris County Regional Water Authority (the "Authority"). This engagement does not create an attorney-client relationship with any related persons or entities.

Scope of Engagement

As your counsel we will provide legal services in connection with the acquisition of certain parcels to be designated by the Authority that are related to the Authority's water line facilities along the route shown on Exhibit A attached hereto (the "Second Source Line"). This engagement will include only the matters described in this paragraph and any additional matters that are made part of the engagement by written supplement to this letter.

We understand and agree that this is not an exclusive agreement, and you are free to retain any other counsel of your choosing. We recognize that we shall be disqualified from representing any other client with interests materially and directly adverse to yours (i) in any matter which is substantially related to our representation of you and (ii) with respect to any matter where there is a reasonable probability that confidential information you furnished to



us could be used to your disadvantage. You understand and agree that, with those exceptions, we are free to represent other clients, including clients whose interests may conflict with yours in litigation, business transactions, or other legal matters. We have discussed that we represent or have represented clients with interests that may conflict with yours such as property owners in connection with public acquisitions by unrelated governmental or quasi-governmental entities. You agree that our representing you in this matter will not prevent or disqualify us from representing clients adverse to you in other matters and that you consent in advance to our undertaking such adverse representations.

This engagement and our attorney-client relationship will be terminated when we have completed the services in the matters covered by this engagement letter and any written supplements to this engagement letter. If you later retain us to perform further or additional services, our attorney-client relationship will be established by another engagement letter.

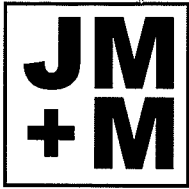
Cooperation

In order to enable us to render effectively the legal services contemplated, the Authority has agreed to disclose fully and accurately all facts and keep us informed of all developments relating to the litigation. We necessarily must rely on the accuracy and completeness of the facts and information you and your agents provide to us. The Authority has agreed to cooperate fully with us and to make its representatives available to attend meetings, discovery proceedings and conferences, hearings and other proceedings. We will attempt to schedule depositions, hearings, etc. to serve the convenience of those representatives, but it is the nature of litigation that such schedules are often not within our control.

We will of course make our best efforts to achieve a result in this litigation that is satisfactory to the Authority. However, because the outcome of litigation is subject to the vagaries and risks inherent in the litigation process, it is understood that we make no promises or guarantees to the Authority concerning the outcome and cannot do so.

Fees

For this matter, our fees will be based on the time spent by the lawyers and non-lawyer personnel who work on the matter. In an effort to reduce overall legal costs, we utilize non-lawyer personnel whenever appropriate. Billing rates for our attorneys vary according to the experience of the individuals. Our current billing rates for those attorneys expected to work on your matter are as follows:



Timekeeper	Title	Rate
Charles McFarland	Partner	\$500
Lindsey Simmons	Associate	\$300
Benjamin Wickert	Associate	\$250
Angela Martinez	Paralegal	\$175

Billing rates for both attorneys and non-lawyer personnel are, from time to time, reviewed and adjusted and may be changed with or without notice. Please feel free at any time to ask for our current rates.

By engaging us, you acknowledge and agree that you are responsible for payment of fees, expenses and disbursements. In appropriate matters as an accommodation to you, we may agree to direct our bills to third-party payors (*e.g.*, an insurer), but you agree that you will remain fully responsible for timely payment of our bills if for any reason the third party does not timely pay such bills. Likewise, we agree that we owe our professional obligations to you, even when a third party pays our bills.

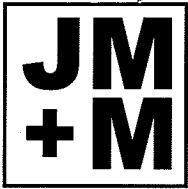
Other Charges

In addition to our fees, there will be other charges for items incident to the performance of our legal services, such as reprographics, couriers, travel expenses, postage, specialized computer applications such as computerized legal research, media services and practice support, records retrieval, and filing fees.

Withdrawal or Termination

Our relationship is based upon mutual consent and you may terminate our representation at any time, with or without cause, by notifying us. Your termination of our services will not affect your responsibility for payment of fees for legal services rendered and of other charges incurred before termination and in connection with an orderly transition of the matter.

We are subject to the rules of professional conduct for the jurisdictions in which we practice, which list several types of conduct or circumstances that require or allow us to withdraw from representing a client, including for example, nonpayment of fees or costs, misrepresentation or failure to disclose material facts, fundamental disagreements, and conflict of interest with another client. We try to identify in advance and discuss with you any situation which may lead to our withdrawal, and if withdrawal ever becomes necessary, we give you written notice of our withdrawal. If we elect to withdraw for any reason, you will take all steps necessary to free us of any obligation to perform further, including the execution of any documents necessary to complete our withdrawal, and we will be entitled to



be paid for all services rendered and other charges accrued on your behalf to the date of withdrawal.

If the foregoing correctly reflects your understanding of the terms and conditions of our representation, please so indicate by executing the enclosed copy of this letter in the space provided below and return it to the undersigned.

Please contact me if you have any questions. We are pleased to have this opportunity to be of service and to work with you.

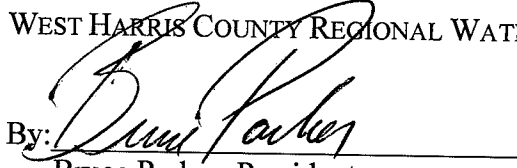
Very truly yours,

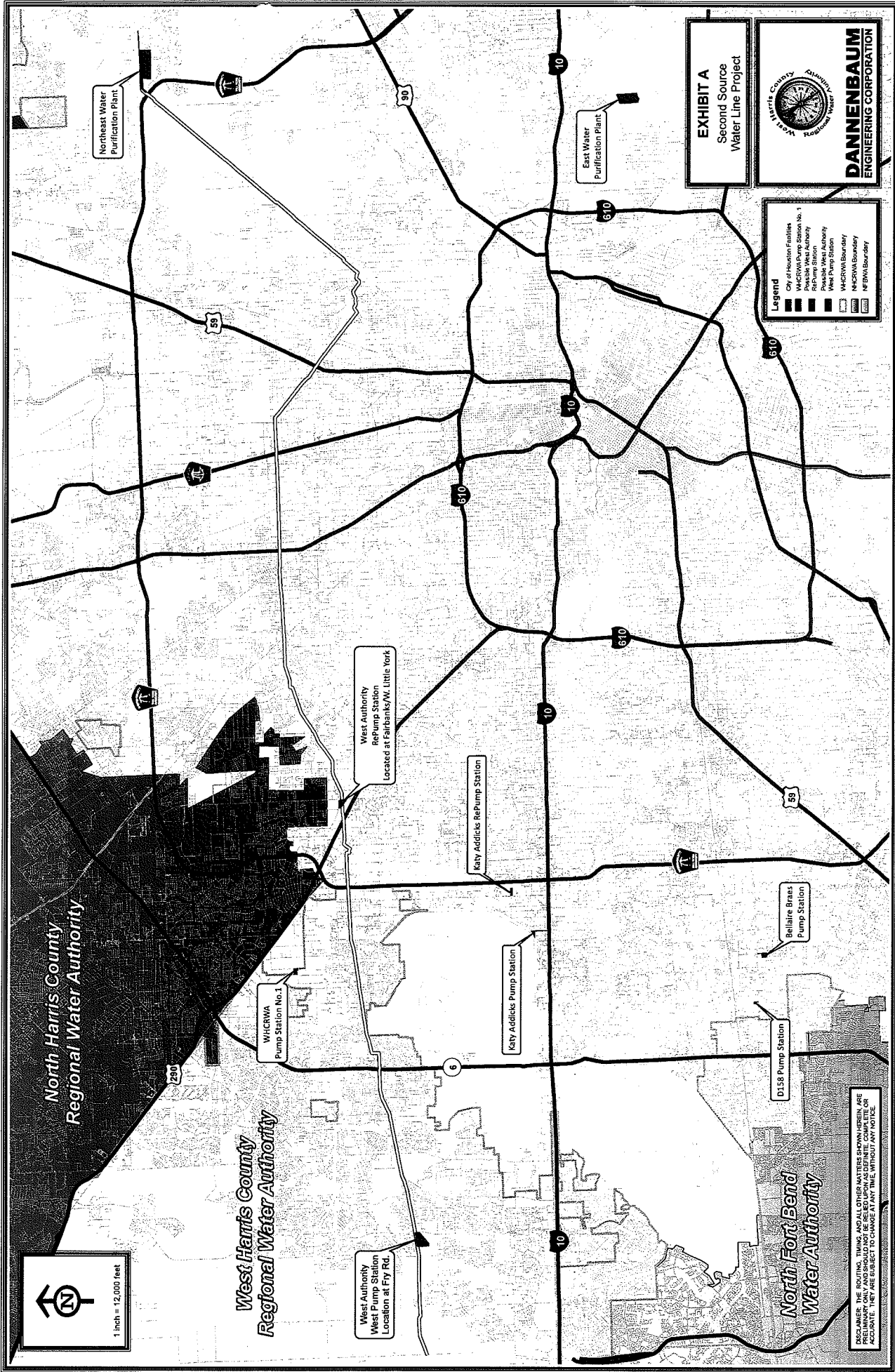
JOYCE, MCFARLAND + MCFARLAND LLP


Charles B. McFarland

AGREED TO AND ACCEPTED:

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

By: 
Bruce Parker, President




 1 inch = 12,000 feet

North Harris County
Regional Water Authority

West Harris County
Regional Water Authority

North Fort Bend
Water Authority

West Authority
Re-pump Station
Located at Fairbairn/W. Little York

Katy Addicks Re-pump Station

Katy Addicks Pump Station


Bellaire Branch
Pump Station

D158 Pump Station

WHCRWA
Pump Station No. 1









West Authority
West Pump Station
Location at Fry Rd.

EXHIBIT A
Second Source
Water Line Project

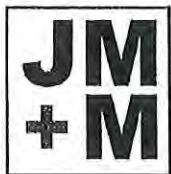


DANNENBAUM
ENGINEERING CORPORATION

Legend

-  City of Houston Facilities
-  WHCRWA Pump Station No. 1
-  Possible West Authority
-  Re-pump Station
-  West Pump Station
-  WHCRWA Boundary
-  WHCRWA Boundary
-  WFPA Boundary

THIS DRAWING IS FOR INFORMATION ONLY. IT IS NOT TO BE USED FOR CONSTRUCTION. THE
 PRELIMINARY ONLY AND SHOULD NOT BE RELIED UPON AS DEFINITIVE. COMPLETE OR
 ACCURATE. THEY ARE SUBJECT TO CHANGE AT ANY TIME, WITHOUT ANY NOTICE.



JOYCE, McFARLAND + McFARLAND LLP

Jeff L. Joyce jjoyce@jmmllp.com
Direct Dial 713.222.1113

712 Main Street, Suite 1500
Houston, TX 77002

Main 713.222.1112
Fax 713.513.5577
www.jmmllp.com

January 5, 2015

Board of Directors
West Harris County Regional Water Authority
c/o Katie Sherborne
Allen Boone Humphries Robinson LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Re: Condemnation and Acquisition Matters.

Dear Ladies and Gentlemen:

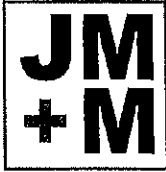
Joyce, McFarland + McFarland LLP has had the privilege of serving as your counsel in the above-referenced matter.

Charles McFarland is the Joyce, McFarland + McFarland partner who has been working with you. As you know, Charles has decided to leave Joyce, McFarland + McFarland and form a new law firm, McFarland PLLC, focusing exclusively on condemnation matters. Although we are disappointed to see him leave, we wish him well in his new enterprise.

We are working with Charles on various transition issues and want to advise you his departure date will be Thursday, January 15, 2015. It is our understanding that you desire Charles to continue handling the above-captioned matter at his new firm when he leaves Joyce, McFarland + McFarland. We respect your decision and will implement it with Charles.

All fees and litigation expenses through January 15, 2015, that were incurred by and owed to Joyce, McFarland + McFarland will be owed to McFarland PLLC. Accordingly, you should direct any payments for those fees and expenses to McFarland PLLC and not Joyce, McFarland + McFarland.

In order to expedite the transfer of your case to McFarland PLLC, we request that you or your authorized representative sign and return the enclosed duplicate original of this letter. Upon receipt, Joyce, McFarland + McFarland will promptly transfer the client files currently held by this firm regarding the above-referenced matter to McFarland PLLC. Please be advised that Joyce, McFarland + McFarland may retain a copy of some or all of such files for our records.



By signing this letter, you are agreeing to the terms stated above, including the obligations with respect to all fees and expenses incurred to date on this matter. As indicated by Charles's signature below, McFarland PLLC agrees with all terms contained herein.

We understand that you desire that the work be transferred in its present state without completion or review by Joyce, McFarland + McFarland before the transfer, and that you further desire that, as of the date you sign below, McFarland PLLC will have the sole responsibility for completion of the work relating to the projects mentioned above, for any final review to determine if there are any changes or revisions which should be made, and for any final work product.

We want you to know we have appreciated representing you in the above-captioned matter. Should you have any questions, please feel free to contact me directly at 713.222.1113.

Very truly yours,

Jeff Joyce
Jeff Joyce

I hereby acknowledge and agree to the contents of this letter:

McFARLAND PLLC

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY

By: *Charles B. McFarland*
Charles B. McFarland

By: *David Parker*

Date: 1-6-15

Date: 1-15-2015

McKim & Creed, Inc. d/b/a SURVCON

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into May 9, 2012, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), McKim & Creed, Inc. d/b/a SURVCON, a division of McKim & Creed, (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain surveying services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall

include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000, unless otherwise amended.

Option 1 - Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 - Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit B**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation

3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III. GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be

maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000.
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined).
- E. Excess Liability with limits not less than \$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000.

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the

Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

CONSULTANT SHALL INDEMNIFY, AND HOLD HARMLESS THE AUTHORITY, ITS DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND ASSIGNS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING BUT NOT LIMITED TO REASONABLE ATTORNEYS' FEES AND EXPENSES, COURT COSTS, AND OTHER EXPENSES INCURRED IN ENFORCING THIS INDEMNITY PROVISION) OR FROM ANY OTHER LOSS OR CLAIM ARISING FROM THIRD PARTY PERSONAL INJURY OR PROPERTY DAMAGE BROUGHT BY CONSULTANT OR ANY OF CONSULTANT'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BUT ONLY TO THE EXTENT BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENT ACTS, ERRORS OR, OMISSIONS, OR MISCONDUCT OF CONSULTANT'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, IN THE PERFORMANCE OF PROFESSIONAL SERVICES.

FOR CONSULTANT'S NON-PROFESSIONAL NEGLIGENCE, CONSULTANT SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE AUTHORITY, ITS DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND ASSIGNS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING BUT NOT LIMITED TO REASONABLE ATTORNEYS' FEES AND EXPENSES, COURT COSTS, AND OTHER EXPENSES INCURRED IN ENFORCING THIS INDEMNITY PROVISION) OR FROM ANY OTHER LOSS OR CLAIM ARISING FROM THIRD PARTY PERSONAL INJURY OR PROPERTY DAMAGE BROUGHT BY CONSULTANT OR ANY OF CONSULTANT'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BUT ONLY TO THE EXTENT BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENT ACTS, ERRORS OR, OMISSIONS, OR MISCONDUCT OF CONSULTANT'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work

performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement

and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)

MCKIM & CREED, INC.
D/B/A SURVCON, A DIVISION OF MCKIM & CREED

By: gail
Name: JAY CANINE
Title: REGIONAL MANAGER
5-16-12

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(McKim & Creed, Inc. d/b/a SURVCON, a division of McKim & Creed)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and McKim & Creed, Inc. d/b/a SURVCON, a division of McKim & Creed ("Contractor"), to be effective the 14th day of November, 2012.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated May 9, 2012 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

MCKIM & CREED, INC.
D/B/A SURVCON, A DIVISION OF
MCKIM & CREED


Bruce G. Parker, President

Date: 11/12/2012


Jay Canine, RPLS, Regional Manager

Date: 11/27/12

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$200,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(McKim & Creed, Inc. d/b/a SURVCON, a division of McKim & Creed)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and McKim & Creed, Inc. d/b/a SURVCON, a division of McKim & Creed ("Contractor"), to be effective the 10th day of July, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated May 9, 2012 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and amended by Addendum No. 1 on November 14, 2012 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

MCKIM & CREED, INC.
D/B/A SURVCON, A DIVISION OF
MCKIM & CREED


Date: 7/10/13
Bruce G. Parker, President



Date: 7/17/13
Jay Canine, RPLS, Regional Manager

EXHIBIT "B"
BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$300,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 3 TO AGREEMENT FOR PROFESSIONAL SERVICES
(McKim & Creed, Inc. d/b/a SURVCON, a division of McKim & Creed)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and McKim & Creed, Inc. d/b/a SURVCON, a division of McKim & Creed ("Contractor"), to be effective the 12th day of March, 2014.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated May 9, 2012 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and amended by Addendum No. 1 on November 14, 2012 and Addendum No. 2 on July 10, 2013 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

MCKIM & CREED, INC.
D/B/A SURVCON, A DIVISION OF
MCKIM & CREED


 _____ Date: 3/12/14
 Bruce G. Parker, President


 _____ Date: 3-5-14
 Jay Canine, RPLS, Regional Manager

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$400,000.00

All Work Authorizations shall specify one of the payment options listed below.

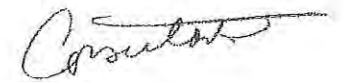
Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Mustang Engineering, L. P.



PART A6

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into this 12th day of May, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Mustang Engineering, L.P. (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the Parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.

SERVICES

Section 1.01. Services. Contractor shall perform certain right of way acquisition and related technical services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall

include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Contractor shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II.

COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of B+/VII or better and licensed to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.

- B. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury - \$1,000,000
- C. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law.

Section 3.04. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.09. Document Ownership. All documents and reports produced in connection with this Agreement (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.10. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.11. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.11. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.13. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.14. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

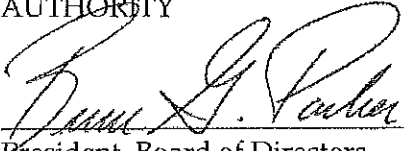
Section 3.15. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.16. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



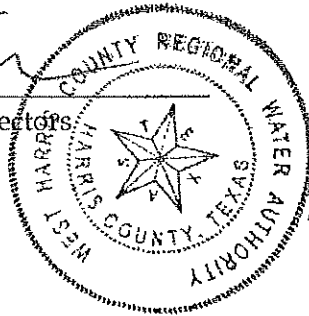
President, Board of Directors

ATTEST

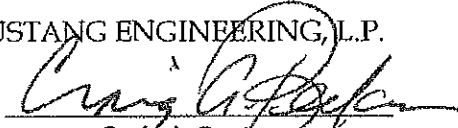


Secretary, Board of Directors

(SEAL)



MUSTANG ENGINEERING, L.P.

 5-5-2010
By: _____
Name: Craig A. Becker
Title: Manager of Corporate Contracts

CBP



MUSTANG ENGINEERING, L.P.

16001 Park Ten Place
Houston, Texas 77084
www.mustangeng.com
FAX: (713) 215-8506
(713) 215-8000

Mr. Wayne Ahrens, P.E.
Program Manager
West Harris County Regional Water Authority
c/o Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

RE: Fee proposal to perform abstracting services for 50 parcels for The West Harris County Regional Water Authority

Dear Mr. Ahrens:

Mustang would like to thank you for the opportunity to demonstrate some of our dynamic and professional abilities in providing abstracting services for the West Harris County Regional Water Authority (WHCRWA). Mustang can provide a wide range of exceptional services for the Second Source Line Project and we are excited to have the opportunity to demonstrate our ability and professionalism in executing this work.

We have reviewed the scope of work provided by Glynda Cross and submit to you our proposal to perform abstracting on 50 parcels in Harris County, Texas.

Scope of Work:

Within sixty (60) days of Notice to Proceed, abstract each parcel researching the current fee owner and all easements that cross the parcel that may affect WHCRWA's rights, including any modifications of the original ExxonMobil easement and encroachment agreements.

Deliverables:

1. Copy of the vesting deed of the underlying fee owner
2. Copy of the original Exxon Mobil easement affecting the parcel
3. Copies of all easements, modifications and encroachment agreements affecting WHCRWA's rights to occupy and/or exercise their rights in regard to the easement and fee property they purchased from ExxonMobil in the Conveyance, Assignment and Bill of Sale filed of record under Document # 20060260676 of the Official Public Records of Real Property of Harris County, Texas on 13 December 2006.
4. Limited Title Certificate (LTC) and run sheet detailing researched records
5. Copy of the tax plat highlighting the tract that has been abstracted



MUSTANG ENGINEERING, L.P.

16001 Park Ten Place
Houston, Texas 77084
www.mustangeng.com
FAX: (713) 215-8506
(713) 215-8000

Material Provided to Mustang by WHCRWA:

1. Recent HCAD parcel maps with all 50 parcels identified
2. Copy of any ExxonMobil maps, alignment sheets, as-builts, USGS quads or aerials of the ExxonMobil corridor for the parcels to be abstracted.

Cost of Abstracting Services to be provided by Mustang:

Total Cost including expenses:

\$350 per Parcel

We are attaching a copy of Mustang's basic LTC and Run Sheet for your review and a copy of the proposed Right of Way Services Agreement to be executed between Mustang and WHCRWA. This is the agreement that was provided to Mustang previously and if there have been any changes to the agreement that are not reflected in the attached copy, please provide us with the agreement that will need to be executed so we may review prior to execution and Notice to Proceed if Mustang's proposal is accepted by WHCRWA.

Again, we appreciate the opportunity to assist WHCRWA with this and other future projects and we hope to become a valued partner with your project support needs.

If you have any questions or I can be of any further assistance, please feel free to contact me at any of the numbers listed below.

Best Regards

Gary Bland
Manager Right of Way and Land
Mustang Engineering, L.P.

AGREED and ACCEPTED this 14th day of May, 2010 by the Board of Directors of the West Harris County Regional Water Authority.

By: [Signature]

Name: Bruce Parker

Title: President

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Mustang Engineering, L.P.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Mustang Engineering, L.P. ("Contractor"), to be effective the 10th day of November, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated May 12, 2010 (the "Agreement") to perform certain professional right-of-way acquisition services and other related technical services that may be required; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

MUSTANG ENGINEERING, L.P.



Bruce G. Parker, President

Date: 11-10-2010



Manager of Corporate Contracts

Date: 12-14-2010



EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$75,000.00 which includes the following Work Authorizations and any future work authorizations:

Work Authorization No. 1 \$25,200.00
Work Authorization No. 2 \$27,650.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Mustang Engineering, L.P.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Mustang Engineering, L.P. ("Contractor"), to be effective the 9th day of February, 2011.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated May 12, 2010 (the "Agreement") to perform certain professional right-of-way acquisition services and other related technical services that may be required; and amended by Addendum No. 1 on November 10, 2010.

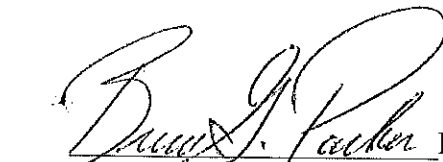
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and amended on November 10, 2010 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

MUSTANG ENGINEERING, L.P.


Bruce G. Parker, President Date: 2/10/11

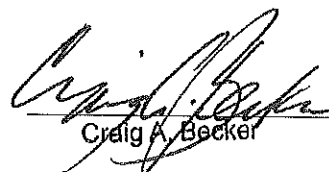

Craig A. Becker Date: 3-14-2011
CSP

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Myrtle Cruz, Inc.

AMENDED AND RESTATED AGREEMENT FOR BOOKKEEPING SERVICES

STATE OF TEXAS :

:

COUNTY OF HARRIS

THIS AGREEMENT for Bookkeeping Services, (the "Agreement") is effective as of the 1st day of June, 2014, (the "Effective Date") between West Harris County Regional Water Authority (hereinafter called the "Authority") and MYRTLE CRUZ, INC., (hereinafter called the "Bookkeeper") and in consideration of the mutual covenants and agreements herein contained.

I.

Any and all agreements currently in effect between Bookkeeper and the Authority are terminated by mutual agreement as of May 31, 2014. Beginning on the Effective Date, the Bookkeeper shall render the following services to the Authority. All services shall be rendered in a professional, competent and timely manner.

MONTHLY ENUMERATED SERVICES

1. Maintain bank accounts, savings accounts, certificates of deposits and other accounts as may be necessary and authorized, and reconcile such accounts on a monthly basis.
2. Deposit District funds in the appropriate account on a timely basis.
3. Prepare and present for Authority Board of Directors (hereinafter called the "Board") approval of all checks, with invoices attached, drawn on the District's accounts.
4. Maintain and reconcile monthly all cash accounts for the Authority's accounts.
5. Prepare monthly statements showing all activity within each of the above funds, and the current distribution of monies within each fund.
6. Maintain all journals and ledgers pertaining to the Authority's funds in a manner consistent with the statute creating the Authority, and in accordance with generally accepted accounting procedures, policies and regulations adopted by the Board and the Texas Commission on Environmental Quality, Water District Financial Management Guide, adopted March 2004, and in such a manner that excessive auditing procedures or adjustments by the Authority's auditor are not required.

7. Complete posting and close all journals and ledgers within forty five (45) days following the end of Authority's fiscal year.
8. Assist the Authority's auditors to efficiently perform the annual audit, including use of Bookkeeper's office facilities during the field audit and using best efforts to comply with recommendations contained in Auditors Annual Management Letter to the Board.
9. Invest bond proceeds and surplus funds in interest bearing time deposits in accordance with state law and the Authority's investment policy.
10. Prepare and provide for review (at least quarterly) an investment report detailing compliance with the Texas Public Funds Investment Act and the Authority's investment policy. Serve as investment officer of the Authority and maintain file for auditor review. Obtain training necessary to comply with state regulations.
11. Verify on a continual basis that securities are provided for the Authority's funds in accordance with state law and Board policy. Provide for review (at least quarterly) a listing of the pledged securities and their stated market value.
12. Work with consultants to prepare annual budget for various Authority funds with monthly increments and compare budget with actual expenditures on a monthly and cumulative basis.
13. Attend meetings of the Board, including but not limited to the monthly meeting, as requested by the Board. All meeting attendance will be included in the base rate.
14. Prepare checks for Directors in accordance with guidelines of the I.R.S. as related to "Statutory Employees". File the appropriate forms both quarterly and annually. Bookkeeper will also provide annual W-2 forms for the Directors.
15. Deposit funds received by the Authority and post payments to on-line reporting system. Transfer deposited payments by wire transfer to Trustee as received and verify receipt of these funds. Reconcile redistribution of funds monthly and annually according to the indenture agreement.
16. Calculate late penalties and generate invoice for this fee when payment is received.

17. Prepare monthly report of fees collected for both ground water and surface water to update the Authority on surface water conversion percentage. Annually this information will be compared to the information provided by the Harris Galveston and the Fort Bend Subsidence District. A report will then be prepared on discrepancies. This report will be the basis of refunded overpayments or billed underpayments. The Bookkeeper will send out the initial collection letters and assist with ongoing collection process.

18. Use report prepared for payment exceptions to update the continuing disclosure report with the percentage of collections and other information on the water usage.

The above enumerated services will be performed in a timely and competent manner for compensation of the services provided by the Bookkeeper to the Authority on a recurring basis.

II.

As consideration for the services rendered by the Bookkeeper to the Authority, Authority shall pay to Bookkeeper as compensation for the above enumerated services, the Base Rate of \$10,500.00 per month, to commence on the Effective Date. Exhibit "A" includes additional detail of the recurring services rendered as enumerated in the Base Rate.

In addition, the Bookkeeper shall render additional services not enumerated in paragraph I or in Exhibit "A", as requested by the Board or required by revised agency regulations and will be paid at the rate of \$65.00 per hour detailed on the monthly billing. If the service is to be a recurring addition to the above enumerated services, an amendment to the contract will be presented to the Board for consideration and approval with the description of service and the monthly amount of the fee.

The Authority shall pay the Bookkeeper for all out-of-pocket expenses reasonable and necessarily incurred by Bookkeeper in the performance of the services described herein, including but not limited to printing, reproduction of documents, long distance telephone calls, postage, ledger binders, and storage of documents. The fee for out-of-pocket expenses will be a "flat fee" of \$450.00 per month. If there is a special project requiring additional copies or postage, the bill for such will be presented to the Board for approval.

In addition, a monthly fee of \$975.00 will be charged for services rendered with respect to tracking, billing and preparing monthly reports for past and future operating and maintenance costs and capital costs (including without limitation, realty interest acquisition, construction, surveying, legal, and engineering costs) related to the Second Source Water Line project. This fee will be charged directly to the Second Source Water Line Joint Facilities account, "the Second Source".

The Authority shall pay the Bookkeeper for all out-of-pocket expenses reasonably and necessarily incurred by Bookkeeper in the performance of the services described herein for the Second Source, including but not limited to printing, reproduction of documents, long distance telephone calls, postage, ledger binders and paper, and storage of documents. The fee for out-of-pocket expenses will be a "flat fee" of \$100.00 per month. If there is a special project requiring additional copies or postage, the bill for such will be presented to the Board for approval.

Bookkeeper will maintain accurate records of all time and materials contributed to Authority services, and the Authority will have the right, on reasonable notice, to audit such records. Bookkeeper will submit a detailed monthly invoice indicating all fees and hourly services, together with any backup documentation requested by the Authority.

NON RECURRING SERVICES

III.

The Bookkeeper shall provide services of a non recurring nature to the Authority including but not limited to, work related to bond issues, release of escrowed funds, refunding bond issues, revision of debt service schedules to reflect changes to debt and coordination with the trustee regarding reserve requirements and annual debt service payments, assistance providing documentation to the arbitrage rebate specialist and defeasance of bonds.

Services that will be deemed non recurring will be billed at the rate listed in Exhibit "A" at the time the service is performed and will be comprehensive of the work required from inception to completion of service. Additional detail of the scope of work for each service is listed in Exhibit "A" with the fee schedule for each service. Fees of additional services for new money bond issues, refunding bond issues, and bond anticipation notes will be assessed and billed at the time of funding such bond issue or anticipation note.

IV.

The Authority shall instruct all contractors, vendors and service representatives or the Authority to submit all bills and invoices to Bookkeeper at least five (5) days prior to any scheduled meetings of the Board. It is understood that any bill or invoice submitted subsequent to the said five (5) day period, shall be paid if possible at said meeting, but will not necessarily be reflected on the cash analysis schedule.

V.

Upon the Effective Date, Bookkeeper shall provide the Authority with a public employees blanket position bond, conditioned that Bookkeeper will faithfully account for all monies which shall come in to Bookkeeper's custody under the terms of its service agreements, including this Agreement and otherwise, at the discretion of the Board, in the amount of two hundred fifty thousand (\$250,000) dollars. The cost of such bond shall be borne by the Authority. The bookkeeper agrees to maintain at the bookkeeper's sole cost and expenses, Professional Liability insurance with limits not less than one million, (\$1,000,000) dollars each claim/annual aggregate.

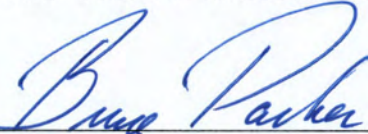
In addition, Myrtle Cruz, Inc. shall obtain a crime policy in an amount to be determined by the Board, with a single insured being the West Harris County Regional Water Authority, and shall provide a certificate of insurance to the Authority. The limit for this coverage shall be ten million (\$10,000,000) dollars and the policy will be paid by Myrtle Cruz, Inc., to be reimbursed to Myrtle Cruz, Inc. by the Authority with proof of payment. The estimated cost of this coverage is \$18,500 per annum.

VI.

The terms of the Agreement shall be for a period of one (1) year, from the Effective Date, and will be automatically renewed for successive one year terms thereafter or for such other periods as the parties may agree. This Agreement may be terminated, with or without cause, by either party upon thirty (30) days written notice to the other party. Bookkeeper shall not be entitled to any payment or further payment other than for work actually performed or for material or supplies furnished prior to termination. Upon termination of this Agreement, the Bookkeeper shall deliver all Authority. The execution of this contract acknowledges receipt of the Authority's order establishing a records management program and designating a records management officer, (the "Document Retention Policy"), a copy of which is attached as Exhibit "B". Myrtle Cruz, Inc. agrees to maintain all Authority records in Myrtle Cruz, Inc. possession in accordance with the Authority's Document Retention Policy.

Executed in multiple copies as of the date shown above.

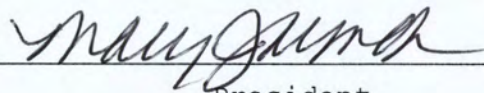
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

By 
President, Board of Directors

ATTEST:


Secretary, Board of Directors

BOOKKEEPER
MYRTLE CRUZ, INC.

By 
President

SERVICES INCLUDED IN BASE RATE
BASE RATE MONTHLY \$10,500.00

EXHIBIT "A"

Detail of Services included in base rate ; Enumerated Section I -Number 1-18

Our monthly fee includes preparing for meeting; e-mails to directors, preparation of report and e-mail of report, preparing checks and copies for meeting.

Monthly Budget Comparison. Schedules of Remaining Balance in Separate Accounts with Funds deposited by District.

Transfers to Regions Bank of pumpage and surface water fees collected. Coordination with Regions on transfers; including monthly transfer and annual true up per indenture agreement.

Monthly Reconciliation of Bank Statements and Money Market Accts.

Investment of District Funds; including Monthly Investment Report.

This includes collateral pledge report and the updates required by bank.

This also includes coordination with trust depository and verification of their statements.

Payroll reports on Monthly Basis to Update Director's W-2. Filing 941 quarterly and Annual Filing of 1099 and 1096 forms. Quarterly payroll tax deposits.

Tracking of Directors fees on monthly basis for annual legal limit.

Tracking contracts paid with total amt due/ retainage and completion %, including contracts that require developer participation and splits related to those project costs.

Summary of monthly disbursements and making the transfer from the applicable funds on deposits , i.e. ,improvement, construction, operating and any other funds on deposit

Posting Books for Audit. Reconciling all accounts to Bank balances.

The books are posted quarterly. Then prepared for audit following the January meeting. During the 1st quarter of the year we spend extra time preparing the books and discussing financials with the auditors.

(Currently using both a financial reporting firm and an auditor)

Depositing Pumpage and Surface Water Fees. Entering Pumpage and Surface Water fees on spread sheet for annual tracking. Listing on Deposit Record for auditor.

Communication with bookkeepers/ well owners to request delinquent payments reports, explain and correct payments, etc. The spreadsheet

allows us to maintain records for the use of your auditor and engineer and operator on groundwater conversion percentage and for annual exception and continuing disclosure report.

Request pumpage reports if not received, send out delinquents notices, delinquent bills and track receipt of payment. Provide information to attorney for collection of delinquent fees upon request.

Continuing Disclosure reporting regarding amount pumped and surface water used and paid to establish percentage of collections . List of the top entities pumping water and using surface water to determine financial information that is provided annually to the disclosure counsel. Determine percentage of payments from MUD versus non-MUDS.

Comparing report from engineer with amounts paid to WHCRWA and the information reported to the Authority on annual water consumption to determine collection percentage.

Bill or refund exceptions and follow up with collection of funds. Send follow up notices and present the remaining unpaid exceptions to the finance committee for action by the delinquent attorney.

Budget: We will prepare and work with District consultants to adopt yearly operating budget (included in monthly fee). Most of the additional work on the budget is attending meetings and conferencing with consultants on projections for operating, construction, debt service number.

Harris Galveston Subsidence District requirements that WHCRWA is the permittee and must report accurately water used and percentage of surface water requires extensive follow up with the well owners/ muds to verify receipt of pumpage report, payment and process late fees. Any modifications to the original forms must be notated and communicated to the engineer.

Tracking payment from entities with capital credit AND agreements for alternate water, effluent credits and various agreements to determine pumpage amount due.

Attendance at the regular monthly meeting and any other committee meeting requested to attend. Finance committee/ special budget mtg

Attend Scheduled conference calls with Attorney, Financial Advisor, Engineer, Auditor as called when necessary to discuss continuing disclosure, exceptions, budget, insurance, long range planning , various other reasons.

Prepare invoices as requested by engineer for purchase of groundwater credits.

Track until invoice is paid and then send copy of check to engineer for processing transfer of credits

Authority expenses (Section II; paragraph 3) are billed as follows:

Flat Fee (monthly) \$450.00

Services not included in the base rate (above) not listed in Non Recurring Services (below) will be tracked and detailed for charge at the hourly rate.

ADDITIONAL SERVICES BILLED AT:
HOURLY RATE: (\$65.00 PER HOUR)

SECOND SOURCE JT. FACILITIES CHARGE

MONTHLY CHARGE \$975.00

To be charged to Second Source Joint Facilities Operating Account and billed to contractual parties. This fee includes billing to North Fort Bend Water Authority for share of debt service on the Texas Water Development Bond ; Series 2012. This Fee also includes any billing to North Fort Bend Water Authority for capital expenses on the second source project that are not funded with the bonds and the tracking to determine each Authority 's prorata share of the expenses.

SECOND SOURCE JOINT EXPENSES: Are billed as follows:

FLAT FEE (monthly) \$100.00

<u>SERVICES PROVIDED / Non Recurring</u> (the following will be charged as a flat rate for each (and not at hourly rate).)		
1.	<p><u>Sale of Bonds</u></p> <p>Work with financial advisor, attorney to provide information for documents provided to rating agencies and for the documentation needed to complete the bond sale. Coordinate with bank on amount needed for collateral , the funding documents and the wires for payment and to Capital Account. Establish new account for the proceeds so these funds can be tracked separately and work with Engineer on applicable use of funds. Set up debt service requirements provided by financial advisor and coordinate with Trustee on new reserve amount and new debt service amount for monthly transfers.</p>	\$1,650.00
2.	<p><u>Refunding Bond Issue</u></p> <p>Coordinate with Financial Advisor, Attorney on closing memo and distribution of proceeds. Wire funds from District accounts if required prior to closing, Notify bank of funding and arrange collateral with bank for District deposits. Update all debt schedules to reflect changes to debt service payments. And notify trustee of change to monthly transfer for debt service requirements</p>	\$1,300.00
3.	<p><u>Defeasance of Existing Bonds</u></p> <p>Coordinate with Attorney and Trustee as paying agent on amount of defeasance and wiring instructions for funds. Work with financial advisor on modification of the debt service schedules / notify auditor and Trustee for monthly transfer for Debt Service Requirements and adjust reserve balance necessary.</p>	\$650.00
4.	<p><u>Release of Escrowed funds</u></p> <p>Determine amounts released for invoices already disbursed and amounts released for prefunding payment. Determine the appropriate souce of funds to reimburse any previously disbursed amounts. Work with auditor to update the total amount spent on capital projects with each Escrow Release.</p>	\$325.00
5.	<p><u>Arbitrage Rebate Calculation done by Omni Cap</u></p> <p>Providing documentation and record research to Arbitrage Rebate Specialist</p> <p>Provide documentation of prior years earned interest on money market, certificate of deposit, and documentation of distribution of bond proceeds . On annual basis provide trust statements and summary</p> <p>On annual basis provide trust statements and summary to Omni Cap for future Arbitrage rebate Calculations</p>	<p>EACH SERIES \$325.00</p> <p>ANNUAL \$250.00</p>

PAS Property Acquisition Services, LLC

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into this 13th day of July, 2011, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Property Acquisition Services, Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

WHEREAS, the parties have previously entered into that certain Right of Way Service Agreement dated April 13, 2011 and that certain Right of Way Services Agreement dated September 11, 2002, each of which shall be superseded and replaced in its entirety by this Agreement;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I. SERVICES

Section 1.01. Services and Fees. Contractor shall perform certain land acquisition services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority. Charges for Services will be made in accordance with the Schedule of Rates and Expense Reimbursements attached hereto as **Exhibit A**.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering

Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit B** and shall be dated when approved. All fees described in the Work Authorization shall include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.02. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000, unless otherwise amended.

Option 1 - Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 - Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit A**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon

Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

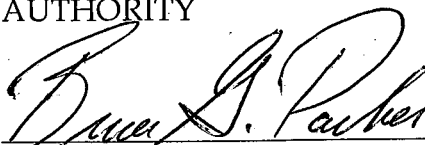
Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

Section 3.18. Prior Agreements. This Agreement shall supersede and replace their entirety all prior agreements, written or otherwise, existing between the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)

PROPERTY ACQUISITION SERVICES, INC.

By: Mark Heidaker
Mark Heidaker, President

EXHIBIT A

Schedule of Rates and Expense Reimbursements

The Rates and reimbursements set forth in this Exhibit B are subject to annual adjustment by Contractor provided Contractor gives WHCRWA a minimum of sixty (60) days written notice of any such adjustment.

Consultant will submit monthly invoices for services provided through the last day of each month to WHCRWA, accompanied by an explanation of charges, professional fees, services, and expenses. WHCRWA will pay such invoices according to its normal payment procedures, but in no event shall such payment be later than thirty days after receipt of the invoice by WHCRWA.

ACQUISITION FEE PER PARCEL

Acquisition Price \$3,000.00 per/parcel

Milestone Billing

Initial Offer 40% per parcel price
Submission of Deed or Final Offer Letter 40% per parcel price
Closing Package or Submission of Condemnation Package 20% per parcel price

CONSULTANT FEE

The Hourly Rate Schedule is based on a per hour basis respectively. Consultant will be paid at the rates per service or employee shown below. WHCRWA will reimburse Consultant for *actual*, project-related expenses at the rates set forth below.

HOURLY RATE SCHEDULE

Principal..... \$ 150.00 / hr
Project Manager..... \$ 110.00 / hr
Right of Way Agent..... \$ 80.00 / hr
Title Coordinator / Examiner..... \$ 65.00 / hr
Right of Way Assistant..... \$ 40.00 / hr

All salary classifications may not be necessary on every project.

REIMBURSABLE PROJECT EXPENSES

TITLE SERVICES

If Title services are required, Contractor will obtain Title Certificate or Title Policy and WHCRWA will have the right to approve per parcel fee prior to the hiring of the abstractor. All Title fees will be billed to the WHCRWA at their actual cost.

APPRAISAL FEES

If appraisals are required, Contractor will obtain appraisals from a licensed appraisal service and WHCRWA will have the right to approve appraisal fees prior to the hiring of the appraiser. All appraisal fees will be billed to WHCRWA at their actual cost.

MISCELLANEOUS PROJECT RELATED EXPENSES

- a) Reproduction, duplicating and blueprinting service
- b) Recording fees
- c) Other expenses authorized by WHCRWA in the performance of the Scope of Services.

ASSIGNMENT OF MASTER SERVICES AGREEMENT

PAS Property Acquisition Services, Inc. (the "Assignor") and West Harris County Regional Water Authority (the "Authority") are parties to the Master Services Agreement dated July 13, 2011 (the "Agreement").

The Assignor now wishes to assign all its rights, obligations, title and interests in and to the Agreement to PAS Property Acquisition Services, LLC (the "Assignee").

Now, therefore, the parties hereto agree as follows:

- I. Assignor agrees to assign, and Assignee agrees to accept such assignment and assumes all of Assignor's rights, obligations, title, and interests in and to the Agreement.
- II. The Authority hereby consents to such assignment.

EFFECTIVE as of February 29, 2012.

ASSIGNOR:
PAS Property Acquisition Services, Inc.

By: Mark Heidaker
Mark Heidaker, President

ASSIGNEE:

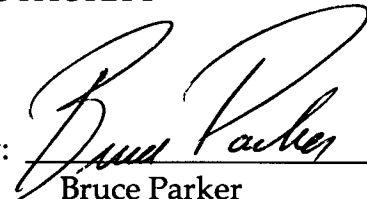
PAS Property Acquisition Services, LLC

By: Mark Heidaker
Mark Heidaker, Manager



AGREED TO AND ACCEPTED on April 11, 2012.

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY

By:  _____
Bruce Parker
President, Board of Directors



**ADDENDUM No. 1 TO MASTER SERVICES AGREEMENT
(PAS Property Acquisition Services, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and PAS Property Acquisition Services, LLC ("Contractor"), to be effective the 8th day of May, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated July 13, 2011 (the "Agreement") to perform certain professional services or such other related services that may be required; and Assignment of Master Services Agreement made effective as of February 29, 2012 and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

PAS PROPERTY ACQUISITION SERVICES, LLC



Bruce G. Parker, President

Date: 5/8/13



Mark Heidaker

Date: 5/13/13

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$550,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Prime Controls, L.P.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into August 14, 2013, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), Prime Controls, LP (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I. SERVICES

Section 1.01. Services. Contractor shall perform certain control system maintenance services (the "Services") for the Authority in accordance with **Exhibit A** attached hereto, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit B** and

shall be dated when approved. All fees described in the Work Authorization shall include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$50,000.00, unless otherwise amended.

Option 1 - Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 - Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit B**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens

Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III. GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury - \$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be

endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, INCLUDING ATTORNEYS FEES AND COURT COSTS, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over

Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry

out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

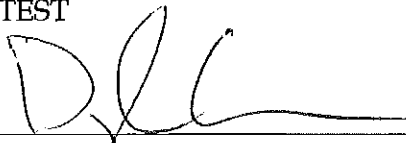
[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

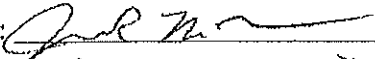
ATTEST



Secretary, Board of Directors



PRIME CONTROLS, LP

By: 
Name: James R. McMillan
Title: Vice President



10400 WESTOFFICE, SUITE 105
HOUSTON, TX 77042
PHONE 713-244-9747 ☐ FAX 713-244-9717

August 14, 2013

Mr. Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, TX 77098-2094

Ref: West Harris County Regional Water Authority
Metering Station Startup Costs

Mr. Ahrens,

Prime Controls is pleased to offer this unit-price quote to start up additional WHCRWA Metering Stations. The price quoted is for each station.

Our Scope of Work shall include all products and services specified to be provided in the following bid specification divisions:

No specification was supplied.

The offering is complete with the exception of those items specifically excluded within the "Exclusion" section of this proposal.

No Equipment is included. All equipment is already being supplied by others.

Services to be provided by Prime Controls include the following major items:

1. Programming of PLC at the site.
2. Modification of the Wonderware HMI application for addition of the new stations at both the WHCRWA pump station and ST Environmental's office in Houston, Texas.
3. Testing and checkout.
4. Warranty services for one year.

PROPOSAL EXCLUSIONS

The following items are not included in our pricing and shall be the responsibility of others:

1. Modification of control panel wiring or terminations. These are to be made by others.



2. This proposal includes all services listed above. If there is significant work outside this scope, this work will be subject to the attached rate sheet. If this does occur, we will notify the customer before any additional cost is incurred for approval.

PROPOSAL CLARIFICATIONS

Price does not include sales tax or bonding cost. Payment terms to be net thirty days.

PROPOSAL PRICING

Prime Controls' pricing shall be provided per the following Bid Item Breakdown:

Above Specified Scope for each additional site: \$3,950.00

We sincerely appreciate this opportunity and look forward to being of service for this work.

Thanks again and please feel free to call if there are any questions.

Sincerely,

A handwritten signature in black ink that reads "Garrett T. Crowell". The signature is written in a cursive style with a large initial "G".

Garrett T. Crowell
Sr. Project Engineer



“2013 T&M Labor Rates and Charges”

The following Labor Rates and Charges shall apply for “Time and Material” projects performed for WHCRWA general area for the calendar year 2013.

I. Labor Rates:

Professional Services shall be available at the following rates:

<u>Professional Classification</u>	2013 HOURLY RATES		
	<u>S.T. Hourly Rates</u>	<u>O.T. Hourly Rates</u>	<u>D.T. Hourly Rates</u>
Account Executive	\$153.00	\$203.00	\$275.00
Project Manager II	\$117.00	\$155.00	\$210.00
Project Manager I	\$112.00	\$149.00	\$202.00
Assistant Project Manager	\$87.00	\$116.00	\$156.00
Engineering Manager	\$162.00	\$216.00	\$291.00
Senior Licensed Engineer	\$162.00	\$216.00	\$291.00
Junior Licensed Engineer	\$135.00	\$180.00	\$243.00
Senior Automation Specialist	\$135.00	\$180.00	\$243.00
Automation Specialist II	\$117.00	\$155.00	\$210.00
Automation Specialist I	\$99.00	\$131.00	\$178.00
IT Manager	\$148.00	\$198.00	\$267.00
IT Professional	\$112.00	\$149.00	\$202.00
I&C Supervisor	\$76.00	\$101.00	\$137.00
Technician II	\$81.00	\$108.00	\$145.00
Technician I	\$70.00	\$93.00	\$126.00
Designer	\$81.00	\$108.00	\$145.00
Intern	\$36.00	\$47.00	\$64.00
Construction Manager	\$96.00	\$127.00	\$172.00
Superintendent	\$85.00	\$113.00	\$153.00
Foreman	\$81.00	\$108.00	\$145.00
Electrical JIW	\$64.00	\$86.00	\$116.00
Installer	\$52.00	\$69.00	\$93.00
Electrical Helper	\$39.00	\$52.00	\$71.00
Panel Shop Manager	\$88.00	\$117.00	\$158.00
Panel Shop JIW	\$43.00	\$57.00	\$77.00
Panel Shop Helper	\$36.00	\$48.00	\$65.00
QA/QC	\$63.00	\$83.00	\$113.00
EH & S	\$67.00	\$90.00	\$121.00
Office - Administrative	\$49.00	\$65.00	\$89.00



"2013 T&M Labor Rates and Charges"

Labor rates include all payroll taxes, benefits, personal laptops, hand tools, overhead and profit.

1. Straight time (S.T.) rates shall apply for all hours worked during the normal eight (8) hour day, Monday through Friday.
2. Overtime (O.T.) rates shall apply for all hours worked in excess of the normal eight (8) hour day and for all hours worked Saturday and Sunday.
3. Double time (D.T.) rates shall for all hours worked during following Holidays:
 - a. New Year's Day
 - b. Easter Sunday
 - c. Memorial Day
 - d. July 4th
 - e. Labor Day
 - f. Thanksgiving Day and Day After Thanksgiving
 - g. Christmas Day
4. Travel time shall be charged at straight time rates.

II. Material/Special Tool Rates

Material, special tools and job site facilities requested to be furnished by Prime Controls shall be invoiced for at actual documented costs plus 15% markup.

III. Travel and Related Expenses

Travel and related expenses shall be invoiced for as follows:

1. Air Travel: Actual documented costs
2. Lodging: Actual documented costs
3. Vehicle: Actual documented costs (rental and gas) or \$175.00 Per Day worked for Company owned vehicle (truck).
4. Per Diem Rate: \$100.00 Per Day worked

Travel arrangements (frequency of trips home, etc.) to be negotiated and pre-agreed to per project/assignment.

IV. Payment

Invoicing shall be bi-weekly. Payment terms shall be net thirty (30) days from date of invoice.

**AMENDMENT No. 1 TO MASTER SERVICES AGREEMENT
(Prime Controls, LP)**

This Amendment to the Master Services Agreement for Professional Services (the "Amendment") is by and between the West Harris County Regional Water Authority (the "Authority") and Prime Controls, LP ("Contractor"), to be effective the 13th day of August, 2014.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated August 14, 2013 (the "Agreement") to perform certain professional services or such other related services that may be required in connection with the Project as defined in the Agreement.

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit A – Remove and replace Exhibit A with the attached revised Exhibit A which is hereby attached to and made a part of the Agreement.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

PRIME CONTROLS, LP


Date: 8/13/14
Bruce G. Parker


Date: 8-7-14

EXHIBIT A
PRIME
CONTROLS

10400 WESTOFFICE, SUITE 103 - HOUSTON, TX 77042
 PHONE 713-244-0747 - FAX 713-244-0717

August 4, 2014

To: Dannenbaum Engineering Corporation
 3100 West Alabama
 Houston, TX 77098-2094

Attn: Mr. Wayne Ahrens

Ref: West Harris County Regional Water Authority
 Metering Station Start-Up
 Prime Controls Quote No.: 080414-JPK

PRIME CONTROLS PROPOSAL

Prime Controls is pleased to offer this unit price quote for the Start-Up work associated with new Metering Stations for WHCRWA as described hereafter.

Our Scope of Work shall include all products and services specified to be provided below.

The offering is complete with the exception of those items specifically excluded within the "Exclusions" section of this proposal.

Equipment shall be furnished. No exceptions. Major products and control panels to be furnished by Prime Controls includes the following:

ITEM	QTY	DESCRIPTION	REFERENCE
1.	1	CalAmp Vanguard 3000 Cellular Router	N/A
2.	1	Hirschmann RS20 Industrial Ethernet Switch	N/A
3.	1	Cellular Antenna	N/A
4.	2	3' Coaxial Cable w/ connectors	N/A
5.	1	Coaxial Cable Surge Protection	N/A
6.	2	Cat-5e Cables	N/A

Services to be provided by Prime Controls include the following major items:

ITEM	SERVICES
1.	PLC Programming services at the new metering station.
2.	Maple OIT Programming services at the new metering station.
3.	Wonderware HMI Programming modification for new metering station at both the WHCRWA pump station and Severn Trent Services office in Houston, TX
4.	Configuration and in-house testing of cellular router and Industrial Ethernet switch
5.	Physical Installation of Prime Controls Furnished Equipment
6.	Final Electrical Terminations to Prime Controls Furnished Equipment
7.	Final Coax Terminations for all Prime Controls Furnished Equipment
8.	Field Check-Out and Start-Up Services
9.	Warranty Services

EXHIBIT A

PROPOSAL EXCLUSIONS

The following items are not included in our pricing and shall be the responsibility of others:

ITEM	EXCLUSIONS
1.	Furnishing and installation of all electrical conduit, raceway, duct banks, wire, etc. required to connect equipment and associated panels.
2.	Modification of control panel wiring or terminations other than what is specified under the services section of this proposal. These are to be made By Others.
3.	Furnishing and/or installation of any and all equipment not specifically mentioned above.
4.	Providing any services not specifically mentioned above.

PROPOSAL CLARIFICATIONS

ITEM	CLARIFICATION
1.	Prime Controls will utilize the existing PLC and OIT programs that have been previously developed, tested and commissioned for WHCRWA.
2.	Pricing does not include sales tax or bonding cost.
3.	Invoicing shall be progressive and include payment for properly stored material. Payment terms to be net thirty days
4.	Pricing shall be valid for ninety (90) days only from proposal date.

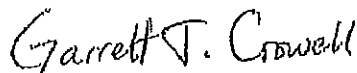
PROPOSAL PRICING

Bid Item	BASE BID	Pricing
1	Metering Station Start-Up	\$5,660.00
	BASE BID TOTAL AMOUNT (Per Station)	\$5,660.00

We sincerely appreciate this opportunity and look forward to being of service for this work.

Thanks again and please feel free to call if there are any questions.

Sincerely,
Prime Controls, LP



Garrett T. Crowell, P.E.
Sr. Project Engineer
(281) 330-1661
g.crowell@prime-controls.com

METERING STATION UPGRADE AND SERVICES AGREEMENT

This Metering Station Upgrade and Services Agreement (this "Agreement") is entered into on June ~~2013~~ 2013 (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation district and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water Code, as amended (the "Owner"), and Prime Controls (the "Contractor").

RECITALS

WHEREAS, the Owner has determined it is in the Owner's best interest to engage a professional service provider for the control panel upgrade services described herein; and

WHEREAS, the Parties have read and understood the terms and provisions set forth in this Agreement and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Owner and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform the services (the "Services") described in the written proposal attached hereto as **Exhibit A**. During the term of this Agreement, Contractor or Owner may recommend certain additions or changes to the Services. In such case, the additions or changes shall be submitted to the Owner for approval in the form of a new proposal or service order. When any new Services or changes to Services are approved, another exhibit shall be added to this Agreement, signed and dated by each Party. The exhibits added shall be sequenced in alphabetical order beginning with **Exhibit B** and shall be dated when approved by the Board. All fees described in the proposal or service order shall include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

II.
COMPENSATION

Section 2.01. Payment for Services. Contractor shall be compensated for the Services as outlined in **Exhibit A**. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Owner) indicating the

Services performed for that month under the terms of this Agreement. Contractor shall submit detailed invoices to the Owner's bookkeeper:

Ms. Erin Garcia
Myrtle Cruz, Inc.
1621 Milam, 3rd Fl.
Houston, TX 77002-8017
Fax: (713) 759-1264
Email: erin_garcia@mcruz.com

Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Owner. Interest shall not be paid on service invoices.

Contractor agrees that upon completion of the work called for hereunder, it will furnish the Owner with proof, satisfactory to the Owner, that all labor, material and equipment for which Contractor has been paid, have been satisfied and paid, unless the Owner waives such proof. Upon furnishing such proof, or waiver thereof, the amount billed by Contractor will be reviewed by the Owner for approval and all undisputed amounts shall be paid to Contractor in accordance with this Section.

III. GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Owner to furnish its best skill and judgment in performing the Services for the Owner. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials and equipment and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Owner and Contractor. Contractor has been retained by the Owner for the sole purpose and to the extent set forth in this Agreement. It is understood and agreed that all work so done by Contractor shall meet with Owner approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Owner during the term of this Agreement is that of an independent contractor. The relationship between the Owner and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance and copies of any required endorsements to the Owner evidencing the following insurance coverage, which coverage shall be maintained throughout the term of this Agreement. Certified

copies of each policy shall be furnished to the Owner upon the Owner's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Owner or others. Cancellation or expiration of any of said insurance policies shall not preclude the Owner from recovery thereunder for any liability arising under this Agreement.

Contractor shall obtain the following insurance from companies having a Best's rating of B+/VII or better and licensed to transact business in the State of Texas:

- A. Workers' Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workers' compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$500,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury - \$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.

Contractor's insurance shall include the following endorsements:

- A. The Owner and the Owner's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for workers' compensation insurance, as to the full limits of liability provided by each insurance policy (including limits greater than the minimum limits required herein).
- B. All required insurance shall be endorsed to provide that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Owner. Renewal certificates shall be provided at least 30 days prior to the termination date of the current certificates of insurance during the term of this Agreement.
- C. Inasmuch as Owner and Contractor intend that all of Contractor's insured loss and liabilities fall upon Contractor's insurers, without recourse against Owner, Contractor agrees to cause all of its policies of insurance maintained in force or procured by Contractor to provide, if necessary by endorsement,

that each such insurer fully waives subrogation against the Owner and its agents and employees.

- D. All of the aforesaid policies shall be endorsed to provide that the coverage provided to the Owner as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Owner, and that neither Contractor nor its insurer will seek contribution or recovery from the Owner or such other insurance available to the Owner.
- E. Contractor shall cause its subcontractors, including all persons hired by Contractor who are not Contractor's employees, who perform any part of the work hereunder, to be added as additional insureds to all coverage required under this Agreement, as to the full limits of liability provided by each insurance policy (including limits greater than the minimum limits required herein).

TO THE FULLEST EXTENT PERMITTED BY LAW, THE CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE OWNER AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER (INCLUDING SPECIFICALLY ATTORNEYS' FEES, COURT COSTS AND OTHER EXPENSES INCURRED IN ENFORCING THIS INDEMNITY PROVISION), WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THE SERVICES PERFORMED UNDER AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

THIS INDEMNITY AGREEMENT IS INTENDED TO MEET THE TEXAS "EXPRESS NEGLIGENCE RULE" BECAUSE CONTRACTOR AGREES THAT IT APPLIES AND IS ENFORCEABLE EVEN AS TO LOSSES, DAMAGES, INJURIES, EXPENSES, CLAIMS, CAUSES OF ACTION, JUDGMENTS OR LIABILITIES JOINTLY OR CONCURRENTLY CAUSED BY THE NEGLIGENCE OR OTHER FAULT OF THE OWNER. THE TERM "FAULT" IN THE PREVIOUS SENTENCE INCLUDES THE VIOLATION OR BREACH BY THE OWNER OF ANY COMMON LAW DUTY, ANY TERM OF THIS CONTRACT, OR ANY STATUTE OR REGULATION.

THIS INDEMNIFICATION OBLIGATION IS IN ADDITION TO ALL OTHER LEGAL, EQUITABLE, OR INDEMNIFICATION REMEDIES AVAILABLE TO THE OWNER. THIS INDEMNIFICATION OBLIGATION SURVIVES THE TERMINATION OR EXPIRATION OF THIS CONTRACT.

CONTRACTOR DOES HEREBY WAIVE, RELEASE AND FOREVER RELINQUISH AND DISCHARGE THE OWNER FROM ALL OF CONTRACTOR'S CAUSES OF ACTION ARISING FROM BODILY INJURY OR DEATH OR DAMAGE TO ANY PROPERTY ARISING OUT OF THE WORK, REGARDLESS OF WHETHER THE INJURY OR DAMAGE IS CAUSED IN FULL OR IN PART BY THE NEGLIGENCE OR OTHER FAULT OF THE OWNER.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, without cause, upon thirty (30) days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Owner does not waive any other remedy allowed under Texas law.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable city, county, state and federal rules, regulations and laws and any codes which may apply to the Services being provided. Contractor will obtain all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable federal, state and local health and safety laws and regulations.

Section 3.08. Inspection. The Owner and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time.

Section 3.09. Warranty. In addition to other common law and statutory warranties, whether implied or express, Contractor's warranty applies to materials, parts, labor and workmanship for one year from the date of completion of the Project. Contractor shall transfer all manufacturers' warranties to the Owner.

Section 3.10. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Owner, which shall be granted or denied in the Owner's sole discretion.

Section 3.11. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Owner and Contractor, except to add any future exhibits pursuant to Section 1.01.

Section 3.12. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes;

lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.13. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction.

Section 3.14. Governing Law. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Owner is located.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Owner and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY



President, Board of Directors


ATTEST:



Secretary, Board of Directors

(SEAL)

PRIME CONTROLS

By: 

Name: Jace McNeil

Title: President

EXHIBIT A



Prime Controls personnel have spent numerous hours researching the optimal solution for this problem, talking to numerous hardware vendors, other consulting engineers, networking specialists and even attending Department of Homeland Security (DHS) meetings and seminars regarding cyber-security for industrial control systems. Based on these discussions, we believe that the best solution is to convert each site from DSL to cellular communications. We had originally wanted to explore installing and configuring industrial DSL routers / firewalls, but we have only found two such devices available on the market and they are both manufactured overseas and are not readily available in the USA. Based on this, we decided to strictly focus on a cellular solution.

SCOPE OF WORK

Prime Controls' scope of work would consist of installing a new managed Ethernet switch and cellular modem with VPN capabilities inside each metering station control panel and set up a secure IPSec VPN tunnel from each metering station back to the central monitoring system. The managed Ethernet switch would be configured to limit local access to only devices that are authorized to connect to the network.

In addition to the new cellular modems and managed switches at each site, Prime Controls would install a new firewall at both pump station 1 and at ST Environmental to accommodate the up to 200 remote VPN connections that will eventually be connected to the system.

Prime Controls proposed scope of work at each metering station control panel includes:

- Removal of existing AT&T-supplied DSL router;
- Installation of a new 4-port Hirschmann RS20 managed Ethernet switch (cut sheet attached);
- Installation of new CalAmp Vanguard 3000 Cellular Router with external antenna and lightning surge arrestor (cut sheet attached);
- Configuration of new cellular router to provide a VPN tunnel to the central monitoring system at both pump station 1 and ST Environmental;
- Configuration of PLC to communicate to central control system via new VPN tunnel;
- Configuration of Wonderware software to communicate to PLC via new VPN tunnel;

Prime Controls proposed scope of work at pump station 1 and ST Environmental will include:

- Install new Cisco ASA5510 firewalls at pump station 1 and at ST Environmental (cut sheet attached);

EXHIBIT A

**PRIME
CONTROLS**

- Configure both new firewalls to provide a VPN tunnel between the pump station 1 and ST Environmental;
- Configure both firewalls to accept VPN connections from each of the metering stations;
- Install and configure new VPN client software on each computer that will be used to log into the control system remotely;

PROPOSAL EXCLUSIONS

The following items are not included in our pricing and shall be the responsibility of others:

1. The on-going monthly cost of the cellular service is not included in this proposal and will be the responsibility of others. The initial cost of setting up the cellular modems is included.
2. Control panel as-built drawings will not be updated as part of this proposal.
3. Furnishing and installation of any equipment not specifically detailed above.
4. All "Civil" work including building and vessel modifications, asphalt demolition/patching, concrete foundations/piers, etc.

PROPOSAL CLARIFICATIONS

1. Prime Controls estimates that it will take 8-10 weeks to complete the scope of work as described above.
2. Price does not include sales tax or bonding cost.
3. Payment terms to be net thirty days.
4. Warranty shall be for a period of 12 months and include costs to repair/replace furnished products that are found to be defective due to manufacturing defects and/or improper workmanship. Damages resulting from acts of God and/or improper maintenance shall not be covered by this warranty.

PRICING BREAKDOWN

Remote Metering Stations

Metering station equipment as described above (each site)	_____	\$1,500.00
Metering station equipment installation and configuration (each site)	_____	\$1,200.00
Remote Metering Stations Total Cost (each)	_____	\$2,700.00
Remote Metering Stations Total Cost (50 stations)	_____	\$135,000.00

EXHIBIT A



Central Monitoring System

Pump Station 1 firewall _____	\$3,400.00
ST Environmental firewall _____	\$3,400.00
Firewall installation and configuration (both sites) _____	\$6,600.00
Total Cost for the Central Monitoring System Modifications _____	\$13,400.00

Total Estimated Cost for all Stations and Central Monitoring System __ \$148,400.00

If you have any questions or need any additional information, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Garrett T. Crowell".

Garrett T. Crowell, P.E.
Sr. Project Engineer

(713) 244-9747 – Office
(281) 330-1661 – Cell
g.crowell@prime-controls.com

Rapid Research, Inc.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into this 12th day of May, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Rapid Research, Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the Parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I. SERVICES

Section 1.01. Services. Contractor shall perform certain right of way acquisition and related technical services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall

This page is a placeholder for information submitted with the application that may contain confidential information.

Please contact Cindy DePrato at 512 463-8420 to request reviewing this information.

This page is a placeholder for information submitted with the application that may contain confidential information.

Please contact Cindy DePrato at 512 463-8420 to request reviewing this information.

- B. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- C. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's compensation insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law.

Section 3.04. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.09. Document Ownership. All documents and reports produced in connection with this Agreement (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.10. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.11. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.11. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.13. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.14. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

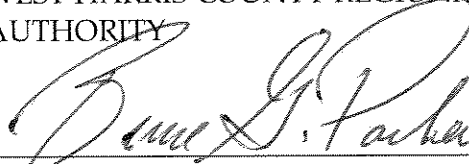
Section 3.15. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.16. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.


[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



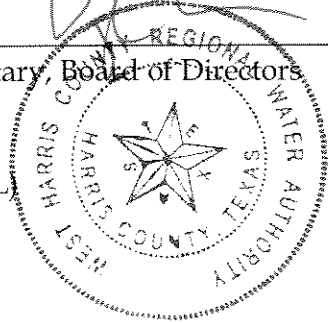
President, Board of Directors

ATTEST

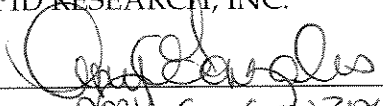


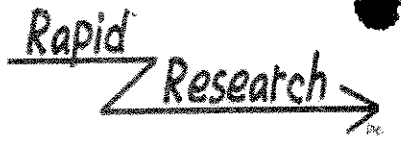
Secretary, Board of Directors

(SEAL)



RAPID RESEARCH, INC.

By: 
Name: AMY C. GONZALES
Title: PRESIDENT



17424 W. Grand Pkwy., Suite 226
Sugar Land, Texas 77479
281-382-0436 ph
1-800-834-2950 fax

May 12, 2010

Mr. Wayne Ahrens, P.E.,
Program Manager
West Harris County Regional Water Authority
c/o Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Mr. Ahrens,

It is my understanding that you would like a proposal for research to be performed on approximately 50 tracts located in Harris County, the location as yet unavailable. The requested research for each tract, to be delivered to you in the form of a Limited Abstract Certificate, is as follows:

- the underlying fee owner
- title history of the former Exxon Easement easement (beginning with Exxon's original acquisition to the WHCRWA's acquisition in December 2006)
- all easements across the fee owner's tract

To make things a bit simpler, I am providing you with a "per tract" fee for these services. My proposal is as follows:

Limited Abstract Certificate: \$215.00 (based on a minimum of 50 tracts)
document copies: \$1.25 per page
plat copies: \$10.00 per plat, regardless of the number of pages

If you have any questions or concerns regarding this proposal, please don't hesitate to contact me and I will be happy to go over it with you. I would like to thank you for allowing me to present you with this proposal for services. We appreciate the opportunity and hope to hear back from you soon.

Sincerely,

Amy C. Gonzales
RAPID RESEARCH, INC.
acgonzales@rapidresearchinc.com

proposal accepted on _____ by:
date

signature
West Harris County Regional Water Authority

printed name

FIRST AMENDMENT TO MASTER SERVICES AGREEMENT

This First Amendment to Master Service Agreement (this "First Amendment") is entered into as of the 9th day of June, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Rapid Research, Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority and Contractor have previously entered into that certain Master Services Agreement dated as of June 9, 2010, (the "Agreement") for the provision of certain services described therein; and

WHEREAS, the parties now desire to amend certain terms of the Agreement, which amended terms shall be effective as of the Effective Date;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits contained herein and in the Agreement, the Authority and Contractor agree as follows:

AGREEMENT

I. The final sentence of the first paragraph of Section 3.03 of the Agreement shall be revised to read as follows:

"Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas; provided, however, that ratings requirements shall not apply to Workmen's Compensation Insurance:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000

C. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined) "

II. **Exhibit A** of the Agreement shall be replaced with the attached **Exhibit A**.

III. Except as specifically amended in this First Amendment, the Agreement shall remain in full force and effect in accordance with its original terms and conditions.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY

Drew A. Fisher

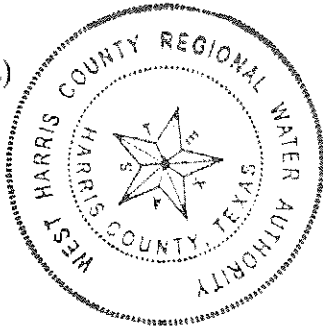
President, Board of Directors

ATTEST


Dyle

Secretary, Board of Directors

(SEAL)



RAPID RESEARCH, INC.

By: 
Name: AMY C. GONZALES
Title: PRESIDENT



17424 W. Grand Pkwy., Suite 226
Sugar Land, Texas 77479
281-382-0436 ph
1-800-834-2950 fax

July 9, 2010

Mr. Wayne Ahrens, P.E., Program Manager
West Harris County Regional Water Authority
c/o Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Mr. Ahrens,

Herein please find my proposal for research to be performed on Segment "A", containing 16 subjects, 15 adjoiners, and 5 roads in Harris County. The requested research for each tract, to be delivered to you in duplicate electronic format on 2 CD's and also in the form of 1 hard copy is as follows:


- * vesting deed for underlying fee owners and their contact information
- * vesting deed into original Exxon easement grantor
- * Exxon easement chain of history from inception to 2006 WHCRWA acquisition
- * all easements, modifications and encroachments affecting Exxon easement and fee property
- * limited title certificates for all adjoiners within 60' of Exxon easement
- * limited title certificates for all underlying fee parcels
- * limited title certificates for all major roads crossed by the Exxon easement
- * facet maps with tracts numbered
- * TXDOT ROW maps and Harris County maps, if available, for all major roads crossed
- * completed Parcel data spreadsheet (as provided by client) for each tract

Limited Abstract Certificate for each subject and adjoiner: \$270.00
document copies: \$1.25 per page
plat copies: \$10.00 per plat, regardless of the number of pages


Compensation for major road crossing research as set by the WHCRWA will be \$150.00 each.

If you have any questions or concerns regarding this proposal, please don't hesitate to contact me and I will be happy to go over it with you. I would like to thank you for allowing me to present you with this proposal. I appreciate the opportunity and hope to hear back from you soon.

Sincerely,


Amy C. Gonzales
RAPID RESEARCH, INC.
acgonzales@rapidresearchinc.com

proposal accepted on 7-14-10 by:
date


signature

BRUCE PARKER
printed name

West Harris County Regional Water Authority

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Rapid Research, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Environmental Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Rapid Research, Inc. ("Contractor"), to be effective the 10th day of November, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated May 12, 2010 (the "Agreement") and the First Amendment entered into on June 9, 2010 to perform certain right-of-way acquisition services and other related technical services that may be required; and

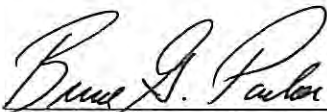
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

RAPID RESEARCH, INC.


Bruce G. Parker, President

Date: 11-10-2011



Date: 11-10-2010

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$50,000.00 which includes the following Work Authorization and any future work authorizations:

Work Authorization No. 1 \$13,006.98

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Rapid Research, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Environmental Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Rapid Research, Inc. ("Contractor"), to be effective the 14th day of November, 2012.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated May 12, 2010 (the "Agreement") and the First Amendment entered into on June 9, 2010 and Addendum No. 1 entered into on November 10, 2010 to perform certain right-of-way acquisition services and other related technical services that may be required; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment originally attached to and made a part of the Agreement and amended on November 10, 2010 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

RAPID RESEARCH, INC.


Bruce G. Parker, President

Date: 11/12/2012


Date: 11/21/2012

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 3 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Rapid Research, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Environmental Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Rapid Research, Inc. ("Contractor"), to be effective the 8th day of May, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated May 12, 2010 (the "Agreement") and the First Amendment entered into on June 9, 2010, Addendum No. 1 entered into on November 10, 2010, and Addendum No. 2 entered into on November 14, 2012; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment originally attached to and made a part of the Agreement and amended on November 14, 2012 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

RAPID RESEARCH, INC.

 Date: 5/8/13
Larry Wepler, Vice President

 Date: 5/10/13

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$200,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Robert W. Baird & Company

&

First Southwest Company, Inc.

FINANCIAL ADVISORY AGREEMENT

This Financial Advisory Agreement (the "Agreement") is made and entered into by and between the West Harris County Regional Water Authority (the "Issuer") and First Southwest Company, LLC and Robert W. Baird & Co. Incorporated (the "Team") effective as of March 5, 2015 (the "Effective Date").

WITNESSETH:

WHEREAS, the Issuer may have under consideration from time to time the authorization and issuance of indebtedness in amounts and forms which cannot presently be determined and, in connection with the authorization, sale, issuance and delivery of such indebtedness, Issuer desires to retain an independent financial advisor; and

WHEREAS, the Issuer desires to obtain the professional services of the Team to advise the Issuer regarding the issuance and sale of certain evidences of indebtedness or debt obligations that may be authorized and issued or otherwise created or assumed by the Issuer (hereinafter referred to collectively as the "Debt Instruments") from time to time during the period in which this Agreement shall be effective; and

WHEREAS, the Team is willing to provide its professional services and its facilities as financial advisor in connection with all programs of financing as may be considered and authorized by Issuer during the period in which this Agreement shall be effective.

NOW, THEREFORE, the Issuer and the Team, in consideration of the mutual covenants and agreements herein contained and other good and valuable consideration, do hereby agree as follows:

**SECTION I
DESCRIPTION OF SERVICES**

Upon the request of an authorized representative of the Issuer, the Team agrees to perform the financial advisory services stated in the following provisions of this Section I; and for having rendered such services, the Issuer agrees to pay to the Team the compensation as provided herein.

A. Financial Planning. At the direction of the Issuer, the Team shall:

1. Survey and Analysis. Conduct a survey of the financial resources of the Issuer to determine the extent of its capacity to authorize, issue, and service any Debt Instruments contemplated. This survey will include an analysis of any existing debt structure as compared with the existing and projected sources of revenues which may be pledged to secure payment of debt service and, where appropriate, will include present and future revenue requirements of the Issuer. In the event revenues of existing or projected facilities operated by the Issuer are to be pledged to repayment of the Debt Instruments then under consideration, the survey will take into account any outstanding indebtedness payable from the revenues thereof, additional revenues to be available from any proposed rate increases and additional revenues, as projected by consulting engineers employed by the Issuer, resulting from improvements to be financed by the Debt Instruments under consideration. The survey provided under this Section 1 may also include, where appropriate, the analysis of the Issuer's rates, the impact of capital contributions to the Issuer by members of the Authority, and the analysis of financing alternatives for payments due the City of Houston or others from the Issuer.

2. Future Financings. Consider and analyze future financing needs as projected by the Issuer's staff and consulting engineers or other experts, if any, employed by the Issuer.

3. Recommendations for Debt Instruments. On the basis of the information developed by the survey described above, and other information and experience available, submit to the Issuer recommendations regarding the Debt Instruments under consideration, including such elements as the date of issue, interest payment dates, schedule of principal maturities, options of prior payment, security provisions, and such other provisions as may be appropriate in order to make the issue attractive to investors while achieving the objectives of the Issuer. All recommendations will be consistent with the goal of designing the Debt Instruments to be sold on terms which are advantageous to the Issuer, including the lowest interest cost consistent with all other considerations.

4. Market Information. Advise the Issuer of our interpretation of current bond market conditions, other related forthcoming bond issues and general information, with economic data, which might normally be expected to influence interest rates or bidding conditions so that the date of sale of the Debt Instruments may be set at a favorable time.

5. Rates. Annual review of rates and provision of recommendations regarding Issuer's Pumpage and Surface Water Fees.

6. Meetings. In the event our attendance is required at a regularly scheduled Issuer meeting, at other public meetings, at meetings of a finance committee or other committee, at a meeting with the City of Houston or any other meeting specifically requested by the Issuer, a member or members of the Team will attend.

B. Debt Management and Financial Implementation. At the direction of Issuer, the Team shall:

1. Method of Sale. Evaluate the particular financing being contemplated, giving consideration to the complexity, market acceptance, rating, size and structure in order to make a recommendation as to an appropriate method of sale, and:

- a. If the Debt Instruments are to be sold by an advertised competitive sale, the Team will:
 - (1) Supervise the sale of the Debt Instruments;

- (2) Disseminate information to prospective bidders, organize such informational meetings as may be necessary, and facilitate prospective bidders' efforts in making timely submission of proper bids;
 - (3) Assist the staff of the Issuer in coordinating the receipt of bids, the safekeeping of good faith checks and the tabulation and comparison of submitted bids; and
 - (4) Advise the Issuer regarding the best bid and provide advice regarding acceptance or rejection of the bids.
- b. If the Debt Instruments are to be sold by negotiated sale, the Team will:
- (1) Recommend for Issuer's final approval and acceptance one or more investment banking firms as managers of an underwriting syndicate for the purpose of negotiating the purchase of the Debt Instruments.
 - (2) Cooperate with and assist any selected managing underwriter and their counsel in connection with their efforts to prepare any Official Statement or Offering Memorandum. The Team will cooperate with and assist the underwriters in the preparation of a bond purchase contract, an underwriters agreement and other related documents. The costs incurred in such efforts, including the printing of the documents, will be paid in accordance with the terms of the Issuer's agreement with the underwriters, but shall not be or become an obligation of the Team, except to the extent specifically provided otherwise in this Agreement or assumed in writing by the Team.
 - (3) Assist the staff of the Issuer in the safekeeping of any good faith checks, to the extent there are any of such, and provide a cost comparison, for both expenses and interest which are suggested by the underwriters, to the then current market.
 - (4) Advise the Issuer as to the fairness of the price offered by the underwriters.

2. Offering Documents. Assist in the preparation and compilation of the notice of sale and bidding instructions, official statement, official bid form and such other documents (the "Offering Documents") as may be required and submit all such documents to the Issuer for examination, approval and certification. The Issuer acknowledges that it is subject to and may be held liable under federal or state securities laws for violations thereof, including misleading or incomplete disclosure in the Offering Documents. After such examination, approval and certification, the Team shall provide the Issuer with a supply of all such documents sufficient to its needs and distribute by mail or, where appropriate, by electronic delivery, sets of the same to prospective purchasers of the Debt Instruments. Also, the Team shall provide copies of the final Official Statement to the purchaser of the Debt Instruments in accordance with the Notice of Sale and Bidding Instructions.

3. Credit Ratings. Make recommendations to the Issuer as to the advisability of obtaining a credit rating or ratings, for the Debt Instruments and/or municipal bond insurance, and, when directed by the Issuer, coordinate the preparation of such information as may be appropriate for submission to the rating agency, or agencies and/or municipal bond insurance providers. In those cases where the advisability of personal presentation of information to the rating agency, or agencies, may be indicated, the Team will arrange for such personal presentations, utilizing such composition of representatives from the Issuer as may be finally approved or directed by the Issuer.
4. Trustee, Paying Agent, Registrar. Upon request, counsel with the Issuer in the selection of a Trustee and/or Paying Agent/Registrar for the Debt Instruments, and assist in the negotiation of agreements pertinent to these services and the fees incident thereto.
5. Financial Publications. When appropriate, advise financial publications of the forthcoming sale of the Debt Instruments and provide them with all pertinent information.
6. Consultants. After consulting with and receiving directions from the Issuer, arrange for such reports and opinions of recognized independent consultants as may be appropriate for the successful marketing of the Debt Instruments.
7. Auditors. In the event formal verification by an independent auditor of any calculations incident to the Debt Instruments is required, make arrangements for such services.
8. Issuer Meetings. Attend meetings of the governing body of the Issuer, its staff, representatives or committees as requested at all times when the Team may be of assistance or service and the subject of financing is to be discussed.
9. Printing. To the extent authorized by the Issuer, coordinate all work incident to printing of the offering documents and the Debt Instruments.
10. Delivery of Debt Instruments. As soon as a bid for the Debt Instruments is accepted by the Issuer, coordinate the efforts of all concerned to the end that the Debt Instruments may be delivered and paid for as expeditiously as possible and assist the Issuer in the preparation or verification of final closing figures incident to the delivery of the Debt Instruments.
11. Debt Service Schedule. After the closing of the sale and delivery of the Debt Instruments, deliver to the Issuer a schedule of annual debt service requirements for the Debt Instruments.

**SECTION II
TERMINATION**

This Agreement may be terminated with or without cause by the Issuer or the Team upon the giving of at least thirty (30) days' prior written notice to the other party of its intention to terminate, specifying in such notice the effective date of such termination. However, it is understood that the Team may not be terminated during the pendency of a competitive bond issue once the Issuer has authorized the advertisement of the sale of such bonds and until the delivery of such bonds. No penalty will be assessed for termination of this Agreement.

**SECTION III
COMPENSATION AND EXPENSE REIMBURSEMENT**

The fees due to the Team for the services set forth and described in Section I, A1 through A6 of this Agreement with respect to financial planning and meetings prior to the issuance of bonds shall be calculated in accordance with the schedule set forth on Appendix A attached hereto. The fees due to the Team for the services set forth and described in Section 1, B1 through B11 of this agreement with respect to the issuance of Debt Instruments shall be calculated in accordance with the schedule set forth on Appendix B attached hereto. Unless specifically provided otherwise in Appendices A and B or in a separate written agreement between Issuer and the Team, such fees, together with any other fees as may have been mutually agreed upon and all expenses for which the Team is entitled to reimbursement, shall become due and payable as shown in Appendices A and B. The Team shall invoice the Issuer for all fees and reimbursable expenses due from the Issuer hereunder, and all invoices shall be signed by First Southwest Company, LLC ("FSC") and Robert W. Baird & Co. Incorporated ("Baird"). In accordance with the terms of this Agreement, the Issuer shall pay each such invoice as follows: (i) for the portion of the invoice attributable to fees, the Issuer shall pay 50% of the fees to FSC and 50% of the fees to Baird, and (ii) for the portion of the invoice attributable to reimbursable expenses, the Issuer shall reimburse FSC or Baird (as applicable) those expenses that the invoice reflects were paid by FSC or Baird (as applicable).

**SECTION IV
MISCELLANEOUS**

1. Choice of Law. This Agreement shall be construed and given effect in accordance with the laws of the State of Texas.
2. Binding Effect; Assignment. This Agreement shall be binding upon and inure to the benefit of the Issuer and the Team, their respective successors and assigns; provided however, neither party hereto may assign or transfer any of its rights or obligations hereunder without the prior written consent of the other party.
3. Entire Agreement. This instrument contains the entire agreement between the parties relating to the rights herein granted and obligations herein assumed. Any oral or written representations or modifications concerning this Agreement shall be of no force or effect except for a subsequent modification in writing signed by all parties hereto.

FIRST SOUTHWEST COMPANY, LLC

By: Hill A. Feinberg
Hill Feinberg
Chairman and Chief Executive Officer

By: Terrell Palmer
Terrell Palmer
Senior Vice President

ROBERT W. BAIRD & CO. INCORPORATED

By: Jay Bartholomew
Jay Bartholomew
Managing Director

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

By: Bruce Parker
Title: PRESIDENT
Date: 3-11-2015

ATTEST:

Dyll

Secretary

APPENDIX A

The fees due the Team for services set forth and described in Section 1, A1 through A6, shall be accrued on an hourly basis as follows:

Senior Vice Presidents/Managing Directors	\$150.00 per hour
Other Vice Presidents/Analysts	\$100.00 per hour
Administrative	\$ 25.00 per hour

With respect to the method of billing used by the Team, if two senior vice presidents and/or managing directors are in attendance or involved in a project, the Issuer will only be invoiced for \$150.00 per hour. However, if a senior vice president and/or managing director and another vice president or analyst is necessary at the attendance of a meeting or involved in a project, the Issuer will be invoiced for both of those professionals.

If the Team seeks payment for any such services, the Team shall invoice the Issuer for any such services on a quarterly basis. Hourly fees shall be due and payable within 60 days of the date of the invoice.

The Issuer shall be responsible for the following expenses, if and when applicable, whether they are charged to the Issuer directly as expenses or charged to the Issuer by the Team as reimbursable expenses:

Travel expenses

Miscellaneous, including copy, delivery, word processing, and phone charges

APPENDIX B

The fees due the Team with respect to the services as set forth in Section I, B1 through B11 for the issuing of Debt Instruments that are bonds are as follows:

	Minimum Fee	\$50,000
First	\$3,000,000:	2.00% of the Principal Amount
\$3,000,001 to	\$5,000,000:	1.50% of the Principal Amount
\$5,000,001 to	\$10,000,000:	1.00% of the Principal Amount
\$10,000,001 to	\$20,000,000:	0.75% of the Principal Amount
\$20,000,001 to	\$30,000,000:	0.50% of the Principal Amount
\$30,000,001 to	\$50,000,000:	0.25% of the Principal Amount
Over	to \$50,000,000:	0.10% of the Principal Amount

The payment of fees described above for financial advisory services shall be contingent upon the delivery of bonds and shall be due at the time that bonds are delivered.

The fees due the Team for Debt Instruments that are not bonds will be mutually determined by the Issuer and Team by separate written agreement.

The Issuer shall be responsible for the following expenses, if and when applicable, whether they are charged to the Issuer directly as expenses or charged to the Issuer by the Team as reimbursable expenses:

Bond counsel, legal or tax opinion, counsel to underwriter, securities or disclosure counsel, or any other counsel

Bond printing

Bond ratings

Credit enhancement

CPA fees for refunding

Official statement preparation and printing and distribution

Paying agent/registrar/trustee

Travel expenses

Publication of Notices in newspapers, financial publications and other publications

Miscellaneous, including copy, delivery, word processing, and phone charges

The payment of reimbursable expenses that the Team has assumed on behalf of the Issuer shall not be contingent upon the delivery of bonds and shall be due at the time that services are rendered and payable upon receipt of an invoice therefor submitted by the Team.

In the event that either party to this contract determines that it is necessary to retain securities or disclosure counsel to review documents and proceedings related to the offering of bonds by the Issuer and to provide other services customarily provided by securities disclosure counsel, such counsel will be retained.

RODS Aerial Mapping, LLC

AGREEMENT FOR AERIAL MAPPING

This Agreement ("Agreement") is made this 12th day of May, 2010, by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and RODS Aerial Mapping, LLC , a Texas limited liability company ("Contractor").

RECITALS

WHEREAS, Contractor owns and operates an aerial mapping firm, the Authority desires to have certain aerial mapping services performed, and Contractor agrees to perform these services for the Authority under terms and conditions set forth in this Agreement; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the mutual promises set forth herein, it is agreed by and between Authority and Contractor as follows:

ARTICLE I Description of Work

Contractor shall perform certain services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority. The Services are further defined in detail in the Contractor proposal included as a part of this Agreement as **Exhibit A**.

During the term of this Agreement, the Authority or Contractor may recommend certain additions or changes to the Services. In such case, the additions or changes shall be submitted to the Authority for approval in the form of a new proposal and fee schedule. All additional services or changes to the Services must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. When any new services or changes to services are approved, another Exhibit shall be added to this Agreement, signed and dated by each party. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit B** and shall be dated when approved by the Authority.

ARTICLE II
Payments to Contractor

The Authority will pay the Contractor for services rendered as outlined in the fee proposal included as part of this Agreement as **Exhibit B**. All fees described in the fee proposal shall include charges for labor, materials, insurance, equipment and any other items required to perform the Services.

Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

ARTICLE III
Relationship of parties

The parties intend that an independent contractor relationship will be created by this Agreement. The Authority is interested only in the results to be achieved and the conduct and control of the work including all safety procedures will lie solely with the Contractor. The means, methods and safety procedures are the sole responsibility of the Contractor. Contractor is not to be considered an agent or employee of the Authority for any purpose and the Contractor will not be entitled to any of the benefits that the Authority provides for its employees, if any. It is understood that the Authority does not agree to use Contractor exclusively. It is further understood that

Contractor is free to contract for similar services to be performed for other companies to the extent that it does not interfere with the performance of this Agreement according to its terms and conditions.

ARTICLE IV

Standard of Care and Regulatory Requirements

Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided, including but not limited to standard ASPRS CLASS I practices and applicable rules and regulations. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

ARTICLE V

Indemnity and Insurance

Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under

this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of B+/VII or better and licensed to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury - \$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE

CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

**ARTICLE VI
Termination of Agreement**

Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

In the event of termination of this Agreement prior to the completion of all services, Authority agrees to pay the Contractor for all work performed based on the percentage of completion. The Contractor agrees to provide, without any obligation to complete, all completed or partially completed deliverables in process on the date of termination upon receipt of payment.

**ARTICLE VII
Document Ownership**

All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

ARTICLE VIII Subcontractors

Contractor hereby represents that flight and aerial photography services will be provided by subcontract entered into by the Contractor. A subcontract for any services to be provided hereunder does not relieve Contractor of any responsibility under this Agreement. All subcontractors shall be required to maintain throughout the term of this Agreement insurance of the types and of the minimum limits set forth in Article V above, as well as aviation insurance required to protect against any claims, losses or damages arising out of or incurred in connection with performance of flight and/or aerial photography services.

Contractor shall require that the Authority and the Authority's agents be added as additional insureds to all coverage required under this Agreement for all liability arising out of any subcontractors' work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of a subcontractor shall also contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority.

Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

ARTICLE IX General Conditions

Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor.

Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will

any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

Notices. All notices to either party by the other required under this Agreement shall be personally delivered or mailed to such party at the following respective address:

CONTRACTOR

(RAM) RODS Aerial Mapping, LLC.
Attn: Terry J. Keeton
6810 Lee Road, Suite 200
Spring, TX 77379

AUTHORITY

West Harris County Regional Water Authority
c/o Allen Boone Humphries Robinson LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027
Attn. Alex Garcia

With a copy to:

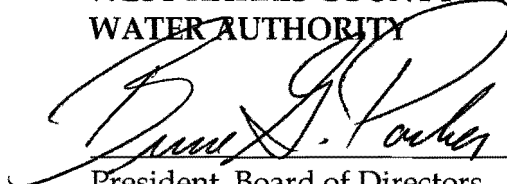
West Harris County Regional Water Authority
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098
Attn. Wayne Ahrens

Execution. The undersigned signatory or signatories for the Contractor and Authority hereby represent and warrant that he or she has full and complete authority to enter into this Agreement on behalf of the party represented, that such Agreement has received the approval necessary from the organization they represent, and to bind such party in accordance with the terms and conditions of this Agreement.

[EXECUTION PAGES FOLLOW]

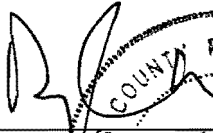
IN WITNESS HEREOF, the Contractor and Authority have executed this Agreement effective

**AUTHORITY
WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY**



President, Board of Directors

ATTEST

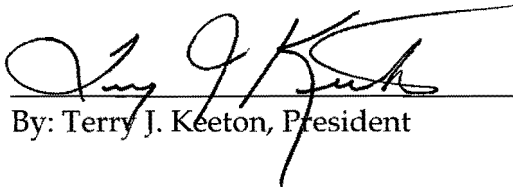


Secretary, Board of Directors

(SEAL)



**CONTRACTOR
RODS AERIAL MAPPING, LLC.**



By: Terry J. Keeton, President

EXHIBIT A: SERVICES TO BE PROVIDED BY CONTRACTOR
EXHIBIT B: FEE PROPOSAL



Exhibit A

Services to be Provided

Limits: **WHCRWA PIPELINE CORRIDOR**
Project Length: 23.9 miles
Units: English

RODS Aerial Mapping, LLC (RAM) greatly appreciates this opportunity to provide you with our proposal to perform professional photogrammetric services as requested. The following proposal is based on our understanding of the scope of work. Our proposed Scope of Services is as follows:

PHOTOGRAMMETRY

All surveying for this project shall be provided in English Units. New project control shall be established for the entire project. The digital orthophoto area shall extend the entire length of the project and shall cover width of the flight.

Project Limits: Rods Aerial Mapping proposes to fly and perform Aerial Mapping for the attached layout of the WHCRWA pipeline corridor. The corridor is divided into three segments: 1A, 1B and 2. Segments 1A and 1B are along a pipeline easement that was previously owned by Exxon. We are requesting a fee proposal for aerial photogrammetry along Segments 1A and 1B combined. All mapping will be developed in accordance with TxDOT specifications. The digital orthophoto area shall extend the entire length of the project and shall cover the width of photography. A 1200 foot wide corridor will be photographed. The mapping will be along a 600 foot wide corridor centered on the existing easement. The corridor is approximately 23.9 miles in total length.

Flight:

Upon notification of target placement, RODS Aerial Mapping will secure the aerial photography utilizing a precision RC 30 Aerial Mapping Camera. The type of aerial film and negative scale to be acquired is as follows:

Color at 1' = 250' scale {1,500' AGL} for digital mapping

Photo Lab:

All aerial film will be processed in a custom lab to ensure the highest quality. The aerial film is checked and edited prior to the production of one set of 9"x9" check prints. Additional prints totaling one (1) set will be made as deliverables to the client

Void and Obscured Areas:

It is understood that these areas will be not mapped under this work order. It is anticipated that the produced mapping files for this project will contain some areas, which are void and/or obscured. It is recommended for these areas to be picked up by field survey.

Aerial Triangulation of Mapping Photography:

RODS Aerial Mapping proposes to utilize analytical triangulation to provide the supplemental control points necessary to set the stereo models in the photogrammetric instruments. The procedure will be completed using a KLT Softcopy Station.

Stereocompilation:

Our stereocompilation department will use the computed horizontal and vertical control point coordinates and elevation values as the control for photogrammetric instruments to collect topographic design maps at 1" =50' scale of the project area. All visible planimetric features interpretable from photography will be plotted. This will include but not limited to: edge of pavement and edge of curbed, buildings, roads, parking lots, sidewalks, concrete pads, drainage structures, meters, valves, fire hydrants, utility poles, manholes and other indications of utility systems, shorelines, ditches, walls, paint lines, fences, signs, railroads, bridges, concrete slabs, trees and other visible features. Vertical 3D DTM data consisting of breaklines and spot elevations will also be plotted. The points are collected as the elevation changes by a pre-specified amount. DTM data will be collected in a manner that will accurately depict the terrain and will meet or exceed specified accuracy requirements for maps with 1' contour intervals. Digital planimetric data will be provided in a specified format. Data will be provided in a AUTOCAD format.

Accuracy:

All digital mapping will comply with national Mapping standards for a 1"=50' with 1' contours. The accuracy of this data presumes that there is no discernable error in the ground control survey. Ninety percent (90%) of the well-defined planimetric features as visible on the aerial photography will be plotted within 0.4' of its true location. The remaining ten percent (10%) of the well-defined planimetric features as visible on the aerial photography will be in error not more than 0.5'. In areas where the ground is obscured we recommend that the client supplement those areas with cross sections or profiles by field survey methods.

CAD Editing:

Our CAD department will perform a series of essential functions on the 1" = 50' scale database. This will include generation of contours for 1 foot. Contours will be generated using terrain-modeling software. A triangular irregular network (Geopak TIN) will be developed using both collected break lines and mass points. Edited contours will be provided in the Microstation format. Our Certified Photogrammetrist will perform a quality control review to assure completeness and review.

Convert the reviewed digital mapping files in model format to finalized files adhering to the Texas Department of Transportation CADD standards. During this process many different actions take place, some of which are listed below:

- Merge mapping-files
- Verify extent of mapping
- Join and concatenate strings
- Check for crossing breaklines / duplicate points
- Close boundaries for obscured areas
- Filter strings for unnecessary vertices
- Process files for dangles, over- and under shoots
- Review planimetry
- Add control points
- Translate according to specs
- Review translated files

DATA PROCESSING

- a) Scan aerial photography at 10 microns to produce a 0.25' ground pixel resolution.
- b) Perform aerial triangulation process to orient individual stereo pairs
- c) QA/QC: Review aerial triangulation report insuring acceptable residuals

DIGITAL ORTHOPHOTOS

- a) Create a digital elevation model covering the project area to support the orthophoto rectification.
- b) Rectify and mosaic digital images to hold a 0.25' ground pixel resolution suitable for a 1"=50' map scale.
- c) QA/QC: Review final rectified images for seamless matching and uniformity

Deliverables for Segments 1A and 1B Mapping:

Digital Mapping Data:

1. Digital planimetric mapping data in 2D AutoCAD format
2. DTM data file in XYZ format
3. Edited 1' contours in 3D AutoCAD format
4. TIN file

Digital Orthophotos:

1. Digital orthophoto images with a 0.25' pixel resolution in Tiff with Tiff world files
2. Reference file for digital orthophotos

● Page 4

Project control and targets will be provided by others.

The schedule will be 70 days from receipt of control from the surveyor. The Aerial mapping firm will give a copy of the panel layout to the surveyor once approved by client.



R.T. Brown, RPLS
Dannenbaum Engineering Corporation
Ph 713 527 6332
R.T.Brown@dannenbaum.com

RE: WHCRWA Pipeline Corridor / Aerial Photogrammetry

Dear Mr. Brown

We are pleased to submit the following proposal for Aerial Mapping services on the above referenced project.

The associated costs for the work are detailed on the attached spreadsheets and totals are as follows:

RAM Services

Flight 2D and 3D mapping & Ortho DEM and 1' contours	\$ 98,457.00
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TOTAL ESTIMATE	\$ 98,457.00
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**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(RODS Aerial Mapping, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and RODS Aerial Mapping, LLC ("Contractor"), to be effective the 8th day of December, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated May 12, 2010 (the "Agreement") to perform certain professional aerial mapping services or such other related services that may be required; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The Contractor proposes to fly and perform aerial mapping for the 5 mile gap between the Segments A and B in accordance with attached Exhibit A in the amount of \$29,840.00.
2. This Addendum amends the contract amount from \$98,457.00 to \$128,297.00.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

RODS AERIAL MAPPING, LLC


Bruce G. Parker, President

Date: 12/8/10


Terry J. Keeton, President

Date: 12-20-10

EXHIBIT A



R.T. Brown, RPLS
Dannenbaum Engineering Corporation
Ph 713 527 6332
R.T.Brown@dannenbaum.com

RE: WHCRWA Pipeline Corridor / Aerial Photogrammetry SEGMENT C Approx 5 miles

Dear Mr. Brown

We are pleased to submit the following proposal for Aerial Mapping services on the above referenced project.

The associated costs for the work are detailed on the attached spreadsheets and totals are as follows:

RAM Services

Flight 2D and 3D mapping & Ortho DEM and 1' contours	\$ 29,840.00
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TOTAL ESTIMATE	\$ 29,840.00
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Services to be Provided

Limits: WHCRWA PIPELINE CORRIDOR SEG C
Project Length: 5 miles
Units: English

RODS Aerial Mapping, LLC (RAM) greatly appreciates this opportunity to provide you with our proposal to perform professional photogrammetric services as requested. The following proposal is based on our understanding of the scope of work. Our proposed Scope of Services is as follows:

PHOTOGRAMMETRY

All surveying for this project shall be provided in English Units. New project control shall be established for the entire project. The digital orthophoto area shall extend the entire length of the project and shall cover width of the flight.

Project Limits: Rods Aerial Mapping proposes to fly and perform Aerial Mapping for the attached layout of the WHCRWA pipeline corridor. The corridor is divided into three segments: A and B which has been flown. There is a 5 mile gap between the two segments. This segment is C and is the limits for this proposal. This is a fee proposal for aerial photogrammetry along Segment C and will tie into the mapping data and the digital orthos of Segments A and B. All mapping will be developed in accordance with TxDOT specifications. The digital orthophoto area shall extend the entire length and orthos for Segment A and B will be done again with Segment C so all tiles will be a seamless mosaic of the complete area.. A 1200 foot wide corridor will be photographed. The mapping will be along a 600 foot wide corridor centered on the existing easement. The corridor is approximately 5 miles in total length.

Flight:

Upon notification of target placement, RODS Aerial Mapping will secure the aerial photography utilizing a precision RC 30 Aerial Mapping Camera. The type of aerial film and negative scale to be acquired is as follows:

Color at 1' = 250' scale {1,500' AGL} for digital mapping

Photo Lab:

All aerial film will be processed in a custom lab to ensure the highest quality. The aerial film is checked and edited prior to the production of one set of 9"x9" check prints. Additional prints totaling one (1) set will be made as deliverables to the client

Void and Obscured Areas:

It is understood that these areas will be not mapped under this work order. It is anticipated that the produced mapping files for this project will contain some areas, which are void and/or obscured. It is recommended for these areas to be picked up by field survey.

Aerial Triangulation of Mapping Photography:

RODS Aerial Mapping proposes to utilize analytical triangulation to provide the supplemental control points necessary to set the stereo models in the photogrammetric instruments. The procedure will be completed using a KLT Softcopy Station.

Stereocompilation:

Our stereocompilation department will use the computed horizontal and vertical control point coordinates and elevation values as the control for photogrammetric instruments to collect topographic design maps at 1" =50' scale of the project area. All visible planimetric features interpretable from photography will be plotted. This will include but not limited to: edge of pavement and edge of curbed, buildings, roads, parking lots, sidewalks, concrete pads, drainage structures, meters, valves, fire hydrants, utility poles, manholes and other indications of utility systems, shorelines, ditches, walls, paint lines, fences, signs, railroads, bridges, concrete slabs, trees and other visible features. Vertical 3D DTM data consisting of breaklines and spot elevations will also be plotted. The points are collected as the elevation changes by a pre-specified amount. DTM data will be collected in a manner that will accurately depict the terrain and will meet or exceed specified accuracy requirements for maps with 1' contour intervals. Digital planimetric data will be provided in a specified format. Data will be provided in a AUTOCAD format.

Accuracy:

All digital mapping will comply with national Mapping standards for a 1"=50' with 1' contours. The accuracy of this data presumes that there is no discernable error in the ground control survey. Ninety percent (90%) of the well-defined planimetric features as visible on the aerial photography will be plotted within 0.4' of its true location. The remaining ten percent (10%) of the well-defined planimetric features as visible on the aerial photography will be in error not more than 0.5'. In areas where the ground is obscured we recommend that the client supplement those areas with cross sections or profiles by field survey methods.

CAD Editing:

Our CAD department will perform a series of essential functions on the 1" = 50' scale database. This will include generation of contours for 1 foot. Contours will be generated using terrain-modeling software. A triangular irregular network (Geopak TIN) will be developed using both collected break lines and mass points. Edited contours will be provided in the Microstation format. Our Certified Photogrammetrist will perform a quality control review to assure completeness and review.

Convert the reviewed digital mapping files in model format to finalized files adhering to the Texas Department of Transportation CADD standards. During this process many different actions take place, some of which are listed below:

- Merge mapping-files
- Verify extent of mapping
- Join and concatenate strings
- Check for crossing breaklines / duplicate points
- Close boundaries for obscured areas
- Filter strings for unnecessary vertices
- Process files for dangles, over- and under shoots
- Review planimetry
- Add control points
- Translate according to specs
- Review translated files

DATA PROCESSING

- a) Scan aerial photography at 10 microns to produce a 0.25' ground pixel resolution.
- b) Perform aerial triangulation process to orient individual stereo pairs
- c) QA/QC: Review aerial triangulation report insuring acceptable residuals

DIGITAL ORTHOPHOTOS

- a) Create a digital elevation model covering the project area to support the orthophoto rectification.
- b) Rectify and mosaic digital images to hold a 0.25' ground pixel resolution suitable for a 1"=50' map scale.
- c) QA/QC: Review final rectified images for seamless matching and uniformity

Deliverables for Segments C Mapping:

Digital Mapping Data:

1. Digital planimetric mapping data in 2D AutoCAD format
2. DTM data file in XYZ format
3. Edited 1' contours in 3D AutoCAD format
4. TIN file

Digital Orthophotos:

1. Digital orthophoto images with a 0.25' pixel resolution in Tiff with Tiff world files

● Page 4

2. Reference file for digital orthophotos

Project control and targets will be provided by others.

The schedule will be 35 days from receipt of control from the surveyor. The Aerial mapping firm will give a copy of the panel layout to the surveyor once approved by client.

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(RODS Aerial Mapping, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and RODS Aerial Mapping, LLC ("Contractor"), to be effective the 14th day of November, 2012.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated May 12, 2010 (the "Agreement") to perform certain professional aerial mapping services or such other related services that may be required; and amended on December 8, 2010 to increase the scope of aerial mapping services and increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The Contractor proposes to fly and perform aerial mapping for approximately ten (10) miles along the Second Source North-South Alignment (Segment 1) in accordance with the attached Exhibit B in the amount of \$64,020.00. The Second Source North-South Alignment is generally parallel with an existing Union Pacific Railroad right-of-way.
2. This Addendum amends the contract amount from \$128,297.00 to \$192,317.00.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

RODS AERIAL MAPPING, LLC


Bruce G. Parker, President

Date: 11/12/2012


Terry J. Keeton, President

Date: 11-21-12

EXHIBIT B



R.T. Brown, RPLS
Dannenbaum Engineering Corporation
Ph 713 527 6332
R.T.Brown@dannenbaum.com

RE: WHCRWA Second Source / Aerial Photogrammetry & Mapping Approx 10 miles

Dear Mr. Brown

We are pleased to submit the following proposal for Aerial Mapping services on the above referenced project.

The associated costs for the work are detailed on the attached spreadsheets and totals are as follows:

RAM Services

Flight 2D and 3D mapping & Ortho DEM and 1' contours	\$ 64,020.00
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TOTAL ESTIMATE	\$ 64,020.00
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Services to be provided

Limits: **WHCROWA SECOND SOURCE NORTH-SOUTH ALIGNMENT**
Project Length: 10 miles
Units: English

RODS Aerial Mapping, LLC (RAM) greatly appreciates this opportunity to provide you with our proposal to perform professional photogrammetric services as requested. The following proposal is based on our understanding of the scope of work. Our proposed Scope of Services is as follows:

PHOTOGRAMMETRY

All surveying for this project shall be provided in English Units. New project control shall be established for the entire project. The digital orthophoto area shall extend the entire length of the project and shall cover width of the flight.

Project Limits: Rods Aerial Mapping proposes to fly and perform Aerial Mapping for the attached layout of the WHCROWA SECOND SOURCE NORTH SOUTH ALIGNMENT corridor. All mapping will be developed in accordance with TxDOT specifications. The digital Orthophotos area shall extend the entire length of the project and shall cover the width of photography. A 1200 foot wide corridor will be photographed. The mapping will be along a 600 foot wide corridor centered on the existing easement. The corridor is approximately 10 miles in total length.

Flight:

Upon notification of target placement, RODS Aerial Mapping will secure the aerial photography utilizing a precision RC 30 Aerial Mapping Camera or a Ultra Cam Digital Camera. The type of aerial film and negative scale to be acquired is as follows:

Color at 1' = 200' scale {1,200' AGL} for digital mapping or

Digital flight RGB with ABGPS and IMU at 3cm GSD

Photo Lab:

All aerial film will be processed in a custom lab to ensure the highest quality. The aerial film is checked and edited prior to the production of one set of 9"x9" check prints. Additional prints totaling one (1) set will be made as deliverables to the client

Void and Obscured Areas:

It is understood that these areas will be not mapped under this work order. It is anticipated that the produced mapping files for this project will contain some areas, which are void and/or obscured. It is recommended for these areas to be picked up by field survey.

Aerial Triangulation of Mapping Photography:

RODS Aerial Mapping proposes to utilize analytical triangulation to provide the supplemental control points necessary to set the stereo models in the photogrammetric instruments. The procedure will be completed using a KLT Softcopy Station.

Stereo compilation:

Our stereo compilation department will use the computed horizontal and vertical control point coordinates and elevation values as the control for photogrammetric instruments to collect topographic design maps at 1" =50' scale of the project area. All visible Planimetric features interpretable from photography will be plotted. This will include but not limited to: edge of pavement and edge of curbed, buildings, roads, parking lots, sidewalks, concrete pads, drainage structures, meters, valves, fire hydrants, utility poles, manholes and other indications of utility systems, shorelines, ditches, walls, paint lines, fences, signs, railroads, bridges, concrete slabs, trees and other visible features. Vertical 3D DTM data consisting of breaklines and spot elevations will also be plotted. The points are collected as the elevation changes by a pre-specified amount. DTM data will be collected in a manner that will accurately depict the terrain and will meet or exceed specified accuracy requirements for maps with 1' contour intervals. Digital Planimetric data will be provided in a specified format. Data will be provided in an AUTOCAD format.

Accuracy:

All digital mapping will comply with national Mapping standards for a 1"=50' with 1' contours. The accuracy of this data presumes that there is no discernable error in the ground control survey. Ninety percent (90%) of the well-defined Planimetric features as visible on the aerial photography will be plotted within 0.4' of its true location. The remaining ten percent (10%) of the well-defined Planimetric features as visible on the aerial photography will be in error not more than 0.5'. In areas where the ground is obscured we recommend that the client supplement those areas with cross sections or profiles by field survey methods.

CAD Editing:

Our CAD department will perform a series of essential functions on the 1" = 50' scale database. This will include generation of contours for 1 foot. Contours will be generated using terrain-modeling software. A triangular irregular network (Geopak TIN) will be developed using both collected break lines and mass points. Edited contours will be provided in the Microstation format. Our Certified Photogrammetrist will perform a quality control review to assure completeness and review.

Convert the reviewed digital mapping files in model format to finalized files adhering to the Texas Department of Transportation CADD standards. During this process many different actions take place, some of which are listed below:

- Merge mapping-files
- Verify extend of mapping
- Join and concatenate strings
- Check for crossing breaklines / duplicate points
- Close boundaries for obscured areas
- Filter strings for unnecessary vertices
- Process files for dangles, over- and under shoots
- Review planimetry
- Add control points
- Translate according to specs
- Review translated files

DATA PROCESSING

- a) Scan aerial photography at 10 microns to produce a 0.25' ground pixel resolution.
- b) Perform aerial triangulation process to orient individual stereo pairs
- c) QA/QC: Review aerial triangulation report insuring acceptable residuals

DIGITAL ORTHOPHOTOS

- a) Create a digital elevation model covering the project area to support the orthophoto rectification.
- b) Rectify and mosaic digital images to hold a 0.25' ground pixel resolution suitable for a 1"=50' map scale.
- c) QA/QC: Review final rectified images for seamless matching and uniformity

Deliverables for Segments:

Digital Mapping Data:

1. Digital Planimetric mapping data in 2D AutoCAD format
2. DTM data file in XYZ format
3. Edited 1' contours in 3D AutoCAD format
4. TIN file

Digital Orthophotos:

1. Digital orthophoto images with a 0.25' pixel resolution in Tiff with Tiff world files
2. Reference file for digital Orthophotos

Project control and targets will be provided by others.

The schedule will be 90 days from receipt of control from the surveyor.

**ADDENDUM No. 3 TO AGREEMENT FOR PROFESSIONAL SERVICES
(RODS Aerial Mapping, LLC)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and RODS Aerial Mapping, LLC ("Contractor"), to be effective the 12th day of March, 2014.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated May 12, 2010 (the "Agreement") to perform certain professional aerial mapping services or such other related services that may be required; and amended by Addendum No. 1 on December 8, 2010 and Addendum No. 2 on November 14, 2012 to increase the scope of aerial mapping services and increase the potential maximum amount that the Contractor may earn for surveying services; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The Contractor proposes to fly and perform aerial mapping for approximately four (4) miles along the Second Source North-South Project (Segment 1) – Little York Road Alignment in accordance with the attached Exhibit B in the amount of \$29,829.00. The Little York Road Alignment extends north, generally parallel with Willie Street from Langley Road to Little York Road; then east parallel with Little York Road from Willie Street to an existing Union Pacific Railroad right-of-way.
2. This Addendum amends the contract amount from \$192,317.00 to \$222,146.00.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

RODS AERIAL MAPPING, LLC


Bruce G. Parker, President

Date: 3/12/14


Terry J. Keeton, President

Date: 3-4-14

EXHIBIT B



R.T. Brown, RPLS
Dannenbaum Engineering Corporation
Ph 713 527 6332
R.T.Brown@dannenbaum.com

RE: WHCRWA Second Source Little York / Aerial Photogrammetry & Mapping Approx 4 miles

Dear Mr. Brown

We are pleased to submit the following proposal for Aerial Mapping services on the above referenced project. The associated costs for the work are detailed on the attached spreadsheets and totals are as follows:

RAM Services

Flight 2D and 3D mapping & Ortho DEM and 1' contours	\$ 29,829.00.00
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TOTAL ESTIMATE	\$ 29,829.00
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EXHIBIT B



Services to be provided

Limits: WHCRWA SECOND SOURCE Little York
Project Length: 4 miles
Units: English

RODS Aerial Mapping, LLC (RAM) greatly appreciates this opportunity to provide you with our proposal to perform professional photogrammetric services as requested. The following proposal is based on our understanding of the scope of work. Our proposed Scope of Services is as follows:

PHOTOGRAMMETRY

All surveying for this project shall be provided in English Units. New project control shall be established for the entire project. The digital orthophoto area shall extend the entire length of the project and shall cover width of the flight.

Project Limits: Rods Aerial Mapping proposes to fly and perform Aerial Mapping for the attached layout of the WHCRWA SECOND SOURCE Little York Addition. All mapping will be developed in accordance with TxDOT specifications. The digital Orthophotos area shall extend the entire length of the project and shall cover the width of photography. A 1200 foot wide corridor will be photographed. The mapping will be along a 600 foot wide corridor centered on the existing easement. The corridor is approximately 4 miles in total length.

Flight:

Upon notification of target placement, RODS Aerial Mapping will secure the aerial photography utilizing a precision RC 30 Aerial Mapping Camera or a Ultra Cam Digital Camera. The type of aerial film and negative scale to be acquired is as follows:

Color at 1' = 200' scale {1,200' AGL} for digital mapping or

Digital flight RGB with ABGPS and IMU at 3cm GSD

Void and Obscured Areas:

It is understood that these areas will be not mapped under this work order. It is anticipated that the produced mapping files for this project will contain some areas, which are void and/or obscured. It is recommended for these areas to be picked up by field survey.

Aerial Triangulation of Mapping Photography:

RODS Aerial Mapping proposes to utilize analytical triangulation to provide the supplemental control points necessary to set the stereo models in the photogrammetric instruments. The procedure will be completed using a KLT Softcopy Station.

Stereo compilation:

Our stereo compilation department will use the computed horizontal and vertical control point coordinates and elevation values as the control for photogrammetric instruments to collect topographic design maps at 1" =50' scale of the project area. All visible Planimetric features interpretable from photography will be plotted. This will include but not limited to: edge of pavement and edge of curbed, buildings, roads, parking lots, sidewalks, concrete pads, drainage structures, meters, valves, fire hydrants, utility poles, manholes and other indications of utility systems, shorelines, ditches, walls, paint lines, fences, signs, railroads, bridges, concrete slabs, trees and other visible features. Vertical 3D DTM data consisting of breaklines and spot elevations will also be plotted. The points are collected as the elevation changes by a pre-specified amount. DTM data will be collected in a manner that will accurately depict the terrain and will meet or exceed specified accuracy requirements for maps with 1' contour intervals. Digital Planimetric data will be provided in a specified format. Data will be provided in an AUTOCAD format.

Accuracy:

All digital mapping will comply with national Mapping standards for a 1"=50' with 1' contours. The accuracy of this data presumes that there is no discernable error in the ground control survey. Ninety percent (90%) of the well-defined Planimetric features as visible on the aerial photography will be plotted within 0.4' of its true location. The remaining ten percent (10%) of the well-defined Planimetric features as visible on the aerial photography will be in error not more than 0.5'. In areas where the ground is obscured we recommend that the client supplement those areas with cross sections or profiles by field survey methods.

CAD Editing:

Our CAD department will perform a series of essential functions on the 1" = 50' scale database. This will include generation of contours for 1 foot. Contours will be generated using terrain-modeling software. A triangular irregular network (Geopak TIN) will be developed using both collected break lines and mass points. Edited contours will be provided in the Microstation format. Our Certified Photogrammetrist will perform a quality control review to assure completeness and review.

Convert the reviewed digital mapping files in model format to finalized files adhering to the Texas Department of Transportation CADD standards. During this process many different actions take place, some of which are listed below:

- Merge mapping-files

● Page 3

- Verify extent of mapping
- Join and concatenate strings
- Check for crossing breaklines / duplicate points
- Close boundaries for obscured areas
- Filter strings for unnecessary vertices
- Process files for dangles, over- and under shoots
- Review planimetry
- Add control points
- Translate according to specs
- Review translated files

DATA PROCESSING

- a) Scan aerial photography at 10 microns to produce a 0.25' ground pixel resolution.
- b) Perform aerial triangulation process to orient individual stereo pairs
- c) QA/QC: Review aerial triangulation report insuring acceptable residuals

DIGITAL ORTHOPHOTOS

- a) Create a digital elevation model covering the project area to support the orthophoto rectification.
- b) Rectify and mosaic digital images to hold a 0.25' ground pixel resolution suitable for a 1"=50' map scale.
- c) QA/QC: Review final rectified images for seamless matching and uniformity

Deliverables for Segments:

Digital Mapping Data:

1. Digital Planimetric mapping data in 2D AutoCAD format
2. DTM data file in XYZ format and an AutoCAD format

Digital Orthophotos:

1. Digital orthophoto images with a 0.25' pixel resolution in Tiff with Tiff world files
2. Reference file for digital Orthophotos

Project control and targets will be provided by others.

The schedule will be 30 days from receipt of control from the surveyor.

S & V Surveying, Inc.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into November 9, 2011, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and S & V Surveying, Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I. SERVICES

Section 1.01. Services. Contractor shall perform certain services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall

include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.02. Basis of Payment. All Work Authorizations shall specify one of the payment options listed below. The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000.00, unless otherwise amended.

Option 1 - Lump Sum Basis. The lump sum shall be equal to the maximum amount payable and based on an approved level of effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 - Specified Rate Basis. The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, **Exhibit B**. Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Section 1.04. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation

3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

III. GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000"

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be

endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over

Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry

out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.


Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

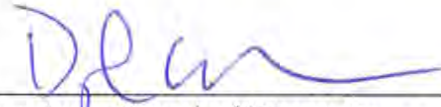
[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY



President, Board of Directors

ATTEST



Secretary, Board of Directors

(SEAL)

CONTRACTOR

By: 

Name: Keith A. Steffek

Title: President, S & V Surveying, Inc.



Professional Land Surveyors
 TBPLS Firm Reg. No. 100247-00

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
 HOURLY RATES AND REIMBURSABLE CHARGES - 2012**

HOURLY RATES

2 man party	\$120.00 / hr.
3 man party	\$145.00 / hr.
4 man party	\$160.00 / hr.
Field Supervisor	\$ 75.00 / hr.
Flag Person	\$ 30.00 / hr.
Survey Manager / RPLS	\$115.00 / hr.
Project Surveyor / RPLS	\$108.00 / hr.
Principal	\$150.00 / hr.
Senior Survey Technician	\$ 85.00 / hr.
Survey Technician	\$ 75.00 / hr.
CAD Technician	\$ 65.00 / hr.
Clerical	\$ 54.00 / hr.

REIMBURSABLE CHARGES

Blueprinting, Copying, Deliveries, Materials, Filing Fees, Equipment and Outside Professional Services	Cost plus 10%
All Terrain Vehicle	\$100.00 / Day
Mileage	\$ 0.55 / Mile
GPS Equipment (Two Receivers)	\$300.00 / Day
Additional Receivers	\$100.00 / Day / Each
Overtime Rates (authorized)	1.5 times standard rate

All field crew time subject to 4 hour minimum.

Non-labor expenses are billed at invoice cost plus 10% service charge.

On projects that take personnel out of town on an over night basis, per diem charges for food and lodging are billed at cost plus 10%.

Daily transportation charges of \$0.55 per mile are computed for mileage from the survey office to the project site and back to the office.

Sales tax added to boundary related services, per State law.

This schedule is subject to annual adjustment and rates are effective Jan. 1, 2012.

DESCRIPTIONS (Continued from Page 1)

Blanket waiver of subrogation coverage is subject to a written contract between the Named Insured and certificate holder that requires such status.

This coverage is primary and non-contributory.

CERTIFICATE ADDENDUM

DATE ISSUED
11/2/2011

NAMED INSURED:

S&V Surveying, Inc.
20111 Krahn Road
Spring TX 77388

CERTIFICATE HOLDER:

West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, TX 77002

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, WE WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER(S) NAMED ON THIS CERTIFICATE, EXCEPT FOR NON-PAYMENT OF PREMIUM OR ANY OTHER CIRCUMSTANCE PERMITTED BY STATE LAW OR POLICY CONDITIONS. FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON US.

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(S & V SURVEYING INC.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and S & V Surveying Inc. ("Contractor"), to be effective the 10th day of April, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Surveying Services, dated November 9, 2011 (the "Agreement") to perform certain professional surveying services or such other related services that may be required; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

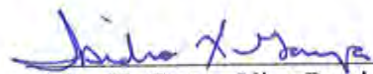
1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

S & V SURVEYING, INC.


Bruce G. Parker, President

Date: 4/10/2013


Isidro X. Garza, Vice President

Date: 04/12/13

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$400,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Severn Trent Environmental Services, Inc.

PROFESSIONAL SERVICES AGREEMENT

THE STATE OF TEXAS §
COUNTIES OF HARRIS & §
FORT BEND

KNOW ALL MEN BY THESE PRESENTS THAT:

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is entered into and effective as of the 13th day of April, 2015, by and between WEST HARRIS COUNTY REGIONAL WATER AUTHORITY ("Authority"), an Authority located in Harris County and Fort Bend County Texas, and acting by and through its duly authorized Board of Directors and SEVERN TRENT ENVIRONMENTAL SERVICES, INC. ("STES"), a Texas corporation with offices located in Houston, Harris County, Texas.

WITNESSETH:

- 1. The Authority currently owns a water delivery system (collectively, the "System") which serves certain political subdivisions within the boundaries and/or within the groundwater reduction plan of the Authority.
2. STES currently provides operations, maintenance, and management services for the System pursuant to that certain Operation and Maintenance Agreement dated December 12, 2007 by and between the Authority and STES (as successor to SWWC Services Inc. under that certain Assignment and Assumption Agreement dated March 1, 2013 by and between the Authority and STES (the "Original Agreement").
3. The Authority and STES are desirous of entering into a new agreement to update certain provisions of the Original Agreement and to revise the fee schedule contained therein.
4. The Authority and STES hereby mutually agree to supersede and replace the Original Agreement as of the date hereof and to enter into a new agreement pursuant to which STES will operate, maintain and manage the System.

NOW, THEREFORE, FOR AND IN CONSIDERATION OF THE promises, covenants and considerations hereinafter set forth, the sufficiency and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

I. REPLACEMENT OF ORIGINAL AGREEMENT

The Original Agreement, in its entirety, is hereby superseded by and replaced by this Agreement.

II. SERVICES

A. ADMINISTRATIVE SERVICES

The following administrative services shall be provided at no additional cost to the Authority.

- 1. Organization. STES shall administer the work, activities, and operations of the System in accordance with the items in this Agreement.
2. Personnel. STES shall provide competent, trained personnel. System supervisors and/or operators shall be licensed or certified by the appropriate state governmental authority. Personnel shall be trained to be professional and courteous in dealing directly with the Authority's customers.

3. Training. STES shall maintain a continuing education program for all employees. Specifically, all System supervisors and operators shall maintain the adequate training necessary to operate the Authority's System in a professional manner with the care and skill ordinarily used by members of the operating profession, practicing under similar conditions. At a minimum, all System supervisors and operators shall attend a state certified or approved water training course at least once each year or otherwise receive a minimum of 20 hours of training each year, to the greatest extent practicable.
4. Administration. STES shall:
 - a. Inventory and maintain a listing of all of the System equipment and spare parts including manufacturer's model and serial numbers, motor frame numbers and other such data as required to provide immediate information for the Scheduled Maintenance Program and repair or replacement of the System equipment.
 - b. Assist in the preparation of an annual operating budget for the Authority.
5. Maintenance Scheduling. STES shall provide a Scheduled Maintenance Program for the System equipment. Developed by STES, this computer program utilizes equipment manufacturer's recommendations and the System equipment inventory to generate maintenance schedules. The resulting monthly schedule lists the specific System equipment to be serviced, the detailed service procedure, specified oil or grease to be used, and a history of service, maintenance and replacements. STES must coordinate with the Authority's GIS Database System for all service, maintenance, and replacements.
6. 24 Hour Service. STES shall maintain 24 hour telephone and dispatch service with qualified personnel to respond to the System's customer problems and equipment malfunctions. The Authority's dedicated Emergency telephone number at the Service Center shall be clearly displayed on all Authority signage. The Service Center shall provide a communications interface between the Authority, the Authority's customers, and STES management/field personnel. The Service Center's personnel shall also have a complete working knowledge of the Authority's SCADA system. They are to monitor the system and make required contact to operational personnel in the event that an alarm or problem is indicated from the SCADA system. The Service Center shall, to the extent reasonably possible, continue to operate during natural disasters. STES shall provide 1 dedicated voice line for the Emergency telephone number in the name of and dedicated to the Authority. The Authority provides 2 DSL lines and cell service for its SCADA system and has provided a computer system to monitor its SCADA system located at STES's Service Center. Such lines, services, and equipment are owned by and belong to the Authority.
7. Employee Identification. STES operating and maintenance employees shall be readily identifiable to the Authority's customers and residents by distinctive clothing. Service vehicles shall have the STES logo prominently displayed.
8. Coordination with Consultants. STES shall coordinate with the Authority's other consultants, such as attorneys, engineers, auditors, bookkeepers, tax assessors, and financial advisors as necessary to maintain efficient operation of the System.

9. Inquiries and Correspondence. STES shall respond to routine inquiries or correspondence from the Authority's directors, customers or consultants in a prompt, professional manner.
10. Authority Meetings. STES' Project Manager or Field Coordinator will attend regularly scheduled meetings and special meetings which have an agenda item relating to the System's operations. The STES representative will have direct knowledge of the System's ongoing operations or agenda items as appropriate.
11. Community Relations. Upon adequate notice, STES shall provide speakers qualified to make presentations to citizen groups, civic associations, and schools within the Authority. Subjects may include, but are not limited to, utility regulations, water facilities operations, effluent reuse projects, and the Authority's budgeting and operations functions. This does NOT include communication with news outlets, which will be directed to representatives designated by the Authority in accordance with the Authority's Crisis Management Media Relations Plan, as such may be amended from time-to-time.
12. Customer Relations. STES shall render reasonable assistance in the promotion of good relations with the Authority's customers which the Authority serves and residents located within the Authority's boundaries.
13. Authority Funds. Any funds collected by STES on behalf of the Authority shall be deposited in the Authority's Operating Fund or Account on a daily basis or as may otherwise be directed by the Authority. All such funds are public funds and may be pledged to the payment of debts of the Authority; therefore, STES agrees that all such funds shall be deposited as provided above without setoff, counterclaim, abatement, suspension, or diminution. STES will maintain Commercial Crime insurance as set forth in Section IV of this Agreement to protect the Authority against theft of Authority funds by STES employees not in collusion with an Authority employee.

B. BASIC SERVICES

1. System Operations. STES shall provide personnel, vehicles and hand tools necessary for the operation of the System.
2. Minimum Staffing. STES shall make available the following personnel to provide service to the System during Standard Operational Hours (6:00 a.m. until 8:30 p.m. Monday through Friday except for STES recognized holidays):
 - (a) Contract Manager
 - (b) Certified Personnel
 - (i) One supervisor with at least a "B" Water Certification
 - (ii) One operator with at least a "B" Water Certification
 - (iii) Three operators with at least a "C" Water Certification

STES shall staff the System during Standard Operations Hours with appropriate operational personnel. For Saturdays, Sundays, and any holidays, STES shall provide personnel for basic check-ins once a day at the Authority's Pump Station No. 1 under Base Services. (Should on-site, dedicated staff at Pump Station No. 1 be required by the Authority, the parties hereto will attempt to negotiate an appropriate increase in fees for STES hereunder). Staff shall be responsible for daily operational activities, first responder to all calls, plus any repairs that can be performed utilizing standard equipment, tools and materials in operational staff vehicle. If, in the opinion of STES, the staff (as described above) cannot perform repairs utilizing standard equipment, tools and materials, STES shall contact the Authority's "Program Manager," currently Dannenbaum Engineering Corp. If additional crews, technicians, equipment, materials, or expertise are required to complete the repair, the costs associated with the additional personnel, equipment and materials shall be billed to the Authority at the Standard Rates described in Attachment "A", and such costs shall be considered Maintenance, Repair and Replacement Services. STES shall provide personnel necessary to coordinate with contractors working directly for the Authority related to the SCADA system at the Authority's Pump Station No. 1 and at remote water plants, onsite mowing at Pump Station No. 1 and cathodic protection of facilities.

3. Meter Reading. STES shall read the following meters:
 - a. Groundwater well meters for water wells subject to the Authority's Groundwater Reduction Plan ("GRP Wells") shall be read annually, as directed by the Authority.
 - b. Surface water meters for surface water delivered by the Authority shall be read weekly.
 - c. Surface water meters for surface water delivered by the City of Houston to the Authority shall be read daily.
 - d. Any other meters subject to alternative water use credit agreements with the Authority shall be read annually.

The parties agree that STES will read such meters according to the frequency described above, unless requested otherwise by the Authority. STES agrees to read any meters more frequently as requested by the Authority at the rates for personnel, equipment, materials and sub-contract provisions reflected in Attachment "A".

4. Postage and Billing Stock. The costs associated with postage, handling of monthly customer billings, operational report scanning, copies, and faxes are included in the Base Operations Fee. If the rate for postage changes after the beginning of the Contract Term, the Authority agrees to pay STES the additional amounts for said postage equal to the amount of the increase in the applicable U.S. postal charge. Special mailings are not included in the Base Fee and shall be priced on a case-by-case basis.

5. System Inspection. STES shall monitor the System facilities as required by state regulations.

STES employees, whenever they are within the Authority boundaries or on the Authority's real property interests, shall monitor the System in order to observe condition of system appurtenances, leaks, defects, damage, and be alert for missing System equipment, including pipeline markers. STES employees shall monitor WHCRWA property and easements to observe for dumping of trash and encroachments. Upon request of WHCRWA, STES shall monitor property outside the Authority's boundaries at the rates for personnel, equipment, materials and sub-contract provisions reflected in Attachment "A".

6. Water Distribution Valve Inspection Program. STES shall inspect and exercise each water distribution valve not less than once per year according to Attachment C and submit a written report of each inspection to the Authority. Any repairs necessary shall be considered non-emergency repairs cover by Section D. 3.
7. Fuel and Bulk Chemicals. STES shall arrange for an adequate inventory and supply of chlorine and other bulk chemicals required to operate the System, and shall arrange for diesel fuel required to operate the Authority's generators. Costs for fuel and bulk chemicals shall be billed directly to the Authority, without a mark-up.
8. Operating Log. STES shall maintain an operating log at the System Pump Station which may be inspected by the Authority at any time. The logs shall include the following:
 - a. Flow records.
 - b. Notations recording repairs or replacements performed.
 - c. Such other matters within the scope of STES' work which the Authority may reasonably request.
 - d. Any information required by regulatory entities.
9. Monthly Operations Report. STES shall render a monthly operations report, as requested by the Authority, which shall include the following information:
 - a. Correspondence to regulatory authorities as appropriate.
 - b. Daily or monthly water production flow data.
 - c. Total water produced and/or purchased.
 - d. Total water accounted for.
 - e. New MUD conversions and water used for construction flushing.
 - f. Water sold/delivered by MUD, including information regarding water plants not taking water (offline) because of maintenance by the Authority or MUD;
 - g. Monthly schedule of maintenance items;

- h. Data related to emergency generators to include, by individual generator, run time per event and cumulative annual, date, reason for use because of emergency power loss, readiness testing, or demand response.
- i. Records regarding equipment repairs and replacements.
- j. Abnormal change in condition of the System equipment, needed repairs and recommendations as to the repair of such equipment.
- k. Insurance claims filed on behalf of the Authority.
- l. Damage to the System and the possible causes thereof. In instances where the damage may be attributable to a contractor, builder, utility company or other entity, STES shall (on behalf of the Authority) back charge the party responsible for such damage, including administrative costs thereof, and include such information in the monthly report.
- m. Informational reports relating to compliance status of the System.
- n. A certification of the date required bacteriological tests were performed.
- o. Statistics relating to overall System operations, as appropriate.
- p. Summary and details of monthly invoices to the Authority separated into specific budget categories.
- q. Operations and maintenance cost data to bookkeeper for use in budget comparisons.
- r. Information and reports as may be required for audit of the Authority's service accounts.

STES shall keep details of the above reports and such reports will be available to provide a clear audit trail of the System water service transactions.

- 10. Regulatory Reports. STES shall prepare and submit routine monthly reports required by regulatory authorities and authorized by the Authority to receive such reports.
- 11. Operational Budgeting. STES shall prepare an operations budget for review and approval by the Authority each year as part of the Authority's annual budgeting process. STES shall work with the Authority's bookkeeper or accountant to review and report the Authority's budget performance at least quarterly throughout the Authority's fiscal year.
- 12. Basic Services Fees. The Authority agrees to compensate STES for the performance of these Basic Services at the rates set forth in the Schedule of Standard Rates, a copy of which is included hereto as Attachment "A".

C. INSPECTION SERVICES

- 1. Meter Testing. STES shall perform or have performed flow accuracy tests on all the Authority's meters. Each meter shall be inspected once per year or as required by the Authority with subsequent reports submitted to the Authority. All necessary repairs shall be considered Non-Emergency repairs covered by Section D. 3.

2. Non-Authority Facility Inspections. STES shall perform such non-Authority Facility inspections as the Authority may request, or which STES with prior approval by the Authority, believes is necessary to protect the integrity of the System and maintain the health and safety of the general public. In the event STES believes such an inspection is necessary, STES shall notify the Authority's Program Manager immediately. The Authority shall pay STES for such services per the rates for personnel and equipment in Attachment "A" and the materials and sub-contract provisions reflected in Attachment "A".

D. MAINTENANCE, REPAIR AND REPLACEMENT SERVICES

The labor and equipment fees for the following services, where applicable, are set forth in the Schedule of Standard Rates, a copy of which is included hereto as Attachment "A".

1. Maintenance. STES shall provide personnel, tools and equipment to perform maintenance on the System facilities and equipment as authorized by the Authority. Maintenance shall include, but not be limited to, the following:
 - a. Maintenance or replacement of pumps, motors, valves and other equipment or facilities.
 - b. Calibration and servicing of instrumentation, control systems and other equipment.
 - c. Flow accuracy tests shall be performed on all Authority's meters. Each meter shall be inspected once per year or as required by the Authority with subsequent reports submitted to the Authority. All necessary repairs shall be considered Non-Emergency repairs.
 - d. Other maintenance as necessary, which requires special skills and/or tools, performed in conformance with equipment manufacturer's recommendations to maintain warranties and to extend the useful life of the equipment.
 - e. Responding to utility location requests in accordance with Texas One-Call statute. STES shall send field personnel to the excavation site to mark the approximate location of the Authority's facilities.
 - f. Replacement of missing pipeline markers.
 - g. Landscape services, including mowing, requested by the Authority.
2. Emergency Repair. STES shall maintain personnel and equipment for emergency repairs 24 hours per day, seven days per week and 365 days per year. Emergencies shall include, but not be limited to, a hazardous condition, water leaks, water line breaks, loss of water pressure, degradation of water quality, water plant malfunctions that could result in regulatory or permit excursions, any response requested by the Authority or its representative or response to resident concerns when necessary to maintain good Authority relations. STES shall contact the (i) Program Manager and (ii) the President, or, if unavailable, the Vice-President, or, if unavailable, any other Board member, to notify the Authority of the Emergency situation. The fact that said notification cannot be made in a timely manner shall neither relieve STES of its responsibility to perform the required repair, nor limit the cost of repairs billed to the Authority in accordance with the pricing covenants of this Contract.

3. Non-Emergency Repairs. STES shall perform Non-Emergency Repairs during Standard Operational Hours. STES shall schedule such Non-Emergency repairs on a first-call, first-serve basis, unless otherwise directed by an authorized Authority Representative. STES must receive approval from the Authority Representative prior to performing Non-Emergency Repairs when the estimated cost of said repair is estimated to exceed the dollar amount specified as "Authorized Maintenance Level" in Attachment A.
4. Replacement. STES shall use a reasonable degree of care with respect to replacement of equipment or facilities but shall not be responsible to the Authority for any guarantees or warranties offered by others in connection with such equipment or facilities. STES agrees to make reasonable efforts to obtain for and assign to the Authority the normal guarantees or warranties associated with any replacement equipment.
5. Routine Operational Bacteriological Analysis. STES shall perform, or have performed, the routine collection of water samples, to an authorized Texas Department of Health laboratory in compliance with the applicable Texas Commission on Environmental Quality (TCEQ) rules and regulations. All test results shall be kept as part of the Authority's records. The Authority shall reimburse STES for the actual cost of these tests.
6. Additional Bacteriological Analysis. Where the Authority is required by the TCEQ regulations to take and submit additional Bacteriological samples STES shall perform any and all necessary testing. All test results shall be kept as part of the Authority's records. The Authority shall reimburse STES for the actual cost of these tests.
7. Other Laboratory Testing. STES shall perform other tests, including but not limited to, those required or requested by the Authority, TCEQ, EPA or any other governmental agency with jurisdiction over the System. All test results shall be kept as part of the Authority's records. The Authority shall reimburse STES for the actual costs incurred by STES for the sampling and laboratory analyses.
8. Expendable Items. STES shall, at the Authority's expense, replace those minor items expended in the daily operation at the Authority's Pump Station(s). Those items are of the general type as follows: brooms, mops, dip nets, rakes, shovels, trash cans, hoses, nozzles, padlocks, and other such similar items used at the Authority's Pump Station(s).
9. Materials and Supplies. In accordance with Attachment A, STES shall be paid for all materials and supplies used to provide services under this Agreement.

E. SUBCONTRACT SERVICES

1. STES Subcontractors. STES may require utilizing sub-contractors for specialized repairs. Such STES subcontractors shall be considered, for the purpose of this Agreement, as employees of STES with STES retaining responsibility for such subcontractors' performance. STES shall not apply a mark-up on subcontractor services for landscape services (including mowing), or providing chemicals or diesel fuel.
2. Authority Subcontractors. The Authority reserves the right to directly employ subcontractors for certain maintenance work within the System. STES shall receive no supervision and inspection fees, and shall not be responsible in any way for services performed by subcontractors employed or paid directly by the Authority.

III. PAYMENT

STES shall submit statements and/or invoices for services to the Authority on a monthly basis. The Authority shall pay such statements and/or invoices within forty-five (45) days of receipt. The Authority agrees to pay interest at the rate specified in the Prompt Payment Act, (Chapter 2251, Texas Government Code) to STES for all amounts unpaid after forty-five (45) days. Interest shall accrue from the 46th day following receipt of statements and/or invoices until the date payment in full is made. Items awaiting backup data shall be excluded from interest charges.

IV. INSURANCE AND INDEMNIFICATION

A. INSURANCE

Insurance Requirements. STES shall procure and maintain throughout the term of this Agreement, at its sole cost and expense, insurance of the types and in the minimum amounts set forth in Attachment "D", which is hereby incorporated for all purposes. Upon execution of this Agreement, STES shall furnish certificates of insurance and copies of required endorsements to the Authority evidencing compliance with the insurance requirements hereof. Certificates shall list STES, the name of the insurance company, the policy number, the term of coverage, and the limits of coverage. STES, and not the Authority, shall be responsible for paying the premiums and deductibles, if any, that may from time to time be due under the required insurance policies. STES, at its sole discretion, may purchase additional limits of insurance and coverage it deems necessary or prudent to protect itself and the work or operations to be performed under this Agreement. The included insurance requirements are separate from and independent of STES's other obligations under this Agreement. STES will provide the Authority with an updated insurance certificate evidencing continued compliance with the insurance requirements set forth herein annually within 30 days of such renewal or at any other time as may be requested by the Authority.

Lapse of or cancellation of insurance, however caused, shall be deemed breach of this Agreement. In the event that the required aggregate limits of liability of any insurance required hereunder are reduced or impaired by 50% or more, then STES shall give the Authority notice of the impairment and promptly cause such impaired limits to be reinstated to the required limits. In the event of lapse or cancellation of any required insurance it is hereafter the specific responsibility of STES to notify the Authority immediately and to immediately reinstate the lapsed or cancelled insurance or to purchase replacement insurance that meets the requirements of this Agreement. STES's failure to provide insurance as required hereunder, or STES's failure to supply the required evidence of insurance, or the failure of the Authority to require evidence of insurance or to notify STES of any breach by STES of the requirements of these provisions or deficiencies in the insurance obtained, shall not constitute a waiver by the Authority of any of the these insurance requirements, or a waiver of any other terms and conditions of this agreement, including STES's obligations to defend, indemnify, and hold harmless the Authority (including subsidiaries and affiliates), as required herein.

B. INDEMNIFICATION

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, STES, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN AGREEMENT, TORT, OR OTHERWISE, WHICH ARISES FROM STES'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY STES OR ANY SUBCONTRACTOR OR AGENT OF STES.

Provided that (a) this Agreement is in force when the violation(s) below occur, (b) the System meets the Texas Commission on Environmental Quality's (the "Commission's") design criteria, (c) there are no events of Force Majeure, and (d) the Authority has not rejected or otherwise failed to approve any of STES's operational or capital improvement recommendations which would have prevented the violation, STES will pay any and all fines or penalties against the Authority as a result of actions taken by the Commission or the Environmental Protection Agency. Prior to settlement and payment of any such fines or penalties, STES reserves the right to contest all actions or proceedings for violations through administrative procedures or otherwise; provided however, if the Authority determines that such a settlement or payment is necessary, the Authority may so settle and pay the fine or penalty at its sole option and expense and recover same from STES (if due from STES hereunder). The Authority's failure to approve STES's operational or capital improvement recommendations that would have prevented the violation(s) will relieve STES of any responsibility under this Section to pay any fines or penalties assessed by any regulatory authority, but only for those fines and penalties resulting from said violation(s).

V. MISCELLANEOUS PROVISIONS

A. RESPONSIBILITIES

- I. STES Responsibilities. STES shall exercise a reasonable degree of care and diligence in the operation and maintenance of the System in conformance with applicable laws, rules and regulations. However, if caused by any improper engineering design of the System, STES will not be responsible for the inadequacy, or lack of quality or quantity of the water supply provided by the System or for any direct or indirect loss, injury or damage resulting from the diminution or interruption of service within the System.
2. Authority Responsibilities. The Authority represents that the System is in good working order, does not contain any known defective equipment or facilities, is suitable and adequate for the needs of its customers and that all of its facilities are, or shall be, built in accordance with local, state and federal regulations. The Authority shall provide:
 - a. All utilities, plant facilities, improvements and modifications necessary to operate the System in a manner required to meet applicable regulations.

- b. A complete set of “record” drawings of the System and any improvements, O&M manuals for equipment and construction submittals onsite at Pump Station, rate schedules and any other information necessary for the administration of the System.
- c. Safety equipment required at the Authority’s Pump Station(s), including, but not limited to, supplies for the chlorination process. STES is responsible for maintaining all equipment and shall be responsible to immediately notify the Authority in writing if any new or replacement safety equipment is needed.

B. RELATIONSHIP OF THE AUTHORITY AND STES

STES shall serve in the capacity of an independent contractor for the Authority during the period of this Agreement.

C. MONETARY AUTHORITY

If at any time a condition exists or arises which, in the opinion of STES, requires repairs or replacements in the System and is considered an Emergency Repair per Section II. D. 2, STES shall obtain the consent of the Authority’s President, or if unavailable, the Authority’s Vice-President, or, if unavailable, any other member of the Board of Directors of the Authority prior to making such repair or replacement. Notwithstanding the foregoing, however, if at any time a condition exists or arises which, in the reasonable opinion of STES, is of an emergency nature and requires the immediate repair or replacement of equipment regardless of the amount, STES, after reasonable attempts to obtain consent, shall proceed with such repair or replacement without the necessity of obtaining the consent of the Board of Directors of the Authority. The failure to obtain such consent prior to the making of such emergency repair or replacement shall not affect the obligation of the Authority to compensate STES for any work performed.

D. FORCE MAJEURE

In the event that STES or the Authority is rendered unable, wholly or in part, by force majeure to carry out its obligations under this Agreement, it is agreed that each party shall give written notice of such force majeure to the other party as soon as possible after the occurrence of the cause relied on and shall, therefore, be relieved of its obligations, so far as they are affected by such force majeure, during the continuance of any inabilities so caused, but for no longer. In the event that the period of suspension shall extend longer than thirty (30) days, either party shall have the privilege of terminating this Agreement. In such event, the Authority shall pay STES compensation pursuant to this Agreement up to the date of termination. The term “force majeure,” as employed herein, shall mean acts of God, strikes, lockouts, or other industrial disturbances, acts of the public enemy, orders of any kind of the government of the United States or of the state or any civil or military authority, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, hurricanes, storms, floods, washouts, disturbances, explosions, partial or entire failure of utilities, shortages of labor, material, supplies or transportation, or any other similar or different cause not reasonably within the control of the party claiming such inability.

E. NON-COMPENSABLE ITEMS

The compensation to be paid to STES herein is exclusive of any tax, assessment, regulatory expense or other charge which may be imposed upon STES by any governmental authority as a result of performing its obligations pursuant to this Agreement other than taxes upon the purchase of material, utilities, supplies, and parts. In the event STES is required by applicable law or regulation to pay or collect any such tax, assessment or regulatory expense or other charge on account of this Agreement or its performance hereunder, then the amount thereof shall be reimbursed to STES by the Authority (in addition to the compensation provided herein). However, STES shall be responsible at its own expense for all corporate income and franchise taxes arising out of its operations. STES shall indemnify and hold the Authority harmless from any liability for any and all such taxes or contributions or interest or penalties for failure to pay same.

F. AMENDMENT AND RATE ADJUSTMENT

The attached Schedule of Rates, a copy of which is included hereto as Attachment "A", is guaranteed for one year from the effective date of this Agreement. Future rate increases, if any, will become effective after STES obtains written approval from the Authority. No other alteration, modification or amendment of this Agreement shall be made except in writing and signed by the Authority and STES.

G. NOTICE

Whenever the provisions of this Agreement require notice to be given, such notice shall be given in writing by certified or registered mail and addressed to the party for who intended at its then address of record and such notice shall be deemed to have been given when the notice was then mailed.

Notices required to be given to STES shall be addressed to:

Severn Trent Environmental Services, Inc.
16337 Park Row
Houston, TX 77084
Attn: Ken Hines
ken.hines@stservices.com

Notices required to be given to the Authority shall be addressed to:

Allen Boone Humphries Robinson, LLP
Phoenix Tower
3200 Southwest Freeway, Ste 2600
Houston, Texas 77027
Attn: Alex Garcia
agarcia@abhr.com

H. TERM AND TERMINATION

This Agreement shall be in force for one year from the effective date and shall continue thereafter from year-to-year subject, however, to termination by either the Authority or STES for any reason at any time by giving thirty (30) days advance written notice to the other.

In the event that this Agreement is terminated for any reason, all materials pertaining to the operations of the facilities and System, and any property belonging to the Authority, shall be promptly delivered by STES to the Authority at no cost to the Authority.

I. FINAL PAYMENT

Upon termination of this Agreement, the Authority shall pay STES within the time period provided in this Agreement any outstanding payment due and owing to STES for work performed prior to the termination date; provided, however, the Authority shall have the right to reduce such final payment as a set-off for any direct damages incurred by the Authority related to STES' willful, intentional, reckless or negligent (whether active, passive or gross) acts or omissions in connection with services performed under this Agreement. Such set-off shall not constitute a waiver by the Authority of any rights or remedies available to it under the Agreement, at law or in equity.

VI. CAPTIONS

The section headings or paragraph captions herein are used for convenience of reference only and not intended to define, extend or limit any provision of this contract.

VII. EXECUTION OF AGREEMENT

IN WITNESS WHEREOF, the Authority and STES have caused this Agreement to be executed by their duly authorized officers.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

SEVERN TRENT ENVIRONMENTAL SERVICES, INC.

By: *Bruce Parler*

By: *Ken Hines*

Printed Name: BRUCE PARLER

Printed Name: Ken Hines

Title: PRESIDENT

Title: Texas Regional Manager

Date: 4-8-2015

Date: 3/23/2015

**PERSONNEL AND EQUIPMENT RATES
ATTACHMENT "A"**

I. SERVICES, B. BASIC SERVICES

Base Monthly Operations Fees

The monthly base operations fee shall be a total monthly fee of \$34,175.

For each additional Authority participant water plant brought online the base fee will increase by \$500.00 per plant per month.

Authorized Maintenance Level

Consistent with the principles of effective cost containment, efficient maintenance and maximization of operational procedures, the Authority authorizes STES to perform Non-Emergency Repairs when, in STES opinion, the cost to the Authority of such repairs shall not exceed \$4,000.

Materials *

Materials purchased on behalf of the Authority not included as part of the Base Services shall be billed to the Authority at cost plus a nine percent (9%) mark up. For items with a purchase price less than \$25.00 no purchase receipt is required; for items with a purchase price between \$25 and \$100 either a purchase receipt or purchase approval by the Authority Engineer or a Director of the Authority shall be required, for items with a purchase price greater than \$100 a purchase receipt shall be required when submitting an invoice to the Authority for reimbursement.

Sub-contract work *

STES may require utilizing sub-contractors for specialized repairs. Sub-contractors utilized on behalf of the Authority with charges not included in the Base Services shall be billed to the Authority at cost plus nine percent (9%) mark up.

Extraordinary Services

STES may render additional services not specified in this Agreement. The Authority may also request extraordinary services not anticipated and not specified in this Agreement of STES. The Authority and STES shall, in good faith, negotiate the amount to be paid by the Authority to STES for such extraordinary services.

*Note: STES shall receive no mark-up on invoices paid directly by the Authority.

**PERSONNEL AND EQUIPMENT RATES – CONTINUED
ATTACHMENT “A”**

PERSONNEL

Salary Cost X 2, which consists of the hourly rate and benefit cost paid to an STES employee X 2.

Overtime rates of time and one-half will apply for work performed before 7:00 a.m. and after 4:30 p.m. in excess of eight (8) hours per day or 40 hours per week, and on weekends and holidays. Holidays are New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and the day after Thanksgiving, Christmas Eve day and Christmas Day.

EQUIPMENT

The below equipment rates will be in effect for year one (1) of the contract. For subsequent years, the regular rates will be adjusted up or down by the same percentage as the Consumer Price Index for All Urban Consumers (published by the United States Bureau of Labor Statistics, Series ID: CUUR0300SA0 - Consumer Price Index, All Urban Consumers, South Region, Not Seasonally Adjusted, Base Period December 1982-84 = 100) (the “C.P.I.”) shall have increased or decreased during the preceding twelve (12) months. The increase or decrease in the C.P.I. shall be determined by calculating the percentage increase or decrease in such index during the prior twelve (12) month period, by determining the percentage difference between (a) the average C.P.I. for the most recent twelve (12) months for which data is available (the “Most Recent Year”), and (b) the average C.P.I. for the twelve (12) month period immediately prior to the Most Recent Year. In the event the U.S. Department of Labor, Bureau of Labor Statistics ceases to publish the C.P.I., the parties hereto agree to substitute another equally authoritative measure of change in the purchasing power of the U.S. dollar as may be then available so as to carry out the intent of this provision.

	Rate	Hourly/Daily/Weekly
A-Box Cleaner	\$ 7.50	Daily
Air Plug 12" to 18"	\$ 95.00	Daily
Air Plug 18" to 30"	\$175.00	Daily
Air Plug 30" to 36"	\$235.00	Daily
Air Plug 36" to 48"	\$285.00	Daily
Air Plugs, Up to 12"	\$ 75.00	Daily

**PERSONNEL AND EQUIPMENT RATES – CONTINUED
ATTACHMENT “A”**

EQUIPMENT

Alignment Tools	\$ 50.00	Hourly
Barricade	\$ 2.00	Daily
Blower	\$ 10.00	Hourly
Boring Machine	\$ 10.00	Hourly
Cam/Push System Camera	\$ 50.00	Hourly
Chopsaw	\$ 10.00	Hourly
Cold water pressure washer	\$ 7.50	Hourly
Confined Space Equipment Kit	\$ 20.00	Hourly
Cutting Torch	\$ 10.00	Hourly
Digital Camera	\$ 25.00	Daily
Envirosight Quick View Pole Camera	\$ 50.00	Hourly
Extendable Hot Stick	\$ 10.00	Hourly
Gas Detector	\$ 5.00	Hourly
Generator , 180 KVA Portable	\$400.00	Daily
High Voltage Tester	\$ 18.50	Hourly
Hose, Discharge 50 ft	\$ 20.00	Daily
Hose, Fire 50 ft	\$ 5.00	Daily
Hose, Suction 20 ft	\$ 4.00	Hourly
Hose, Vactor 6" 20 ft	\$ 35.00	Daily
Hydrogen Sulfide Monitor	\$ 50.00	Hourly

**PERSONNEL AND EQUIPMENT RATES – CONTINUED
ATTACHMENT “A”**

EQUIPMENT

Infrared Camera System	\$ 85.00	Hourly
Metal Detector	\$ 7.50	Hourly
Metrotek Line Tracer	\$ 7.50	Hourly
Pump, 12 volt	\$ 8.50	Hourly
Pump, 4" Submersible w/compressor	\$125.00	Daily
Pump, Utility 1"	\$ 7.50	Hourly
Pump, Utility 2"	\$ 14.00	Hourly
Pump, Utility 3"	\$ 15.00	Hourly
Pump, Utility 4"	\$ 30.00	Hourly
Pump, Utility 6"	\$ 35.00	Hourly
Sawsall	\$ 5.00	Hourly
Shield, Fixed Box	\$ 15.00	Hourly
Shoring Equipment	\$ 20.00	Hourly
Smoke Test Blower	\$ 25.00	Hourly
Steel Road Plate	\$100.00	Weekly
Subsurface LD-12 Acoustic Leak Detection	\$ 25.00	Hourly
Tapping Machine	\$ 7.50	Hourly
Thermal Temperature Gun	\$ 5.00	Hourly
Utility Lights	\$ 25.00	Daily
Vibration Meter	\$ 8.00	Hourly
Voltage Recorder	\$ 85.00	Daily
Welder	\$ 25.00	Hourly

**PERSONNEL AND EQUIPMENT RATES – CONTINUED
ATTACHMENT “A”**

EQUIPMENT

	Rate	Hourly/Daily/Weekly
Air Compressor	\$ 35.00	Hourly
Air Scouring Unit	\$110.00	Hourly
Backhoe Rig (Backhoe w/Trailer)	\$ 56.50	Hourly
Chlorination Truck	\$ 29.00	Hourly
Crane Truck	\$ 60.00	Hourly
Crew Truck	\$ 29.00	Hourly
Dump Truck	\$ 55.00	Hourly
Electrical Truck	\$ 31.00	Hourly
Excavation Trailer w/Equipment	\$ 25.00	Hourly
Fork Lift	\$ 25.00	Hourly
Maintenance Truck	\$ 31.00	Hourly
Mini Excavator	\$ 35.00	Hourly
Shoring Trailer	\$ 25.00	Hourly
Spin Doctor (Mechanical Valve Operator)	\$ 35.00	Hourly
Skid Steer Loader	\$ 35.00	Hourly
Televising Unit w/Technician	\$115.00	Hourly
Tractor Mower	\$ 23.50	Hourly
Trencher	\$ 15.00	Hourly
Utility Trailer	\$ 9.50	Hourly
Utility Truck	\$ 16.00	Hourly
Vactor Truck w/Operator	\$155.00	Hourly
Vactor Truck w/Operator - Overtime	\$180.00	Hourly

AUTHORITY FACILITIES ATTACHMENT "B"

The System consists of the following facilities:

A. Pump Station No. 1

Pump Station No. 1 is located at 7215 Harms Road, Houston, Texas and includes, among other facilities, the following:

- * City of Houston Point of Delivery meter station including 2-24" Krohne flowmeters on the Authority side.* Three (3), five million gallon wire-round, pre-stressed concrete ground storage tank.
- * Six (6) 7,000 gpm horizontal split case pumps, 4 of which are constant speed and 2 variable speed pumps with variable frequency drives.
- * One (1) chloramination system including: sodium hypochlorite storage and feed system, liquid ammonium sulfate storage and feed system, chemical analyzers, water softening system, static mixer and diffusers.
- * Two 2000kW emergency generators and 2-4000 gallon storage tanks for associated diesel fuel.
- * From time-to-time, the Authority will install additional water lines and such water lines will be included in the term "System". STES shall obtain monthly from the Authority's engineer, Dannenbaum Engineering Corp., information showing the location of additional water lines put into service and additional connections to districts.

B. Surface Water Line Connections to the current 54 water plants

- * Surface water connections include meter station and flow control with control panel.
- * From time-to-time, the Authority will install water line connections to the current 54 water plants and such connections shall be included in the term "System". STES will obtain monthly from the Authority's engineer, Dannenbaum Engineering, Corp., information showing the location of additional water lines put into service and additional connections to districts.

C. Transmission and Distribution System Water Lines

- * Authority has currently constructed and is operating approximately 250 miles of waterlines. From time to time additional lines are constructed and put into service.

D. Additional Facilities

- * In the event the Authority deems it necessary to perform on-site meter readings of (i) groundwater well meters for water wells subject to the Authority's Groundwater Reduction Plan ("GRP Wells"), (ii) surface water meters for surface water delivered by the Authority, (iii) surface water meters for surface water delivered by the City of Houston to the Authority; and (iv) any other meters subject to alternative water use credit agreements with the Authority, STES will provide said service in accordance with Section II.B.3, which is within the Base Fee.
- * Authority SCADA system at pump station and at remote water plants using DSL communications with cell system backup at pump station site.

**WATER VALVE INSPECTION PROGRAM SOP
ATTACHMENT "C"**

1. Locate the valve box.
2. If necessary, jet or clean valve stack with valve box cleaner to remove dirt/debris.
3. Operate the valve and make sure it is left fully open.
4. Mark valve location on the curb with paint (open left – Blue, open right – Red).
5. Fill in maintenance log, noting any repairs to be made such as raising the box, removing debris which could not be removed during inspection/maintenance, necessary removal of pavement or landscaping and excavation, locates, etc.
6. Notify landowner of pending necessary repairs, if applicable.

**INSURANCE PROVISIONS
ATTACHMENT "D"**

1.1 Insurance Requirements

STES shall procure and maintain in full force and effect ("carry"), at STES' sole expense, insurance of the following types and minimum amounts, written by insurance companies satisfactory to the Authority, and having a rating of not less than "A-VII" by A.M. Best or equivalent.

STES, in its discretion, may purchase additional kinds or limits of insurance. The Authority makes no representation that the insurance required hereunder will be adequate to protect STES,

These insurance requirements are independent from all other obligations of STES under this Agreement, apply whether or not required by any other provision of this Agreement, and shall not be construed to limit STES' liability under other provisions of this Agreement, including the indemnity provisions hereof, except to the extent mandated by applicable law.

1.2 Worker's Compensation and Employers' Liability

STES shall carry statutory Worker's Compensation Insurance covering STES' employees in compliance with all requirements of the Workers' Compensation laws of the State of Texas.

In addition, STES shall carry Employer's Liability Insurance covering all Work hereunder in an amount not less than the following:

Each Accident	\$1,000,000
Disease Limit	\$1,000,000

1.3 General Liability Insurance

STES shall carry general liability insurance on a form no less broad than the "Commercial General Liability Insurance" form dated 2004 or thereafter promulgated by the Insurance Services Office, as respects all work hereunder, for all liability arising out of injury to or death of one or more persons, and injury to or destruction of property, in any one occurrence, in amounts not less than:

General Aggregate	\$2,000,000
Products – Completed/Operations Aggregate	\$1,000,000
Personal & Advertising Injury	\$1,000,000
Each Occurrence	\$1,000,000

1.4 Automobile Liability Insurance

STES shall carry Automobile Liability Insurance on a form no less broad than the "Business Automobile Liability Insurance" form dated 1985 or thereafter promulgated by the Insurance Services Office, covering any auto (including owned, hired or non-owned autos) in an amount not less than \$1,000,000 combined single limit, for all liability arising out of injury to or death of one or more persons, and injury to or destruction of property, in any one occurrence.

INSURANCE PROVISIONS-CONTINUED ATTACHMENT "D"

1.5 Excess/Umbrella Liability Insurance and Commercial Crime Insurance

STES shall carry either excess liability insurance that follows the form of the underlying primary liability insurance required hereunder for Employers' Liability, General Liability, and Automobile Liability Insurance, or umbrella excess insurance affording coverage at least as broad as such underlying policies, in an amount not less than \$2,000,000 per occurrence and \$2,000,000 in the aggregate. STES shall carry Commercial Crime coverage in an amount not less than \$10,000 per occurrence and \$1,000,000 in the aggregate

1.6 Deductibles

Reasonable deductibles or self-insured retentions, not exceeding 5% of the required limit of liability, are permitted. Any and all deductibles, and any self-insurance retentions, of all insurance policies required shall be paid by STES and shall not be billed to or payable by the Authority.

1.7 Additional Insureds

To the maximum extent permitted by law, STES shall cause all insurance required hereunder (except workers' compensation) to name the Authority as an additional insured thereunder with respect to all work hereunder, for the full limits of liability shown in the declarations of each such policy purchased by STES (including limits greater than the minimum limits required herein), and shall include language providing:

- That such insurance shall respond for Authority as primary insurance vis-à-vis other insurance available to District and shall waive any "other insurance" rights so that no contribution shall be required from any other insurance that may be available to the Authority.
- That each such insurer shall provide Authority with thirty (30) days written notice (and ten (10) days written notice in the case of nonpayment of premium) prior to cancellation of or material change in any required insurance.

1.8 Waiver of Subrogation

The parties intend that none of STES' insurers shall ever subrogate against the Authority. Accordingly, STES agrees to cause all of its insurers, including but not limited to insurers underwriting policies required of STES hereunder, to waive subrogation against the Authority. **In order to assure the effectiveness of STES' agreement to obtain waivers of subrogation, STES additionally agrees that it now waives and releases all rights of recovery, claims, or causes of action that might hereafter arise in favor of STES for any loss, damage or liability that is covered by any of STES' insurance, regardless of whether the loss, damage or liability is caused by the breach of any legal duty by, or the negligence or other fault of the Authority.** The foregoing release includes loss, damage or liability that would be covered by the insurance required of STES hereunder even if STES should fail to obtain the required insurance.

**INSURANCE PROVISIONS-CONTINUED
ATTACHMENT "D"**

1.9 Certificates and Information as to Required Insurance

STES shall furnish the Authority with Certificates of Insurance signed by STES' insurance agent, showing STES' procurement of the insurance required hereunder. Each such Certificate shall accurately reflect insurance in place and shall comply with all requirements of law.

STES shall provide the Authority with thirty (30) days written notice (and ten (10) days written notice in the case of nonpayment of premium) prior to cancellation of or material change in any required insurance.

STES warrants the complete accuracy of all information provided on every Certificate of Insurance provided by STES, or provided by STES' agent or broker, to the Authority.

STES agrees to provide the Authority with true, correct and complete photo/electronic copies, or to make available for inspection the originals, or all policies of insurance that STES is required to procure and maintain in force under this Agreement within three (3) business days after receipt of the Authority's request.

1.10 No Waiver by Authority

STES' failure to provide insurance as required hereunder, or STES' failure to supply Certificates of Insurance that comply with Certificates of Insurance Section above or the failure of Authority to require evidence of insurance or to notify STES of any breach by STES of the requirements of these provisions or deficiencies in the insurance obtained, shall neither constitute a waiver by Authority of any of these Insurance Requirements, nor a waiver of any other terms and conditions of this Agreement, including STES' obligations to defend, indemnify, and hold harmless Authority, as required herein.

Notice in the Event of Occurrence or Loss

STES shall promptly notify all implicated insurers, and shall furnish all reasonable required information, concerning any occurrence or loss event that might give rise to a claim to coverage by STES or Authority. STES shall promptly provide to Authority copies of all correspondence and documents related to any such occurrence or event.

Sue Davis Communications

**A GOVERNMENT/MEDIA RELATIONS PROPOSAL
FOR
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY**

This Agreement ("Agreement") between Sue Davis Communications ("Firm"), 4721 Hummingbird St., Houston, TX 77035-4915 and West Harris County Regional Water Authority, , c/o Allen Boone Humphries Robinson LLP, 3200 Southwest Freeway, Ste. 2600, Houston, Texas 77027 ("Client") specifies the services for which the Client engages Firm and the terms and conditions of the engagement.

PURPOSE OF AGREEMENT:

Create and provide a government/media relations and community outreach program for the Second Source water pipeline project running from within the boundaries of the West Harris County Regional Water Authority to the City of Houston's Northeast Water Treatment Plant ("the Project").

This program will work with the appropriate elected officials, community organizations and individuals in areas affected by the construction, as well as the media, to educate them about the Project.

CLIENT AND FIRM UNDERSTAND AND AGREE THAT:

1. Client engages and retains Firm as Client's consultant for public relations services for West Harris County Regional Water Authority and/or other services as outlined in Addendum "A" to this Agreement (the "Program"). Client may also utilize other public relations consultants for the Project and/or other services. Firm's relationship to Client during the term of this Agreement is that of an independent contractor. Firm shall make periodic oral or written reports and recommendations to the Client, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Firm relating to the Program.

2. Client has the right to make changes to Addendum A. Firm will issue, and Client will sign, a Project Change Notice ("PCN") in respect of any such change; the PCN will note any addition of services (for which Client will pay at Client's sole cost) or reduction of services (which will reduce Client's cost) resulting from the change. Firm may invoice Client immediately for any additional cost, and Client will pay the invoice upon receipt as provided in paragraph 4(a).

3. To promote quality workmanship and on-time performance by Firm, Client will provide Firm on a timely basis with the information and materials necessary for Firm to perform the services specified in this Agreement and generally to carry out the Program.

4. (a) Client agrees to pay an advance retainer in the amount of \$2,500, due upon the execution of this agreement. Client will be billed by the Firm at the hourly rate (the "Basic Fee")

of \$190.00 per hour for Firm's services under this Agreement for the period commencing June 1, 2010, and ending upon completion of the Project, estimated to be in 2017. Firm agrees to invoice Client on the first day of the month for the previous month's services, and Client agrees to pay such invoice by the 30th of that month; provided, however, that no payment shall be due from Client unless and until the advance retainer is exhausted. In addition, Firm shall provide Client with monthly invoices showing the charges applied against said \$2,500 advance retainer. Work on this account may be discontinued with notice if the account is overdue in excess of 30 days. Client has the option of resuming service or terminating the account after payment of the arrearage and late fees.

(b) All out-of-pocket expenses and other costs described in Addendum A are in addition to the Basic Fee and are to be paid by Client upon presentation of invoice as provided in paragraph 4(a).. Expenses will be billed monthly with appropriate supporting receipts. Substantial expenses, which are defined as any expenses over \$150, will require the Client's prior written approval or prior written approval of the President of the Client's Board of Directors.

(c) Client agrees to pay Firm a monthly finance charge of the lesser of (i) 1-1/2% of any invoice not paid when due or (ii) the maximum rate allowed by law of any invoice not paid when due.

5. Either party may terminate this agreement with or without cause upon thirty days written notice to the non-terminating party. The parties may mutually agree upon a shorter termination notice period if in writing and signed by all parties to the Agreement. Upon termination of this Agreement, Client shall pay Firm for all amounts due Firm at that time including but not limited to any amounts due as provided in paragraph 4(a) above and all other costs for work done and liabilities incurred (including any obligations incurred with third parties) relating to the Program through the effective date of termination.

6. Notwithstanding paragraph 4(a) above, if one or more Acts of God or other causes beyond the parties' control renders the performance of services or provisions of material or other performance by either party impossible or delays it for six (6) months in the aggregate, either party, upon prompt written notice to title other specifying the event(s) or cause(s), will be excused from such nonperformance or delay, and either party then has the right to terminate this Agreement on further written notice to the other.

7. All prior understandings and negotiations between Firm and Client, both written and oral, are merged in this Agreement, which is the entire agreement between them. No representation, inducement or promise has been made or relied upon by either party, unless expressly set forth in this Agreement. This Agreement may be altered or changed only in writing signed by both parties.

8. In the event of a dispute between the parties to this Agreement that results in litigation, the prevailing party shall be entitled to recover attorney's fees and costs from the non-prevailing party. To the maximum extent allowed by law, attorney's fees shall be awarded whether the claim for relief is based on contract law, tort law, or both.

9. Neither party may assign this Agreement without other party's prior written consent.

10. The validity, interpretation and performance of this Agreement shall be controlled by and construed under the laws of the State of Texas.

11. By June 18, 2010, Firm shall furnish certificates of its insurance to the Client evidencing the following insurance coverage of Firm, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Client. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Client upon Client's request. Firm shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. The provisions of this Section shall not limit the Firm's remedies against Client nor Client's remedies against the Firm. Firm shall give written notice to the Client within 5 business days of the date on which total claims by any party against Firm reduces the aggregate amount of coverages below amounts required by this Agreement. Firm shall obtain the following insurance from such companies having a Bests rating of B+/VII or better and licensed to transact business in the State of Texas:

- A. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury - \$1,000,000
- B. Comprehensive Automobile Liability Insurance with limits not less than \$500,000 (combined)

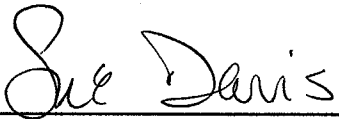
The Client and the Client's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Firm's work under this Agreement. All policies written on behalf of Firm shall contain a waiver of subrogation in favor of the Client and the Client's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Client as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Client, and will not seek contribution or recovery from the Client or such other insurance available to the Client. Firm, not the Client, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

12. The following addenda and schedules are attached to and form an integral part of this Agreement:

Addendum A

EFFECTIVE as of the 1st day of June, 2010.

FIRM:
SUE DAVIS COMMUNICATIONS



Sue Davis

ACCEPTED BY:
**WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY**



Print Name: BRUCE G. PARKER

Title: PRESIDENT

ADDENDUM A

Sue Davis Communications will:

- **Determine which elected officials' districts are affected and reach out to them to brief them on the Project and continue dialog with them throughout the Project.**
- **Determine appropriate organizations and individuals within a community affected by the Project and reach out to brief them on the Project and continue dialog with them throughout the Project.**
- **Serve as a contact for elected officials and the public on the Project.**
- **Prepare news releases as appropriate and distribute to the media, while serving as media contact for the Project.**
- **Hire subcontractors, with written approval of Client or the President of the Client's Board of Directors, as necessary to accomplish objectives.**

Costs excluded from Basic Fee:

The Basic Fee does not include certain costs and expenses, which are to be invoiced to Client at cost and paid by Client upon invoice, including but not limited to:

- **All printing and duplicating.**
- **Fees for outside services, with written approval of Client or the President of the Client's Board of Directors, selected and monitored by Firm.**
- **Photography and photographic duplication.**
- **All travel and meals .**
- **Any other direct expense associated with the Program.**

T. N. Edmonds & Associates

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into as of this 13th day of October, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and T. N. Edmonds & Associates (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain appraisal services described in Exhibit A (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall include charges for labor,

materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Contractor shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY,**

COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having either (i) a Best's rating of B+ or better and

licensed to transact business in the State of Texas, or (ii) a Best's rating of A- or better and admitted to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$500,000
 - b. General aggregate - \$1,000,000
 - c. Products-Completed Operations Aggregate - \$500,000
 - d. Personal & Advertising Injury - \$500,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$1,000,000/\$1,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor's work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD

HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control. Notwithstanding anything contained in any attachments or exhibits hereto, the Authority shall not be required to provide insurance for the Contractor or indemnify the Contractor.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the

other party of any duty or obligation hereunder will be deemed a waiver thereof in the future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY

Drew Parker

President, Board of Directors

ATTEST

[Signature]

Secretary, Board of Directors

(SEAL)



T. N. EDMONDS & ASSOCIATES .

By: *[Signature]*
Name: Tom N. Edmonds, Jr.
Title: Appraiser

T. N. Edmonds & Associates
1301 Leeland Street, Suite 310 • Houston, TX 77002
P.O. Box 1419 • Houston, TX 77251-1419
Tel. (713)840-9272 • Fax (713)840-1828
tom@tedmonds.com

October 13, 2010

West Harris County Regional Water Authority
Allen Boone Humphries Robinson LLP
3200 Southwest Freeway, Suite 2600
Houston, TX 77027

Attn: Ms. Katie Dorfman

Re: Proposal for appraisal services along the 40 mile WHCRWA line that crosses the City of Houston

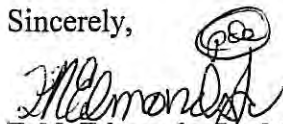
Gentlemen:

Attached please find the Master Services Agreement regarding the referenced project. We will provide appraisal services in connection with the acquisition of certain parcels to be designated by the West Harris County Regional Water Authority (the "Authority") that are related to the Authority's water line facilities, and other related facilities, along the route shown on Exhibit A attached hereto (the "Second Source Line").

Upon identification of the parcel to be appraised, we will provide a lump-sum fee proposal for the preparation and completion of an appraisal report determining the compensation owed for the proposed acquisition of the parcel. Should you engage our services, we will study the real estate market within which the property competes, acquire and analyze market data, and prepare an appraisal report that complies with the *Uniform Standards of Professional Appraisal Practice*.

Enclosed is a copy of my qualifications. Thank you for your consideration.

Sincerely,



T. N. Edmonds, Jr., MAI, SRA, ASA
Certification No. TX-1321314-G

pde

enc:

Real Estate Appraisers / Consultants

TOM N. EDMONDS JR.

Broker License No. 122210, State of Texas
State Certified General Real Estate Appraiser, No. TX-1321314-G

Professional Affiliations and Activities

Appraisal Institute - MAI, SRA
American Society of Appraisers - ASA
Houston Association of Realtors
Texas Association of Realtors
National Association of Realtors
International Right-of-Way Association

Experience

Self-employed as a full-time fee appraiser, having qualified and testified as an Expert Witness in County and District Courts in Harris, Brazoria, Fort Bend, Montgomery, Austin, Brazos, Freestone, Galveston, Leon, Liberty, and Waller counties.
Instructor, having taught Real Estate Appraisal and Real Estate Principles courses at private state-accredited schools.
Co-founder of Gulf Coast School of Real Estate, accredited by the Texas Real Estate Commission.

Certification

I am a State Certified General Real Estate Appraiser.
I have completed the continuing education programs of the Appraisal Institute and the American Society of Appraisers.

Education

South Texas College, A.A.
University of Houston, B.B.A.
Real Estate Program, University of Houston
RE 2301, Principles of Real Estate
RE 3301, Real Estate Valuation
RE 3302, Real Estate Management
RE 3303, Real Estate Finance
RE 4301, Income Property Valuation
Lindenwood College, St. Charles, MO, International Valuation Sciences Institute
Appraisal Institute
Basic Income Capitalization, Course 310
Advanced Sales Comparison and Cost Approaches, Course 530
Uniform Standards of Professional Appraisal Practice (USPAP), Course 410
Uniform Standards of Professional Appraisal Practice, Course 420
Various seminars on income-producing properties
American Institute of Real Estate Appraisers
Real Estate Appraisal Principles, Course 1A1 (8-1)
Basic Valuation Procedures, Course 1A2
Residential Valuation, Course 8-2
Capitalization Theory & Techniques, Part A, Course 1BA
Capitalization Theory & Techniques, Part B, Course 1BB
Case Studies in Real Estate Valuation, Course 2-1
Report Writing, Course 2-2
American Society of Appraisers
National Uniform Standards of Professional Appraisal Practice (USPAP)

Qualifications / T. N. Edmonds, Jr. (continued)

Society of Real Estate Appraisers
Course 1-B (awarded reciprocal credit)
Course R-2, Society of Real Estate Appraisers
Course 201, Principles of Income Property Appraising
Course 202, Applied Income Property Valuation
Texas Association of Realtors, Course 1
Seminars through the Appraisal Institute, Marshall & Swift, Harris County Attorney's Office
Employee Relocation Council, Veterans Administration, Federal Housing Administration, and
Southwestern Legal Foundation.

Partial List of Clients

Alvin State Bank
Boy Scouts of America
CenterPoint Energy
Certified Mortgage
Citizens National Bank
City of Dayton
City of Houston
City of Humble
City of Meadows Place
City of Pasadena
City of Pearland
City of Seabrook
Coastal Banc ssb
Exxon
Federal Deposit Insurance Corporation
Federal National Mortgage Association
Friendswood Development Company
Gateway Homes
The George Foundation
Harris County
Harris County Department of Education
Harris County Toll Road Authority
Harris County Hospital District
Houston Independent School District
Hull State Bank
International Bank of Commerce
Inverness Forest Utility District
Klein Independent School District
Metropolitan Transit Authority
Navigation Bank
Patriot Bank
Port of Houston Authority
Resolution Trust Corporation
Shell Oil Company
Southwestern Bell Telephone Company
Suburban Homes
Texas Department of Transportation
Veterans Administration
Wells Fargo Bank (formerly Prime Bank)
Weingartens Realty Investors

**ADDENDUM No. 1 TO MASTER SERVICES AGREEMENT FOR
PROFESSIONAL SERVICES
(T.N. Edmonds & Associates)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Appraisal Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and T.N. Edmonds & Associates ("Contractor"), to be effective the 8th day of December, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services dated October 13, 2010 (the "Agreement") to perform appraisal services and other related professional services that may be required; and

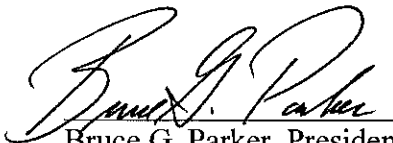
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

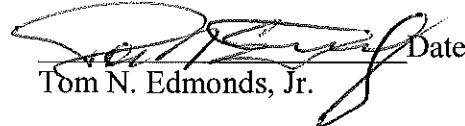
1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

T.N. EDMONDS & ASSOCIATES


Bruce G. Parker, President

Date: 12/8/10


Tom N. Edmonds, Jr.

Date: 12-21-10

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$50,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Terracon Consultants, Inc.

MASTER SERVICES AGREEMENT

This Master Service Agreement (this "Agreement") is entered into this 12th day of May, 2010, (the "Effective Date") by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Terracon Consultants, Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority has determined it is in the Authority's best interest to engage a professional service provider for the services described herein; and

WHEREAS, the Parties have read and understood the terms and provisions set forth in this Agreement, and have been afforded a reasonable opportunity to review this Agreement with their respective legal counsel;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits herein contained, the Authority and Contractor agree as follows:

I.
SERVICES

Section 1.01. Services. Contractor shall perform certain services (the "Services") for the Authority, and Contractor shall be compensated for such Services as described in this Agreement. Contractor may not deviate from approved Services without the prior written consent of the Authority.

Section 1.02. Approval of Work Authorization. Approval of Services shall be evidenced by a written proposal or service order (a "Work Authorization"), which shall include the service to be performed, the location, the schedule and the fees. Each Work Authorization must be approved, as evidenced by written signature, by the Authority's Board of Directors (the "Board") or Wayne Ahrens of Dannenbaum Engineering Corporation, as allowed by the Authority's Second Amended Resolution Authorizing Approval of Work Orders and Change Orders, as may be amended from time to time. All approved Work Authorizations shall be attached as an Exhibit to this Agreement. When any new Work Authorization is approved, another Exhibit shall be added to this Agreement, signed and dated by each party or its authorized representative. The Exhibits added shall be sequenced in alphabetical order beginning with **Exhibit A** and shall be dated when approved. All fees described in the Work Authorization shall

include charges for labor, materials, insurance, equipment and any other items required to perform the work in the Services.

Section 1.03. Reports. Consultant shall make periodic oral or written reports and recommendations to the Authority, as requested, with respect to conditions, transactions, results, progress and/or circumstances encountered by Contractor relating to performance of the Services.

II. COMPENSATION

Section 2.01. Payment for Services. Contractor shall submit a detailed monthly invoice (together with any back-up documentation requested by the Authority) indicating the Services performed for that month under the terms of this Agreement. Payment shall be made within forty-five (45) days of the approval of Contractor's invoice by the Authority. Contractor shall submit detailed invoices to:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002

Copy to: West Harris County Regional Water Authority
c/o Wayne Ahrens
Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Neither partial payments made hereunder nor approval of invoices shall be construed as final acceptance or approval of that part of Contractor's Services to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

Section 2.02. Payment to Subcontractors. Contractor shall make timely payments to all persons and entities supplying labor, materials or equipment in connection with the Services. Contractor agrees that upon completion of work called for hereunder, it will furnish the Authority with proof, satisfactory to the Authority, that all labor, material, and equipment for which Contractor has been paid and satisfied, unless the Authority waives such proof. **AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY,**

COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.

III.
GENERAL CONDITIONS

Section 3.01. Contractor's Duties. Contractor covenants with the Authority to furnish its best skill and judgment in performing the Services for the Authority. Contractor agrees to furnish efficient business administration and superintendence and to use its best efforts to furnish at all times an adequate supply of workmen, materials, and equipment, and to perform the Services in the most expeditious and economical manner. Contractor agrees to exercise reasonable diligence in performing the Services, using the degree of care and skill that a prudent person in the same or similar profession would use.

Section 3.02. Relationship of Authority and Contractor. It is understood and agreed that all work so done by Contractor shall meet with Authority approval, but that the detailed manner and method of performing the Services shall be under the control of Contractor. Contractor's relationship to the Authority during the term of this Agreement is that of an independent contractor. The relationship between the Authority and Contractor is not exclusive.

Section 3.03. Insurance and Indemnification. Before commencing any work hereunder, Contractor shall furnish certificates of its insurance to the Authority evidencing the following insurance coverage of Contractor, which coverage shall be maintained throughout the term of this Agreement. Such certificates shall contain a provision that coverages afforded under the policy will not be canceled or modified without at least seven days prior written notice to the Authority. Renewal certificates shall be provided at least 30 calendar days prior to the termination date of the current certificates of insurance. Certified copies of each policy shall be furnished to the Authority upon the Authority's request. Contractor shall not violate or knowingly permit to be violated any condition of the insurance policies required by this Agreement. Nothing contained in this Section shall limit or waive Contractor's legal or contractual responsibilities to the Authority or others. Cancellation or expiration of any of said insurance policies shall not preclude the Authority from recovery against Contractor, or otherwise, for any liability arising under this Agreement. Contractor shall give written notice to the Authority within 5 business days of the date on which total claims by any party against Contractor reduces the aggregate amount of coverages below amounts required by this Agreement. Contractor shall obtain the following insurance from such companies having a Bests rating of B+/VII or better and licensed to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000
 - d. Personal & Advertising Injury -\$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000

The Authority and the Authority's agents and employees shall be added as additional insureds to all coverage required under this Agreement for all liability arising out of Contractor' work under this Agreement, except for worker's compensation insurance and professional liability insurance. All policies written on behalf of Contractor shall contain a waiver of subrogation in favor of the Authority and the Authority's agents and employees. In addition, all of the aforesaid policies shall be endorsed to provide that the coverage provided to the Authority as an additional insured will be on a primary basis, and not in excess of other insurance coverage available to the Authority, and will not seek contribution or recovery from the Authority or such other insurance available to the Authority. Contractor, not the Authority, shall be responsible for any and all policy premiums and deductibles due in connection with the insurance required hereunder.

AS PART OF THE CONSIDERATION FOR THIS AGREEMENT, CONTRACTOR, FOR ITSELF AND ITS SUCCESSORS AND ASSIGNS, AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, REPRESENTATIVES, AND AGENTS, FROM EVERY LOSS, DAMAGE, INJURY, COST, EXPENSE, CLAIM, JUDGMENT, OR LIABILITY OF EVERY KIND OR CHARACTER, WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHICH ARISES DIRECTLY OR INDIRECTLY FROM THE CONTRACTOR'S WILLFUL, INTENTIONAL, RECKLESS, OR NEGLIGENT (WHETHER ACTIVE, PASSIVE, OR GROSS) ACTS OR OMISSIONS RELATED TO OR ARISING FROM THIS AGREEMENT. THIS INDEMNITY AND HOLD HARMLESS PROVISION WILL APPLY WHETHER SUCH ACTS OR OMISSIONS

ARE CONDUCTED BY THE CONTRACTOR OR ANY SUBCONTRACTOR OR AGENT OF THE CONTRACTOR.

Section 3.04. Term and Termination. Either party may terminate this Agreement at any time, with or without cause, upon 45 days written notice to the other party. Contractor shall not be entitled to any payment or further payment other than for work performed or material, equipment, or supplies furnished prior to such termination. The Authority does not waive any other remedy allowed under Texas law. The Authority may also suspend or terminate a Work Authorization, without terminating this Agreement, upon fourteen (14) days written notice to Contractor, which notice requirement may be waived by Contractor. A suspended Work Authorization may be reinstated and resumed in full force and effect upon written notice from the Authority. Contractor shall not be entitled to any payment or further payment during such suspension other than for work performed or material, equipment, or supplies furnished prior to such termination and/or after reinstatement.

Section 3.05. Agreement Controls. To the extent that there is any inconsistency between the provisions of this Agreement and any attachments or exhibits hereto, the terms of this Agreement shall control.

Section 3.06. Regulatory Requirements. All work will be done in strict compliance with all applicable federal, local, city, county, state and any other regulatory rules, regulations and laws, and any codes which may apply to the Services being provided. Contractor will obtain and maintain, at its sole cost an expense, all permits and licenses required to perform the Services and will be responsible for securing inspections and approvals of its work from any authority having jurisdiction over Contractor's Services. Contractor shall immediately notify the Authority of any suspension, revocation or other detrimental action against any license, permit or certification required hereunder.

Section 3.07. Safety and Health Standards. Contractor shall observe and comply with all applicable Federal, State and local health and safety laws and regulations.

Section 3.08. Inspection. The Authority and its duly authorized representatives shall have the right to inspect all Services being performed hereunder at any time. Contractor agrees to maintain adequate books, payrolls, and records satisfactory to the Authority in connection with any and all Services performed hereunder and to maintain such books, payrolls, and records for at least four years. The Authority and its duly authorized representatives shall have the right to audit such books, payrolls, and records at any reasonable time or times.

Section 3.09. Assurance. Contractor agrees that it shall perform its obligations to the Authority under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of the Authority.

Section 3.10. Document Ownership. All documents, including original drawings, estimates, specifications, periodic progress notes, and written data (collectively, the "Documents") shall be the property of the Authority, provided that Contractor has received full compensation due pursuant to the terms of this Agreement and subject to all of the following terms and conditions. If the Authority uses such Documents in a matter that is unrelated to the project covered by the Agreement, except with the express written consent of Contractor, which consent will not be unreasonably withheld, then any such use shall be at the Authority's sole risk.

Section 3.11. Assignability. Contractor shall not assign its rights or obligations or any sum that may accrue to it hereunder without the written consent of the Authority, which shall be granted or denied in the Authority's sole discretion.

Section 3.12. Modifications. This Agreement shall be subject to amendment, change or modification only with the prior mutual written consent of the Authority and Contractor, except to add any future Exhibits pursuant to Section 1.02.

Section 3.13. Force Majeure. In the event either party to this Agreement is rendered unable, wholly or in part, by force majeure including an act of God; strikes; lockouts, or other industrial disturbances; acts of the public enemy; orders of any kind of government of the United States or the State of Texas or any civil or military authority (other than a party to this Agreement); insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; hurricanes; storms; floods; droughts; arrests; civil disturbances; explosions; or other inability similar to those enumerated; to carry out its obligations under this Agreement, it is agreed that party shall give written notice of such act to the other party as soon as possible after the occurrence of the cause relied on and shall, thereafter, be relieved of its obligations, so far as they are affected by such act, during the continuance of any inability so caused, but for no longer.

Section 3.14. Agreement Subject to Applicable Law. This Agreement and the obligations of the parties hereunder are subject to all rules, regulations and laws which may be applicable by the United States, the State of Texas or any other regulatory agency having jurisdiction. This Agreement is governed in accordance with the laws of the State of Texas and shall be enforceable in the county in which the Authority is located and the Services are being performed.

Section 3.15. Waiver. No waiver or waivers of any breach or default by a party hereto of any term, covenant or condition or liability hereunder of performance by the other party of any duty or obligation hereunder will be deemed a waiver thereof in the

future, nor will any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 3.16. Intended Beneficiaries. This Agreement is for the sole and exclusive benefit of the Authority and Contractor and will not be construed to confer any benefit upon any other party.

Section 3.17. Severability. The provisions of this Agreement are severable, and if any provision or part of this Agreement or the application thereof to any person or circumstance is ever held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Agreement and the application of such provision or part of this Agreement to other persons or circumstances will not be affected hereby.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement in multiple copies, each of equal dignity, as of the date set forth on the first page hereof.

[EXECUTION PAGE FOLLOWS]

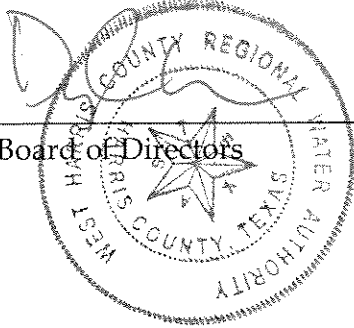
WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY

James G. Parker
President, Board of Directors

ATTEST

Secretary, Board of Directors

(SEAL)



TERRACON CONSULTANTS, INC.

By: *Thomas R. Mares*
Name: Thomas R. Mares
Title: SR. PRINCIPAL

FIRST AMENDMENT TO MASTER SERVICES AGREEMENT

This First Amendment Master Service Agreement (this "First Amendment") is entered into this 9th day of June, 2010, but effective as of the 12th day of May, 2010 (the "Effective Date"), by and between West Harris County Regional Water Authority, a conservation and reclamation Authority and a body politic and a political subdivision of the State of Texas, created under the authority of Article XVI, Section 59 of the Texas Constitution and operating under and governed by the provisions of Chapters 49 and 54, Texas Water code, as amended (the "Authority"), and Terracon Consultants, Inc. (the "Contractor").

RECITALS

WHEREAS, the Authority and Contractor have previously entered into that certain Master Services Agreement dated as of May 12, 2010, (the "Agreement") for the provision of certain services described therein; and

WHEREAS, the parties now desire to amend certain terms of the Agreement, which amended terms shall be effective as of the Effective Date;

NOW, THEREFORE, in consideration of the premises, mutual promises, covenants, obligations and benefits contained herein and in the Agreement, the Authority and Contractor agree as follows:

AGREEMENT

I. The final sentence of Section 3.03 of the Agreement shall be revised to read as follows:

"Contractor shall obtain the following insurance from such companies having a Bests rating of A- or better and licensed or approved to transact business in the State of Texas:

- A. Workmen's Compensation Insurance covering liability arising out of Contractor's employment of workers and anyone for whom the employer may be liable for workers' compensation claims at limits as imposed by statute. Workmen's compensation insurance is required, and no alternative forms of insurance shall be permitted.
- B. Employer's Liability Insurance Limitations with limits of not less than \$1,000,000.
- C. Commercial General Liability Insurance with limits not less than:
 - a. Each occurrence - \$1,000,000
 - b. General aggregate - \$2,000,000
 - c. Products-Completed Operations Aggregate - \$2,000,000

- d. Personal & Advertising Injury -\$1,000,000
- D. Comprehensive Automobile Liability Insurance with limits not less than \$1,000,000 (combined)
- E. Excess Liability: \$2,000,000/\$2,000,000.
- F. Professional Liability: \$1,000,000/\$1,000,000"

II. Except as specifically amended in this First Amendment, the Agreement shall remain in full force and effect in accordance with its original terms and conditions.


[EXECUTION PAGE FOLLOWS]

WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY

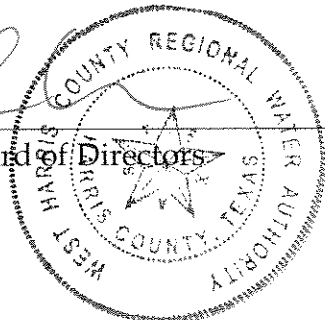


President, Board of Directors

ATTEST




Secretary, Board of Directors



(SEAL)

TERRACON CONSULTANTS, INC.

By: 

Name: Jeffrey C. Roberts, P.E.
Title: Vice President

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Terracon Consultants, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Environmental Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Terracon Consultants, Inc. ("Contractor"), to be effective the 10th day of November, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Environmental Services, dated May 12, 2010 (the "Agreement") and the First Amendment entered into on June 9, 2010 to perform certain professional environmental services or such other related services that may be required; and

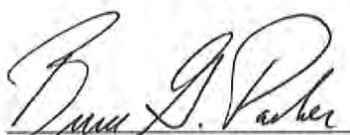
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

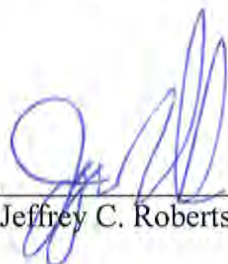
1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

TERRACON CONSULTANTS, INC.


Bruce G. Parker, President

Date: 11-10-2011


Jeffrey C. Roberts, P.E.

Date: 12/9/10

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$300,000.00 which includes the following Work Authorizations and any future work authorizations:

Work Authorization No. 1	\$14,500.00
Work Authorization No. 2	\$2,800.00
Work Authorization No. 3	\$13,600.00
Work Authorization No. 4	\$165,00.00
Work Authorization No. 5	\$70,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Terracon Consultants, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Environmental Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Terracon Consultants, Inc. ("Contractor"), to be effective the 9th day of November, 2011.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Environmental Services, dated May 12, 2010 (the "Agreement") and the First Amendment entered into on June 9, 2010 to perform certain professional environmental services or such other related services that may be required; and amended on November 9, 2011 to increase the potential maximum amount that Contractor may earn for all Work Authorizations, and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

TERRACON CONSULTANTS, INC.


Bruce G. Parker, President

Date: 9 NOV 2011



Jeffrey C. Roberts, P.E.

Date: 11/14/11

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$400,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 3 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Terracon Consultants, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Environmental Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Terracon Consultants, Inc. ("Contractor"), to be effective the 14th day of March, 2012.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Environmental Services, dated May 12, 2010 (the "Agreement") and the First Amendment entered into on June 9, 2010 to perform certain professional environmental services or such other related services that may be required; and amended on November 10, 2010 by Addendum No. 1 and by Addendum No. 2 on November 9, 2011 to increase the potential maximum amount that Contractor may earn for all Work Authorizations, and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:


1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

TERRACON CONSULTANTS, INC.



Bruce G. Parker, President Date: 3/14/12



Jeffrey C. Roberts, P.E. Date: 3/23/12

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$600,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 4 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Terracon Consultants, Inc.)**

This Addendum to the Master Services Agreement (the "Agreement") for Professional Environmental Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Terracon Consultants, Inc. ("Contractor"), to be effective the 10th day of July, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Environmental Services, dated May 12, 2010 (the "Agreement") and the First Amendment entered into on June 9, 2010 to perform certain professional environmental services or such other related services that may be required; and amended on November 10, 2010 by Addendum No. 1, by Addendum No. 2 on November 9, 2011, and on March 14, 2012 by Addendum No. 3 to increase the potential maximum amount that Contractor may earn for all Work Authorizations, and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:


1. The attached Exhibit B – Basis of Payment shall be made a part of the Agreement for all purposes.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

TERRACON CONSULTANTS, INC.



Bruce G. Parker, President Date: 7/10/13



Jeffrey C. Roberts, P.E. Date: 7/15/13

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$650,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

V & A Consulting Engineers, Inc.

AGREEMENT

**Lump Sum or Specified Rate
Work Authorizations Used**

This Agreement ("Agreement") is entered into as of April 9, 2008, between **West Harris County Regional Water Authority ("WHCRWA")** and **V & A Consulting Engineers, Inc. (Contractor)**.

WITNESSETH:

WHEREAS, WHCRWA desires to obtain professional services pursuant to the terms and conditions of this Agreement; and

WHEREAS, Contractor desires to provide such services in exchange for the fees hereinafter specified.

NOW, THEREFORE, for and in consideration of the promises and mutual covenants contained herein, the parties hereto agree as follows:

1. General.

1.1 WHCRWA hereby retains Contractor and Contractor hereby agrees to perform the services and to develop the work product described on Exhibit "A" attached and incorporated hereto and specified on future written Work Authorizations (the "Work").

1.2 The relationship of Contractor to WHCRWA under this Agreement and otherwise shall be that of independent contractor. Contractor shall take no action which is likely to lead third parties to believe that it is a partner or venturer with WHCRWA in connection with the performance of the Work. Contractor is not, by the terms of this Agreement or otherwise, an agent, employee, or representative of WHCRWA. While Contractor shall be responsible to perform the duties and obligations owed to WHCRWA under this Agreement, WHCRWA shall not control or have the right to control the manner or methods employed by Contractor in the performance of its Work hereunder.

2. Certain Duties of Contractor.

In addition to its other duties under this Agreement, Contractor shall comply with the following:

2.1 Contractor agrees to provide prompt and efficient professional services as herein described for the fees hereinafter specified. Contractor shall coordinate

its performance of the services hereunder with WHCRWA. Contractor shall make periodic oral or written reports and recommendations to WHCRWA with respect to conditions, transactions, situations, or circumstances encountered by Contractor relating to the services to be performed under this Agreement.

2.2 Contractor shall make timely payments to all persons and entities supplying labor, materials, or equipment in connection with the Work to be performed under this Agreement. **CONTRACTOR SHALL PROTECT, INDEMNIFY AND HOLD HARMLESS, WHCRWA, ITS DIRECTORS, OFFICERS, AGENTS AND EMPLOYEES FROM ANY AND EVERY KIND AND CHARACTER OF DAMAGES, LAWSUITS, EXPENSES, DEMANDS, CLAIMS AND CAUSES OF ACTION ARISING AGAINST WHCRWA, ITS OFFICERS, AGENTS OR EMPLOYEES, OR ITS SUBCONTRACTORS, THEIR OFFICERS, AGENTS AND EMPLOYEES, OR OTHER PERSONS, FIRMS, OR CORPORATIONS WHATSOEVER ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

2.3 Contractor shall obtain, maintain, and pay for all licenses, permits, and certificates, including all professional licenses that are required by any statute, ordinance, rule, or regulation to be obtained by Contractor in connection with the performance of the Work under this Agreement. Contractor shall immediately notify WHCRWA of any suspension, revocation, or other detrimental action against any license, permit or certification required hereunder.

2.4 Contractor shall replace any of its personnel or consultants whose work product is deemed unsatisfactory by WHCRWA, in the WHCRWA's sole and absolute discretion.

2.5 Contractor expressly represents and warrants that all the Work to be performed by Contractor shall be of good quality and shall be performed in a professional manner using that degree of care and skill ordinarily exercised by and consistent with the standards of competent professionals providing similar services in connection with the same or similar projects, and that all work products provided by Contractor to WHCRWA shall be fit for the purposes intended by WHCRWA. Contractor's Work shall comply with all applicable federal, state and local laws, codes, rules and regulations.

2.6 Contractor agrees that it shall perform its obligations to WHCRWA under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of WHCRWA.

2.7 No Work of any nature shall be undertaken by Contractor under this Agreement until a written Work Authorization is executed and a notice to proceed is issued by WHCRWA.

3. Contractor's Compensation:

3.1 In complete compensation and satisfaction for all services to be provided by Contractor under this Agreement, WHCRWA shall pay the fees set forth in each Work Authorization and per rates included in Exhibit "B", attached and incorporated hereto. In the event the Work is delayed by Contractor, Contractor shall provide such overtime and additional manpower and equipment as is required to overcome such delays, and Contractor shall not be entitled to additional compensation to pay for any additional costs incurred in overcoming such delays. It is agreed that the fees specified in the Work Authorizations shall not be exceeded under any circumstances without prior written approval from WHCRWA.

3.2 Contractor shall invoice WHCRWA monthly in the proper amounts based on the services performed by Contractor. Dependant upon the payment option referenced on each Work Authorization, Contractor shall provide invoices as detailed in Exhibit "B" for the applicable payment option. All invoices are subject to approval by WHCRWA. WHCRWA shall approve, in whole or in part, or disapprove Contractor's invoices within 45 calendar days of receipt. Contractor will be notified if the invoice or any portion thereof is rejected by WHCRWA or is delayed for any reason.

3.3 WHCRWA shall pay Contractor within the above-mentioned 45 calendar day period the amount of any approved invoice. All remittances by WHCRWA of such compensation shall be made by check. Such checks will be made payable to Contractor and payments will be addressed to Contractor at its address specified herein for notices. Neither partial payments made hereunder nor approval of invoices or Work by WHCRWA shall be construed as final acceptance or approval of that part of Contractor's Work to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

3.4 Monthly invoices shall be submitted as follows:

Original copy to: Mary Jarmon
West Harris County Regional Water Authority
c/o Myrtle Cruz, Inc.
1621 Milam, 3rd Floor
Houston, Texas 77002-8017

Copies to:
Wayne Ahrens
West Harris County Regional Water Authority
c/o Dannenbaum Engineering Corporation
3100 West Alabama
Houston, Texas 77098

Cam Postle
 West Harris County Regional Water Authority
 c/o Postle Property Services, Inc.
 1300 Post Oak Boulevard, Suite 1110
 Houston, Texas 77056

4. **Insurance:**

4.1 Contractor must obtain the types and limits of insurance, including special provisions as provided below:

COVERAGE	LIMITS OF LIABILITY
Workers' Compensation	Statutory for Workers' Compensation
Employer's Liability	Bodily Injury by Accident \$500,000 (each accident) Bodily Injury by Disease \$500,000 (policy limit) Bodily Injury by Disease \$500,000 (each employee)
Commercial General Liability	Bodily and Personal Injury; Products and Completed Operations, Bodily Injury and Property Damage, and Contractual Liability Combined Limits of \$1,000,000 each Occurrence, and \$1,000,000 aggregate
Excess/Umbrella Coverage	\$1,000,000 each occurrence, and \$2,000,000 aggregate
Automobile Liability	\$1,000,000 combined single limit
Professional Liability Coverage	\$1,000,000 per claim/aggregate

4.2 **Issuers of Policies.** The issuer of any policy (1) shall have a Certificate of Authority to transact insurance business in Texas and (2) shall be an admitted insurer in the State of Texas and have a Best's rating of at least A and a Best's Financial size Category of Class VIII or better, according to the most current edition of *Best's Key Rating Guide*.

4.3 **Insured Parties.** Each policy, except those for Workers' Compensation, Employer's Liability, and Professional Liability, must name WHCRWA (and their officers, agents, and employees) as additional insured parties on the original policy and all renewals or replacements.

4.4 **Deductibles.** Contractor shall be responsible for and bear any claims or losses to the extent of any deductible amounts and waives any claim it may have for the same against WHCRWA and their officers, agents, or employees.

4.5 **Cancellation:**

(1) Each policy, with the exception of Professional Liability, must state that it may not be canceled, materially modified, or nonrenewed unless the insurance company gives WHCRWA 30 days' advance written notice. Professional liability policies must state that they may not be canceled, non-renewed, or have their limit of liability or types of coverage reduced by endorsement unless the insurance company gives WHCRWA 30 days advance written notice.

(2) Contractor shall give written notice to WHCRWA within 5 days of the date on which total claims by any party against Contractor reduce the aggregate amount of coverage below the amounts required by this Agreement.

4.6 **Subrogation.** Each policy, except Professional Liability, must contain an endorsement to the effect that the insurer waives any claim or right of subrogation to recover against WHCRWA and their officers, agents, or employees.

4.7 **Endorsement of Primary Insurance.** Each policy, except Worker's Compensation and Professional Liability, shall be endorsed to provide that they are primary coverages and not in excess of any other insurance available to WHCRWA, and without rights of contribution or recovery against WHCRWA or from any such other insurance available to WHCRWA with respect to claims arising under this Agreement..

4.8 **Liability for Premium.** Contractor shall pay all insurance premiums.

4.9 **Delivery of Policies.** Contractor shall provide certificates of insurance in accordance with the requirements of the Agreement and prior to the start of the Work.

4.10 **Indemnification.** CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS WHCRWA, ITS DIRECTORS, OFFICERS, AGENTS, AND EMPLOYEES FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING REASONABLE ATTORNEY'S FEES AND EXPENSES, COURT COSTS, AND OTHER EXPENSES INCURRED IN ENFORCING THIS INDEMNITY PROVISION) BROUGHT BY CONTRACTOR OR ANY OF CONTRACTOR'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENCE OR MISCONDUCT OF CONTRACTOR, OR CONTRACTOR'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES.

5. Term and Termination.

5.1 This Agreement shall be effective upon the date of execution by WHCRWA, subject to the notice to proceed and issuance of a Work Authorization, and shall terminate at close of business on _____, unless the Agreement is: (1) modified by written supplemental agreement prior to the date of termination; (2) extended under a work suspension pursuant to Article 5.5; or (3) otherwise terminated as hereinafter provided.

5.2 WHCRWA may terminate, with or without cause, this Agreement, resultant Work Authorizations and Contractor's performance of the Work hereunder at any time by giving 14 calendar days written notice to the Contractor. As soon as possible, but not later than the effective date of such notice, the Contractor shall, unless the notice directs otherwise, immediately discontinue all Work in connection with this Agreement and shall proceed to promptly cancel all existing orders and subcontracts insofar as such orders or subcontracts are chargeable to this Agreement. Within 30 calendar days after the effective date of the notice of termination, Contractor shall deliver to WHCRWA all work products obtained by or prepared by Contractor as part of its Work hereunder (including but not limited to all reports, schedules, charts, analysis, maps, letters, notes, manuals, plans, models and photographs), and shall submit an invoice showing in detail Work performed under this Agreement to the date of termination. WHCRWA shall then pay the prescribed fees to the Contractor for Work actually performed under this Agreement up to the date of termination, less any previous payments, in the same manner as prescribed in Section 3. The Contractor may, if necessary, submit invoices for vendor and subcontractor charges which are incurred in connection with this Agreement prior to the effective date of termination and received by the Contractor after the termination invoice. WHCRWA shall not be obligated to pay Contractor any other termination expenses.

5.3 Contractor may terminate its performance under this Agreement if WHCRWA fails to pay the compensation owed to Contractor pursuant to the terms of this Agreement. Should such default occur, Contractor shall have the right to terminate all or part of its duties under this Agreement as of the 30th calendar day following the receipt by WHCRWA of a notice from Contractor describing such default and intended termination, provided: (i) such termination shall be ineffective if within the 30 calendar day period WHCRWA cures the default, and (ii) such termination may be stayed beyond such 30 calendar day period, at the sole option of the Contractor, pending cure of the default.

5.4 Contractor may terminate Contractor's performance under this Agreement, with or without cause, by giving 14 calendar days written notice to the WHCRWA.

5.5 Should WHCRWA desire to suspend or terminate a Work Authorization but not terminate the Agreement, WHCRWA may orally notify the Contractor followed by written confirmation, giving fourteen (14) days notice. Both parties may waive the fourteen day notice in writing. A Work Authorization may be

reinstated and resumed in full force and effect upon written notice from WHCRWA to resume the work. If WHCRWA suspends a Work Authorization, the Work Authorization will terminate on the date specified unless the Work Authorization is amended to authorize additional time. WHCRWA shall have no liability for Work performed or costs incurred prior to the date authorized by WHCRWA to begin Work, during periods when Work is suspended, or after the completion date of the Work Authorization or termination of the Agreement.

5.6 No allowance for an extension of time for any cause whatsoever, shall be claimed by, or given to, Contractor unless Contractor shall have made written request upon WHCRWA for such extension within forty-eight (48) hours after the cause of such extension occurred.

6. The Ownership of Work Product.

6.1 WHCRWA shall be the Owner of all ideas and information created, developed or obtained by Contractor in the performance of the Work hereunder. Contractor shall furnish to WHCRWA all field notes, reports, the original tracings of all drawings, plans, maps, photographs, and other materials (including, if requested by WHCRWA, design computations, design sketches, and review drawings) prepared pursuant to this Agreement. The originals of all such documents shall be and remain the property of WHCRWA. With respect to the forms of expression of ideas reduced to a tangible medium of expression, such as engineering drawings, plans, maps, and the like, which are covered by federal copyright laws, WHCRWA shall be the Owner of such works and all exclusive rights of copyright therein. It is agreed that all such works shall be deemed to be "works made for hire," as that term is defined in 17 U.S.C. 101. However, in the event it should be determined that any of such works is not a "work made for hire," then Contractor agrees to assign, and does hereby assign unto WHCRWA all right, title, and interest in and to such works, including all right, title, and interest in and to all exclusive rights of copyright therein.

6.2 Notwithstanding the foregoing, Contractor may retain copies of such documents and shall have the right to use such copies for its own internal purposes, but Contractor may not provide such documents to others or sell, license, or otherwise market to others such documents or the information contained therein.

6.3 Contractor shall take all steps which may be necessary or appropriate to ensure that it or its nominee (which shall be WHCRWA) obtains title to the work product that may be created or developed by its employees and its subcontractors who assist in the performance of the Work hereunder. For example, in all Agreements entered into between Contractor and subcontractors, it shall be provided that the subcontractor assigns to Contractor or its nominee (which shall be WHCRWA) all of the subcontractor's rights in and to the Work and all exclusive rights of copyright herein.

7. Confidential Information.

7.1 During the term of this Agreement, Contractor may acquire from WHCRWA, or obtain or develop in connection with the performance of its Work hereunder, confidential information belonging to WHCRWA. As used herein, the term "confidential information" shall mean any information, written or oral, relating to the Work and which gives WHCRWA a business advantage over others, including but not limited to, processes, techniques, procedures, designs, drawings, plans, diagrams, specifications, computer programs, systems, know-how, trade secrets and other technical data, project information, policies and agreements, including this Agreement. Contractor shall not, without the prior written consent of WHCRWA, disclose or make available to any person, or use, directly or indirectly, except in connection with the performance of its Work hereunder, any of such confidential information. This obligation shall not apply to such portions of WHCRWA's confidential information which: (a) was previously known to Contractor (as evidenced by its written records) prior to obtaining the same from WHCRWA or developing the same for WHCRWA while performing the Work hereunder; or (b) was in the public domain prior to the time of disclosure by WHCRWA to the Contractor or prior to the time such information was developed by Contractor for WHCRWA under this Agreement; or (c) the information is later disclosed to Contractor by a third party who did not receive the same, directly or indirectly, from WHCRWA or who had no obligation of secrecy with respect thereto. No provision of this Agreement shall be construed to impose any confidentiality obligation or requirement upon the WHCRWA and the WHCRWA may (at its discretion) disclose to whomever any information or documents deemed appropriate by the WHCRWA.

7.2 Contractor further agrees that it shall not make any announcements or release any information or photographs concerning this Agreement or the Work or any part thereof to any member of the public or to the press or to any official body, unless prior written consent is obtained from WHCRWA.

7.3 Contractor shall take all steps which may be necessary or appropriate in order that its employees and its vendors and consultants are bound by and adhere to the confidentiality provisions of this Agreement (including but not limited to, the inclusion of appropriate clauses to carry out the purpose and intent hereof in all subcontracts, purchase orders and consulting agreements entered into by Contractor pursuant to the performance of this Agreement).

8. Miscellaneous.

8.1 This Agreement shall be construed and enforced for all purposes pursuant to the laws of the State of Texas and, to the extent applicable, all federal laws and all rules and regulations of any regulatory body or officer having jurisdiction. The parties agree that this Agreement is to be performed at least in part in Harris County, Texas and therefore the federal and state courts in Houston, Harris County, Texas shall have in

personam jurisdiction over the parties to resolve any disputes between them arising out of this Agreement.

8.2 This Agreement shall inure to the benefit of WHCRWA and Contractor. This Agreement is personal to Contractor and may not be assigned or transferred without the written permission of WHCRWA. This Agreement shall not be construed in favor or against either party on the basis that such party did nor did not draft the Agreement.

8.3 This Agreement (including all documents incorporated by reference or attached as exhibits hereto) represents the entire Agreement between WHCRWA and Contractor with respect to the subject matter hereof and supersedes and merges all prior negotiations, representations, discussions or agreements, either written or oral, with respect to the subject matter hereof. This Agreement may be amended only by written instrument signed by duly authorized representatives of both WHCRWA and Contractor.

8.4 All Work Authorizations issued pursuant to this Agreement shall be incorporated herein by reference, be subject to the terms and conditions set forth herein and shall follow the format set forth in Exhibit "A-1".

8.5 All notices required or permitted hereunder shall be in writing and shall be deemed delivered on the date of delivery if by personal delivery or, if by mail, three days after deposit with the United States Postal Service (certified mail, return receipt requested) addressed to the respective other party at the addresses shown below:

West Harris County Regional
Water Authority
c/o Allen Boone Humphries Robinson LLP
3200 Southwest Freeway
Suite 2600
Houston, Texas 77027

V & A Consulting Engineers, Inc.
Lake Merritt Plaza
1999 Harrison Street, Suite 975
Oakland, CA 94612

8.6 The failure of either party to insist on performance of any of the provisions of this Agreement shall not be construed as a waiver of the requirements of such provision.

IN WITNESS WHEREOF, this Agreement is executed in duplicate originals by WHCRWA and Contractor.

**WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY**

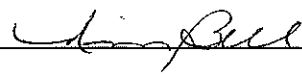
By: 

Name: Dan Sallee

Title: President

Date: 4-22-2008

V & A CONSULTING ENGINEERS, INC.

By: 

Name: Kim Bell

Title: Manager of Firmwide Services

Date: 4-10-08

EXHIBIT "A"

SCOPE OF WORK

Contractor agrees to furnish all supervision, labor, materials, supplies and equipment, and other items necessary to **perform professional corrosion engineering services** as directed, set forth and specified in individual Work Authorizations to be issued periodically pursuant to this agreement.

WHCRWA will issue Work Authorization(s) to authorize all work under this contract. The Contractor must sign and return a Work Authorization within seven (7) working days after receipt. Refusal to accept a Work Authorization may be grounds for termination of the Agreement. WHCRWA shall not be responsible for any action by the Contractor or any costs incurred by the Contractor relating to work not directly associated with or begun prior to the execution of a Work Authorization.

Work Authorizations are issued at the discretion of WHCRWA. While it is WHCRWA's intent to issue Work Authorizations hereunder, the **Contractor shall have no cause of action conditioned upon the lack of quantity or dollar amount of Work Authorizations issued. Contractor is not guaranteed Work Authorizations in the maximum total amount set forth in Exhibit "B", nor in any amount whatsoever. The amount set forth in Exhibit "B" represents the potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement.** Each Work Authorization shall be signed by both parties and become a part of the Agreement. No Work Authorization will waive WHCRWA's or the Contractor's responsibilities and obligations established in this Agreement. The Contractor shall promptly notify WHCRWA of any event that will affect completion of a Work Authorization.

Before additional Work may be performed or additional costs incurred a written Supplemental Work Authorization must be issued. Both parties must execute a Supplemental Work Authorization within the period of performance specified in the original Work Authorization. WHCRWA shall not be responsible for actions by the Contractor or any costs incurred by Contractor for work begun prior to the execution of the Supplemental Work Authorization. If the Contractor determines or reasonably anticipates that a Work Authorization cannot be completed before the specified completion date, the Contractor shall promptly notify WHCRWA. WHCRWA may, at its sole discretion, extend the work authorization period by execution of a Supplemental Work Authorization.

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 - Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and expenses and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost or expenses.

Option 2 - Specified Rate and Expenses Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

EXHIBIT "B-1"

HOURLY RATE SCHEDULE



Lake Merritt Plaza
1999 Harrison St., Suite 975
Oakland, CA 94612

510.903.6600 Tel
510.903.6601 Fax
vaengineering.com

V&A CONSULTING ENGINEERS

FEE SCHEDULE

EFFECTIVE JANUARY 31, 2008

<u>JOB TITLE</u>	<u>HOURLY RATES</u>
Principal-in-Charge	\$250
Senior Project Manager	\$200
Project Manager	\$190
Senior Project Engineer	\$170
Project Engineer	\$150
Associate Engineer	\$130
Assistant Engineer	\$115
CADD Designer	\$115
Engineering Assistant	\$95
NACE Level II Technician	\$90
Technician	\$80
Project Administrator/Clerical	\$70
Forensic Engineering	\$325
Deposition/Court Appearance	\$425

RATES INCLUDE OVERHEAD AND PROFIT

OTHER DIRECT COSTS

Subcontractor/Subconsultant	Cost + 10%
Travel (Air/Hotel/Per Diem/Rent-A-Car)	At Cost
Auto/Truck Mileage	\$0.50/Mile
Field Truck Rental	\$80/Day
Confined Space Entry Truck and Safety Equipment Rental	\$120/Day
Sewer Flow Meter Rental	\$1,200/Month
Sewer Flow Meter Rental	\$300/Week
Rain Gauge Meter Rental	\$100/Month
Ultrasonic Thickness Gauge Rental	\$150/Day
Reproduction	At Cost

**AMENDMENT No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(V & A Consulting Engineers, Inc.)**

This Amendment to Agreement for Professional Services (the "Amendment") is by and between the West Harris County Regional Water Authority (the "Authority") and V & A Consulting Engineers, Inc. ("Contractor"), to be effective the 10th day of June, 2009.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated April 9, 2008 (the "Agreement") to perform certain professional services or such other related services that may be required in connection with the Project as defined in the Agreement.


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement, is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

V & A CONSULTING ENGINEERS, INC.


Dan H. Sallee, President

Date: 6/10/09

 Date: 6-29-09

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$200,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost or expenses.

Option 2 – Specified Rate and Expenses Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

EXHIBIT "B-1"

HOURLY RATE SCHEDULE



Lake Merritt Plaza
1999 Harrison St., Suite 975
Oakland, CA 94612

510.903.6600 Tel:
510.903.6601 Fax:
vaengineering.com

V&A CONSULTING ENGINEERS

FEE SCHEDULE

EFFECTIVE JANUARY 31, 2008

<u>JOB TITLE</u>	<u>HOURLY RATES</u>
Principal-in-Charge	\$250
Senior Project Manager	\$200
Project Manager	\$190
Senior Project Engineer	\$170
Project Engineer	\$150
Associate Engineer	\$130
Assistant Engineer	\$115
CADD Designer	\$115
Engineering Assistant	\$95
NACE Level II Technician	\$90
Technician	\$80
Project Administrator/Clerical	\$70
Forensic Engineering	\$325
Deposition/Court Appearance	\$425

RATES INCLUDE OVERHEAD AND PROFIT

OTHER DIRECT COSTS

Subcontractor/Subconsultant	Cost + 10%
Travel (Air/Hotel/Per Diem/Rent-A-Car)	At Cost
Auto/Truck Mileage	\$0.50/Mile
Field Truck Rental	\$80/Day
Confined Space Entry Truck and Safety Equipment Rental	\$120/Day
Sewer Flow Meter Rental	\$1,200/Month
Sewer Flow Meter Rental	\$300/Week
Rain Gauge Meter Rental	\$100/Month
Ultrasonic Thickness Gauge Rental	\$150/Day
Reproduction	At Cost

**AMENDMENT No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(V&A Consulting Engineers, Inc.)**

This Amendment to Agreement for Professional Services (the "Amendment") is by and between the West Harris County Regional Water Authority (the "Authority") and V&A Consulting Engineers, Inc. ("Contractor"), to be effective the 9th day of March, 2011.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated April 9, 2008 (the "Agreement") to perform certain professional services or such other related services that may be required in connection with the Project as defined in the Agreement; and amended by Amendment No. 1 on June 10, 2009.


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and amended on June 10, 2009 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

V&A CONSULTING ENGINEERS, INC.



Bruce G. Parker, President

Date: 3/9/2011



Date: 3-22-11

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$300,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost or expenses.

Option 2 – Specified Rate and Expenses Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**AMENDMENT No. 3 TO AGREEMENT FOR PROFESSIONAL SERVICES
(V & A Consulting Engineers, Inc.)**

This Amendment to Agreement for Professional Services (the "Amendment") is by and between the West Harris County Regional Water Authority (the "Authority") and V & A Consulting Engineers, Inc. ("Contractor"), to be effective the 8th day of August, 2012.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated April 9, 2008 (the "Agreement") to perform certain professional services or such other related services that may be required in connection with the Project as defined in the Agreement; amended by Amendment No. 1 on June 10, 2009; and amended by Amendment No. 2 on March 9, 2011.

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and amended by Addendum No. 1 on June 10, 2009 and further amended by Addendum No. 2 on March 9, 2011 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.
2. Exhibit "B-1" – Hourly Rate Schedule, originally attached to and made a part of the Agreement, is hereby replaced with the Revised Exhibit "B-1" Hourly Rate Schedule attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

V & A CONSULTING ENGINEERS, INC.



Bruce G. Parker, President

Date: 8/8/12



Date: 8/7/2012

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$400,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost or expenses.

Option 2 – Specified Rate and Expenses Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.



EXHIBIT "B-1"

V&A CONSULTING ENGINEERS

2012 TEXAS FEE SCHEDULE

EFFECTIVE JANUARY 1, 2011

<u>JOB TITLE</u>	<u>HOURLY RATES</u>
Principal-In-Charge	\$259
Senior Project Manager	\$210
Project Manager	\$200
Senior Project Engineer/Senior Project Designer	\$180
Structural Engineer/Structural Designer	\$180
Project Engineer/Project Designer	\$160
Associate Designer	\$140
Assistant Designer	\$124
CADD Designer	\$124
Engineering Assistant	\$108
Senior Technician	\$105
NACE Certified Coating Inspector	\$78
Technician	\$95
Project Administrator/Clerical	\$75
Forensic Engineering	\$400
Deposition/Court Appearance	\$500

RATES INCLUDE OVERHEAD AND PROFIT

OTHER DIRECT COSTS

Subcontractor/Subconsultant	Cost + 10%
Soil Samples (pH, Cl ⁻ , SO ₄ ⁻ , Saturated Resistivity, As-Rec'd Resistivity, Bicarbonate)	\$150 to \$180/Sample
Travel (Air/Hotel/Per Diem/Rent-A-Car)	At Cost
Auto/Truck Mileage	Federal Rate
Field Truck Rental	\$80 to \$85/Day
Confined Space Entry Truck and Safety Equipment Rental	\$120 to \$125/Day
Reproduction	At Cost

**AMENDMENT No. 4 TO AGREEMENT FOR PROFESSIONAL SERVICES
(V & A Consulting Engineers, Inc.)**

This Amendment to Agreement for Professional Services (the "Amendment") is by and between the West Harris County Regional Water Authority (the "Authority") and V & A Consulting Engineers, Inc. ("Contractor"), to be effective the 12th day of February, 2014.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated April 9, 2008 (the "Agreement") to perform certain professional services or such other related services that may be required in connection with the Project as defined in the Agreement; amended by Amendment No. 1 on June 10, 2009; and amended by Amendment No. 2 on March 9, 2011; and amended by Amendment No. 3 on August 8, 2012.

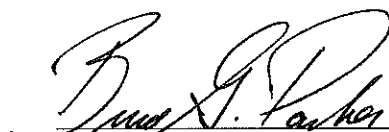
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and amended by Addendum No. 1 on June 10, 2009 and further amended by Addendum No. 2 on March 9, 2011, and amended by Amendment No. 3 on August 8, 2012 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

V & A CONSULTING ENGINEERS, INC.


Date: 2/12/14
Bruce G. Parker, President

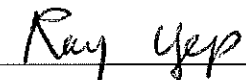

Date: 2/25/14
CEO

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$500,000.00.

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost or expenses.

Option 2 – Specified Rate and Expenses Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.



Exhibit B-1

V&A CONSULTING ENGINEERS

2014 FEE SCHEDULE

EFFECTIVE JANUARY 1, 2014

<u>JOB TITLE</u>	<u>HOURLY RATES</u>
Principal-in-Charge	\$283
Senior Project Manager	\$247
Project Manager	\$221
Senior Project Engineer	\$206
Structural Engineer	\$206
Project Engineer	\$185
Associate Engineer/Designer	\$165
Assistant Engineer/Designer	\$134
CADD Designer	\$134
Engineering Assistant	\$124
Senior Technician	\$118
NACE Certified Coating Inspector	\$82
Technician	\$103
Project Administrator/Clerical	\$82
Forensic Engineering	\$412
Deposition/Court Appearance	\$515

RATES INCLUDE OVERHEAD AND PROFIT

OTHER DIRECT COSTS

Subcontractor/Subconsultant	Cost + 10%
Soil and Coating Sample Analysis	Cost + 10%
Travel (Air/Hotel/Per Diem/Rent-A-Car)	At Cost
Auto/Truck Mileage	Federal Rate
Field Truck	\$85/Day
Confined Space Entry Truck and Safety Equipment	\$130/Day
Reproduction, Printing, Shipping	At Cost

**AMENDMENT No. 5 TO AGREEMENT FOR PROFESSIONAL SERVICES
(V & A Consulting Engineers, Inc.)**

This Amendment to Agreement for Professional Services (the "Amendment") is by and between the West Harris County Regional Water Authority (the "Authority") and V & A Consulting Engineers, Inc. ("Contractor"), to be effective the 12th day of March, 2014.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated April 9, 2008 (the "Agreement") to perform certain professional services or such other related services that may be required in connection with the Project as defined in the Agreement; amended by Amendment No. 1 on June 10, 2009; amended by Amendment No. 2 on March 9, 2011; amended by Amendment No. 3 on August 8, 2012; and amended by Amendment No. 4 on February 12, 2014.

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit "B-1" – Hourly Rate Schedule, originally attached to and made a part of the Agreement, is hereby replaced with the Revised Exhibit "B-1" Hourly Rate Schedule attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

V & A CONSULTING ENGINEERS, INC.


Bruce G. Parker, President

Date: 3/12/14



Date: 3/14/2014

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$500,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost or expenses.

Option 2 – Specified Rate and Expenses Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.



Exhibit B-1

V&A CONSULTING ENGINEERS

2014 FEE SCHEDULE

EFFECTIVE JANUARY 1, 2014

<u>JOB TITLE</u>	<u>HOURLY RATES</u>
Principal-in-Charge	\$283
Senior Project Manager	\$247
Project Manager	\$221
Senior Project Engineer	\$206
Structural Engineer	\$206
Project Engineer	\$185
Associate Engineer/Designer	\$165
Assistant Engineer/Designer	\$134
CADD Designer	\$134
Engineering Assistant	\$124
Senior Technician	\$118
NACE Certified Coating Inspector	\$82
Technician	\$103
Project Administrator/Clerical	\$82
Forensic Engineering	\$412
Deposition/Court Appearance	\$515

RATES INCLUDE OVERHEAD AND PROFIT

OTHER DIRECT COSTS

Subcontractor/Subconsultant	Cost + 10%
Soil and Coating Sample Analysis	Cost + 10%
Travel (Air/Hotel/Per Diem/Rent-A-Car)	At Cost
Auto/Truck Mileage	Federal Rate
Field Truck	\$85/Day
Confined Space Entry Truck and Safety Equipment	\$130/Day
Reproduction, Printing, Shipping	At Cost

**AMENDMENT No. 6 TO AGREEMENT FOR PROFESSIONAL SERVICES
(V & A Consulting Engineers, Inc.)**

This Amendment to Agreement for Professional Services (the "Amendment") is by and between the West Harris County Regional Water Authority (the "Authority") and V & A Consulting Engineers, Inc. ("Contractor"), to be effective the 8th day of April, 2015.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated April 9, 2008 (the "Agreement") to perform certain professional services or such other related services that may be required in connection with the Project as defined in the Agreement; amended by Amendment No. 1 on June 10, 2009; amended by Amendment No. 2 on March 9, 2011; amended by Amendment No. 3 on August 8, 2012; amended by Amendment No. 4 on February 12, 2014 and amended by Amendment No. 5 on March 12, 2014 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. The attached Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement is hereby replaced with the Revised Exhibit B – Basis of Payment.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

V & A CONSULTING ENGINEERS, INC.



Bruce G. Parker, President

Date: 4-8-2015



Date: 3-31-15

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$600,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost or expenses.

Option 2 – Specified Rate and Expenses Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Vinson&Elkins

Vinson & Elkins

George R. Murphy gmmurphy@velaw.com
Tel 713.758.2693 Fax 713.615.5433

July 8, 2010

West Harris County Regional Water Authority
c/o Katie Dorfman
Allen Boone & Humphries, LLP
3200 Southwest Freeway, 26th Floor
Houston, Texas 77027

Re: West Harris County Regional Water Authority: Right-of-Way Acquisition matters in connection with Second Source Line

Gentlemen:

We appreciate being asked to represent West Harris County Regional Water Authority ("Authority") in connection with the acquisition of certain parcels to be designated by the Authority that are related to the Authority's water line facilities along the route shown on Exhibit A attached hereto (the "Second Source Line"). Our experience has been that it is mutually beneficial to set forth, at the outset of our representation, the role and responsibilities of both our law firm and the client. That is the purpose of both this letter and the separate Standard Terms of Engagement for Legal Services that is enclosed with this letter.

Client

The client for this engagement is West Harris County Regional Water Authority. This engagement does not create an attorney-client relationship with any related persons or entities, such as parents, subsidiaries, affiliates, employees, officers, directors, shareholders, or partners.

Scope of Engagement

As your counsel we will instigate proceedings to assert and secure the Authority's rights in the right of way associated with the parcels to be designated by the Authority as necessary for the Authority's water line facilities along the route shown on Exhibit A attached hereto, known as the Second Source Line. This engagement will include only the matter described in this paragraph and any additional matters that are made part of the engagement by written supplement to this letter.

We understand and agree that this is not an exclusive agreement, and you are free to retain any other counsel of your choosing. We recognize that we shall be disqualified from representing any other client with interests materially and directly adverse to yours (i) in any matter which is substantially related to our representation of you and (ii) with respect to any matter where there is a reasonable probability that confidential information you furnished to us could be used to your disadvantage. You understand and agree that, with those exceptions, we are free to represent other clients, including clients whose interests may conflict with yours in litigation, business transactions, or other legal matters. We have discussed that we represent or have represented clients with interests that may conflict with yours such as property owners in connection with public acquisitions by unrelated governmental or quasi-governmental entities. You agree that our representing you in this matter will not prevent or disqualify us from representing clients adverse to you in other matters and that you consent in advance to our undertaking such adverse representations.

This engagement and our attorney-client relationship will be terminated when we have completed the services in the matters covered by this engagement letter and any written supplements to this engagement letter. If you later retain us to perform further or additional services, our attorney-client relationship will be established by another engagement letter.

Our firm represents a number of lawyers and law firms in professional liability, business, tax and other matters. This means that we may have represented, may currently represent, or in the future may represent counsel opposing your interests in a matter in which we represent you. This will not in any way affect the diligence or vigor with which we represent your interests in the matter or the matters on which you engage our firm. If this is a concern to you, please let us know and we will check on the particular lawyers involved in your matter or matters.

Cooperation

In order to enable us to render effectively the legal services contemplated, West Harris County Regional Water Authority has agreed to disclose fully and accurately all facts and keep us informed of all developments relating to the litigation. We necessarily must rely on the accuracy and completeness of the facts and information you and your agents provide to us. West Harris County Regional Water Authority has agreed to cooperate fully with us and to make its representatives available to attend meetings, discovery proceedings and conferences, hearings and other proceedings. We will attempt to schedule depositions, hearings, etc. to serve the convenience of those representatives, but it is the nature of litigation that such schedules are often not within our control.

We will of course make our best efforts to achieve a result in this litigation that is satisfactory to West Harris County Regional Water Authority. However, because the outcome of litigation is subject to the vagaries and risks inherent in the litigation process, it is understood that we make no promises or guarantees to West Harris County Regional Water Authority concerning the outcome and cannot do so.

Fees

For this matter, our fees will be based on the time spent by the lawyers and non-lawyer personnel who work on the matter. Billing rates for our attorneys vary according to the experience of the individuals. Our current billing rates for those attorneys expected to work on your matter range from \$335.00 an hour for the most junior associate to \$565.00 an hour for the most senior partner. In an effort to reduce overall legal costs, we utilize non-lawyer personnel whenever appropriate. Time devoted by such non-lawyer personnel to client matters is currently charged at billing rates generally ranging from \$110.00 to \$300.00 per hour. Billing rates for both attorneys and non-lawyer personnel are, from time to time, reviewed and adjusted and may be changed with or without notice. Please feel free at any time to ask for our current rates.

By engaging us, you acknowledge and agree that you are responsible for payment of fees, expenses and disbursements. In appropriate matters as an accommodation to you, we may agree to direct our bills to third-party payors (e.g., an insurer), but you agree that you will remain fully responsible for timely payment of our bills if for any reason the third party does not timely pay such bills. Likewise, we agree that we owe our professional obligations to you, even when a third party pays our bills.

Other Charges

In addition to our fees, there will be other charges for items incident to the performance of our legal services, such as reprographics, couriers, travel expenses, some long distance telephone calls, facsimile transmissions, postage, overtime for secretaries and other non-legal staff, specialized computer applications such as computerized legal research, media services and practice support, records retrieval, and filing fees. The basis upon which we establish these other charges is set forth in the Standard Terms of Engagement For Legal Services.

Investment Disclosures

Many of the Firm's lawyers, directly or beneficially, own interests in corporations and other entities or in real property. Although our computerized system used for checking conflicts of interest tracks all investments made in the name of the Firm, it does not contain data as to investments made individually by each of the Firm's lawyers. If you are at all concerned about these individual investments, we will be pleased to canvass our lawyers about their individual investments in any entity or entities about which you may be concerned.

Withdrawal or Termination

Our relationship is based upon mutual consent and you may terminate our representation at any time, with or without cause, by notifying us. Your termination of our services will not affect your responsibility for payment of fees for legal services rendered and of other charges incurred before termination and in connection with an orderly transition of the matter.

We are subject to the rules of professional conduct for the jurisdictions in which we practice, which list several types of conduct or circumstances that require or allow us to withdraw from representing a client, including for example, nonpayment of fees or costs, misrepresentation or failure to disclose material facts, fundamental disagreements, and conflict of interest with another client. We try to identify in advance and discuss with you any situation which may lead to our withdrawal, and if withdrawal ever becomes necessary, we give you written notice of our withdrawal. If we elect to withdraw for any reason, you will take all steps necessary to free us of any obligation to perform further, including the execution of any documents necessary to complete our withdrawal, and we will be entitled to be paid for all services rendered and other charges accrued on your behalf to the date of withdrawal.

Other

If the foregoing, including the items set forth in the enclosed Standard Terms of Engagement For Legal Services, correctly reflects your understanding of the terms and conditions of our representation, please so indicate by executing the enclosed copy of this letter in the space provided below and return it to the undersigned.

Please contact me if you have any questions. We are pleased to have this opportunity to be of service and to work with you.

Very truly yours,

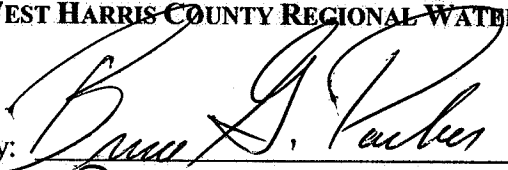
VINSON & ELKINS L.L.P.

By 
George R. Murphy

Enclosure

AGREED TO AND ACCEPTED:

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

By: 

Title: PRESIDENT

VINSON & ELKINS L.L.P.*Standard Terms of Engagement
for Legal Services*

This statement sets forth certain standard terms of our engagement as your lawyers and is intended as a supplement to the engagement letter that we have with you as our client. Unless modified in writing by mutual agreement, these terms will be an integral part of our agreement with you as reflected in the engagement letter. Therefore, we ask that you review this statement carefully and contact us promptly if you have any questions. We suggest that you retain this statement in your file with the engagement letter.

The Scope of Our Work

You should have a clear understanding of the legal services we will provide. Any questions that you have should be dealt with promptly.

We will at all times act on your behalf to the best of our ability. Any expressions on our part concerning the outcome of your legal matters are expressions of our best professional judgment, but are not guarantees. Such opinions are necessarily limited by our knowledge of the facts and are based on the state of the law at the time they are expressed.

It is our policy that the person or entity that we represent is the person or entity that is identified in our engagement letter, and absent an express agreement to the contrary does not include any affiliates of such person or entity (e.g., if you are a corporation or partnership, any parents, subsidiaries, employees, officers, directors, shareholders or partners of the corporation or partnership, or commonly owned corporations or partnerships; or, if you are a trade association, any members of the trade association). If you believe this engagement includes additional entities or persons as our clients you should inform us immediately.

It is also our policy that the attorney-client relationship will be considered terminated upon our completion of any services that you have retained us to perform. If you later retain us to perform further or additional services, our attorney-client relationship will be revived subject to the terms of engagement that we agree on at that time.

Who Will Provide the Legal Services

Customarily, each client of the Firm is served by a principal attorney contact. The principal attorney should be someone in whom you have confidence and with whom you enjoy working. You are free to request a change of principal attorney at any time. Subject to the supervisory role of the principal attorney, your work or parts of it may be performed by other lawyers and non-lawyers in the Firm. Such delegation may be for the purpose of involving lawyers or non-lawyers with special expertise in a given area or for the purpose of providing

services on the most efficient and timely basis. Whenever practicable, we will advise you of the names of those attorneys and non-lawyers who work on your matters.

How Our Fees Will Be Set

Generally, our fees are based on the time spent by the lawyers and non-lawyers who work on the matter. We will charge for all time spent in representing your interests, including, by way of illustration, telephone and office conferences with you and your representatives, consultants (if any), opposing counsel, and others; conferences among our legal and non-lawyer personnel; factual investigation; legal research; responding to your requests for us to provide information to your auditors in connection with reviews or audits of financial statements; drafting letters and other documents; and travel. We will keep accurate records of the time we devote to your work in units of quarters of an hour.

The hourly rates of our lawyers and non-lawyers are, from time to time, reviewed and adjusted and may be changed with or without notice to reflect current levels of legal experience, changes in overhead costs, and other factors. London rates are set in UK pounds sterling and are converted to dollars using the official exchange rate established by the UK government at the beginning of the calendar quarter in which the time was worked.

Although we may from time to time, at the client's request, furnish estimates of legal fees and other charges that we anticipate will be incurred, these estimates are by their nature inexact (due to unforeseeable circumstances) and, therefore, the actual fees and charges ultimately billed may vary from such estimates.

With your advance agreement, the fees ultimately charged may be based upon a number of factors, such as:

- The time and effort required, the novelty and complexity of the issues presented, and the skill required to perform the legal services promptly;
- The fees customarily charged in the community for similar services and the value of the services to you;
- The amount of money or value of property involved and the results obtained;
- The time constraints imposed by you as our client and other circumstances, such as an emergency closing, the need for injunctive relief from court, or substantial disruption of other office business;
- The nature and longevity of our professional relationship with you;
- The experience, reputation and expertise of the lawyers performing the services;

- The extent to which office procedures and systems have produced a high-quality product efficiently.

For certain well-defined services (for example, a simple business incorporation), we will (if requested) quote a flat fee. It is our policy not to accept representation on a flat-fee basis except in such defined-service areas or pursuant to a special arrangement tailored to the needs of a particular client. In all such situations, the flat fee arrangement will be expressed in a letter, setting forth both the amount of the fee and the scope of the services to be provided.

We also will, in appropriate circumstances, provide legal services on a contingent fee basis. Any contingent fee representation must be the subject of a separate and specific engagement letter.

Additional Charges

In addition to our fees, there will be other charges for items incident to the performance of our legal services, such as reprographics, couriers, travel expenses, some long distance telephone calls, facsimile transmissions, postage, overtime for secretaries and other non-legal staff, specialized computer applications such as computerized legal research, media services and practice support, records retrieval, and filing fees. The current basis for these charges in the Firm's U.S. offices is set forth below. Charges for similar services in the Firm's foreign offices may vary from those shown below. The Firm will review this schedule of charges periodically and adjust them to take into account changes in the Firm's costs and other factors.

Reprographics and Production Services

The Firm charges \$.15 per page for non-color duplicating and scanning, including printing electronic and scanned images, and printing for duplication purposes. Additional charges apply for color and oversized (over 11x17 inches) documents. There are special charges for other production services, which are available on request.

Courier Services

Charges, which may vary based on the service provider used and the service provided, are billed at the Firm's actual cost.

Computer Aided Legal Research (CALR)

Charges for services are billed at the Firm's actual cost.

Telefax

The Firm charges \$0.25 per page for outgoing telefaxes, which includes all telephone costs. There is no charge for incoming faxes.

Telephone

The Firm does not charge for local or domestic long distance calls originating in the Firm's U.S. offices. Other long distance calls, including international long distance calls, audio conferencing services, and calling card calls are charged at the Firm's actual cost for the call or conference.

Travel-Related Expenses

Airfare, hotel, meals, ground transportation and other travel related costs are billed at the Firm's actual costs, including negotiated discounts.

All Other Costs

The Firm charges actual disbursements for third-party services such as court reporters, expert witnesses, etc., and may recoup expenses reasonably incurred in connection with services performed in-house, such as postage, non-legal staff overtime, file retrieval, media services and practice support, etc. A current schedule of these charges is available on request.

Unless special arrangements are otherwise made, fees and expenses of others (such as experts, investigators, consultants and court reporters) will be the responsibility of, and billed directly to, the client. Further, all invoices in excess of \$500 will be forwarded to the client for direct payment.

Billing Arrangements and Terms

Our billing rates are based on the assumption of prompt payment. Consequently, unless other arrangements are made, fees for services and other charges will be billed monthly and are payable within thirty days of receipt.

By engaging us, you acknowledge and agree that you are responsible for payment of fees, expenses and disbursements. In appropriate matters as an accommodation to you, we may agree to direct our bills to third-party payors (e.g., an insurer), but you agree that you will remain fully responsible for timely payment of our bills if for any reason the third party does not timely pay such bills. Likewise, we agree that we owe our professional obligations to you, even when a third party pays our bills.

Confidentiality

We will preserve the confidentiality of information you provide us consistent with applicable law including the rules of professional conduct governing lawyers. This confirms your agreement that, with respect to firm brochures or other material or information regarding the firm and its practice, we may indicate the general nature of our representation of you and your identity as a firm client.

Client and Firm Documents

We will maintain any documents that you furnish to us in our client file (or files) for this matter. At your request, we will return your documents to you at the conclusion of the matter (or earlier, if appropriate). It is your obligation to tell us which, if any, of the documents that you furnish us that you want returned. We will return those documents to you promptly after our receipt of payment for outstanding fees and charges. Our own files pertaining to this matter, including the work performed by our attorneys, will be retained by the Firm. Any documents retained by the firm will be kept for a certain period of time, and ultimately we will destroy them in accordance with our record retention program schedule then in effect.

Third Party Contractors

Like many law firms and other organizations, our Firm from time to time uses or deals with third parties in connection with certain areas of our practice or operations. For instance, these third parties may include vendors, consultants, advisors, or other service providers in areas such as litigation support, storage, document management, hardware and software systems, law firm practice management, information technology, accounting and financial matters, and the like. Additionally, the Firm may use temporary lawyers and non-lawyers in certain matters. In performing their services, these parties may have some access to confidential client information, and the Firm accordingly has appropriate confidentiality arrangements with them obligating them to preserve the confidentiality of any such information. You consent to the Firm allowing non-employee contractors access to such information as described. We take our confidentiality obligations very seriously; do not hesitate to contact us with any questions.

**2010 HOURLY RATES FOR LAWYERS AND STAFF
EXPECTED TO WORK FOR
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY**

George Murphy, Partner	\$565.00
David Wall, Associate	\$335.00
Kim Neumann, Paralegal	\$270.00
Julie McCurtain, Paralegal	\$235.00

Per the terms of this engagement, these rates may be adjusted.



VINSON & ELKINS L.L.P.
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1001 FANNIN STREET
HOUSTON, TEXAS 77002-6760
TELEPHONE (713) 758-2222
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Larry W. Nettles
Direct Dial 713-758-4586
Direct Fax 713-615-5538
lnettles@velaw.com

April 27, 2004

West Harris County Regional Water Authority
Mr. Dan Sallee
c/o Alex Garcia
Allen Boone Humphries LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

Re: Representation of West Harris County Regional Water Authority on
Environmental Matters

Dear Mr. Sallee:

Thank you for asking us to represent West Harris County Regional Water Authority (the "Authority") in connection with environmental matters relating to the acquisition of pipeline rights-of-way from Exxon Gas System, Inc., ("Exxon") and other environmental matters that you may refer to us from time to time. As you know, we are also representing the Authority in a matter pursuant to an engagement letter dated August 7, 2003 relating to the Authority's acquisition of property from Reagan and Regina Folmar for the construction and operation of water line facilities. As indicated in our original engagement letter, we are sending you this supplemental engagement letter to confirm the requested expansion of the scope of our representation of West Harris County Regional Water Authority to include environmental matters relating to the acquisition of pipeline rights-of-way from Exxon.

This letter constitutes our agreement to represent West Harris County Regional Water Authority pursuant to the terms of our original engagement letter and the attached Standard Terms of Engagement for Legal Services.

For this matter, our fees will be based on the time spent by the lawyers and paralegal personnel who work on the matter. As explained in the attached Standard Terms of Engagement for Legal Services, billing rates for our attorneys vary according to the experience of the individuals. Our current billing rates for those attorneys expected to work on your matter range from \$160 an hour for the most junior associate to \$495 an hour for the most senior partner. In an effort to reduce overall legal costs, we utilize paralegal personnel whenever appropriate. Time devoted by such paralegal personnel to client matters is currently charged at billing rates generally ranging from \$90 to \$160 per hour. Billing rates for both attorneys and paralegal

Mr. Dan Sallee

Page 2

April 27, 2004


personnel are, from time to time, reviewed and adjusted, and may be changed with or without notice. Please feel free at any time to ask for our current rates.

If this letter, including the terms set forth in the original engagement letter and the Standard Terms of Engagement For Legal Services, correctly reflects your understanding of the terms and conditions of our representation, please have an authorized representative of the Authority so indicate by executing a copy of this letter in the space provided below and returning it to me.

Please contact me if you have any questions. Thank you again for asking us to represent the Authority in this new matter; we are pleased to have this opportunity to be of service and to work with you.

Very truly yours,

VINSON & ELKINS L.L.P.

By: 
Larry W. Nettles

Enclosure

AGREED TO AND ACCEPTED:

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

By: 

Title: President

VINSON & ELKINS L.L.P.

*Standard Terms of Engagement
for Legal Services*

This statement sets forth certain standard terms of our engagement as your lawyers and is intended as a supplement to the engagement letter that we have with you as our client. Unless modified in writing by mutual agreement, these terms will be an integral part of our agreement with you as reflected in the engagement letter. Therefore, we ask that you review this statement carefully and contact us promptly if you have any questions. We suggest that you retain this statement in your file with the engagement letter.

The Scope of Our Work

You should have a clear understanding of the legal services we will provide. Any questions that you have should be dealt with promptly.

We will at all times act on your behalf to the best of our ability. Any expressions on our part concerning the outcome of your legal matters are expressions of our best professional judgment, but are not guarantees. Such opinions are necessarily limited by our knowledge of the facts and are based on the state of the law at the time they are expressed.

It is our policy that the person or entity that we represent is the person or entity that is identified in our engagement letter, and absent an express agreement to the contrary does not include any affiliates of such person or entity (i.e., if you are a corporation or partnership, any parents, subsidiaries, employees, officers, directors, shareholders or partners of the corporation or partnership, or commonly owned corporations or partnerships; or, if you are a trade association, any members of the trade association). If you believe this engagement includes additional entities or persons as our clients you should inform us immediately.

It is also our policy that the attorney-client relationship will be considered terminated upon our completion of any services that you have retained us to perform. If you later retain us to perform further or additional services, our attorney-client relationship will be revived subject to the terms of engagement that we agree on at that time.

This engagement shall be subject to the Texas Disciplinary Rules of Professional Conduct.

Who Will Provide the Legal Services

Customarily, each client of the firm is served by a principal attorney contact. The principal attorney should be someone in whom you have confidence and with whom you enjoy working. You are free to request a change of principal attorney at any time. Subject to the supervisory role of the principal attorney, your work or parts of it may be performed by other lawyers and legal assistants in the firm. Such delegation may be for the purpose of involving

lawyers or legal assistants with special expertise in a given area or for the purpose of providing services on the most efficient and timely basis. Whenever practicable, we will advise you of the names of those attorneys and legal assistants who work on your matters.

How Our Fees Will Be Set

Generally, our fees are based on the time spent by the lawyers and paralegal personnel who work on the matter. We will charge for all time spent in representing your interests, including, by way of illustration, telephone and office conferences with you and your representatives, consultants (if any), opposing counsel, and others; conferences among our legal and paralegal personnel; factual investigation; legal research; responding to your requests for us to provide information to your auditors in connection with reviews or audits of financial statements; drafting letters and other documents; and travel. We will keep accurate records of the time we devote to your work in units of quarters of an hour.

The hourly rates of our lawyers and legal assistants are reviewed and adjusted annually on a Firm-wide basis to reflect current levels of legal experience, changes in overhead costs, and other factors.

Although we may from time to time, at the client's request, furnish estimates of legal fees and other charges that we anticipate will be incurred, these estimates are by their nature inexact (due to unforeseeable circumstances) and, therefore, the actual fees and charges ultimately billed may vary from such estimates.

With your advance agreement, the fees ultimately charged may be based upon a number of factors, such as:

- The time and effort required, the novelty and complexity of the issues presented, and the skill required to perform the legal services promptly;
- The fees customarily charged in the community for similar services and the value of the services to you;
- The amount of money or value of property involved and the results obtained;
- The time constraints imposed by you as our client and other circumstances, such as an emergency closing, the need for injunctive relief from court, or substantial disruption of other office business;
- The nature and longevity of our professional relationship with you;
- The experience, reputation and expertise of the lawyers performing the services;
- The extent to which office procedures and systems have produced a high-quality product efficiently.

For certain well-defined services (for example, a simple business incorporation), we will (if requested) quote a flat fee. It is our policy not to accept representation on a flat-fee basis except in such defined-service areas or pursuant to a special arrangement tailored to the needs of a particular client. In all such situations, the flat fee arrangement will be expressed in a letter, setting forth both the amount of the fee and the scope of the services to be provided.

We also will, in appropriate circumstances, provide legal services on a contingent fee basis. Any contingent fee representation must be the subject of a separate and specific engagement letter.

Additional Charges

In addition to our fees, there will be other charges for items incident to the performance of our legal services, such as photocopying, messengers, travel expenses, long-distance telephone calls, facsimile transmissions, postage, overtime for secretaries and other non-legal staff, specialized computer applications such as computerized legal research, and filing fees. The current basis for these charges is set forth below. The Firm will review this schedule of charges on an annual basis and adjust them to take into account changes in the Firm's costs and other factors.

Duplicating

The Firm charges \$.15 per page.

Courier Services

The Firm charges an amount which generally represents cost including the distribution service provided by the Firm. Depending on the volume of work performed by a service provider, the Firm may receive a volume discount during a particular accounting period for which no adjustment is made on an individual client's bill.

Computer Aided Legal Research (CALR)

Third party providers of CALR services charge the Firm amounts each month based on the type, extent, and duration of the services provided. The Firm charges clients for client research only based on the computed cost to the Firm for the use of the services. This cost is monitored and revised periodically to achieve an average "at cost" rate for clients.

Telefax

The Firm charges \$1.00 per page for outgoing telefaxes, which includes all telephone costs.

Telephone

The Firm does not charge for local calls. Due to the Firm-wide volume of long distance calls and multitude of rates for the various area codes and exchanges (over 65,000), the Firm does not bill each individual call based on the statements received from providers, but rather charges a flat rate of \$.41 per minute for each long distance call made within the United States. This rate (\$.41)

is an approximation of third party provider charges and internal costs associated with this service. International calls are charged based on the rate in effect for the country being called.

Travel-Related Expenses

Airfare, meals, and related travel expenses charged to the client represent actual, out-of-pocket cost. Depending on the volume of both Firm and personal travel, the Firm may receive beneficial services, including airline tickets from its travel agent for which no adjustment is made on an individual client's account. In addition, credits earned under the Frequent Flyer Programs accrue to the individual traveler and not to the Firm.

All Other Costs

The Firm charges actual disbursements for third-party services like court reporters, expert witnesses, etc., and may recoup expenses reasonably incurred in connection with services performed in-house, such as mail services, secretarial overtime, file retrieval, etc.

Unless special arrangements are otherwise made, fees and expenses of others (such as experts, investigators, consultants and court reporters) will be the responsibility of, and billed directly to, the client. Further, all invoices in excess of \$500 will be forwarded to the client for direct payment.

Billing Arrangements and Terms

Our billing rates are based on the assumption of prompt payment. Consequently, unless other arrangements are made, fees for services and other charges will be billed monthly and are payable within thirty days of receipt.

Advances

Clients of the firm are sometimes asked to deposit funds as an advance payment with the firm. The advance payment will be applied first to payment of charges for such items as photocopying, messengers, travel, etc., as more fully described above, and then to fees for services. The advance will be deposited in our client advance account and we will charge such other charges and our fees against the advance and credit them on our billing statements. In the event such other charges and our fees for services exceed the advance deposited with us, we will bill you for the excess monthly or may request additional advances. Any unused portion of amounts advanced will be refundable at the conclusion of our representation.

Client Documents

We will maintain any documents you furnish to us in our client file (or files) for this matter. At the conclusion of the matter (or earlier, if appropriate), it is your obligation to advise us as to which, if any, of the documents in our files you wish us to turn over to you. These documents will be delivered to you within a reasonable time after receipt of payment for outstanding fees and costs. We will retain any remaining documents in our files for a certain

Mr. Dan Sallee

Page 7

April 27, 2004

period of time and ultimately destroy them in accordance with our record retention program schedule then in effect.

Weisser Engineering Company

AGREEMENT

**Lump Sum or Specified Rate
Work Authorizations Used**

This Agreement ("Agreement") is entered into as of August 17, 2004, between **West Harris County Regional Water Authority ("WHCRWA")** and **Weisser Engineering Co. (Contractor)**.

WITNESSETH:

WHEREAS, WHCRWA desires to obtain professional services pursuant to the terms and conditions of this Agreement; and

WHEREAS, Contractor desires to provide such services in exchange for the fees hereinafter specified.

NOW, THEREFORE, for and in consideration of the promises and mutual covenants contained herein, the parties hereto agree as follows:

1. General.

1.1 WHCRWA hereby retains Contractor and Contractor hereby agrees to perform the services and to develop the work product described on Exhibit "A" attached and incorporated hereto and specified on future written Work Authorizations (the "Work").

1.2 The relationship of Contractor to WHCRWA under this Agreement and otherwise shall be that of independent contractor. Contractor shall take no action which is likely to lead third parties to believe that it is a partner or venturer with WHCRWA in connection with the performance of the Work. Contractor is not, by the terms of this Agreement or otherwise, an agent, employee, or representative of WHCRWA. While Contractor shall be responsible to perform the duties and obligations owed to WHCRWA under this Agreement, WHCRWA shall not control or have the right to control the manner or methods employed by Contractor in the performance of its Work hereunder.

2. Certain Duties of Contractor.

In addition to its other duties under this Agreement, Contractor shall comply with the following:

2.1 Contractor agrees to provide prompt and efficient professional services as herein described for the fees hereinafter specified. Contractor shall coordinate

its performance of the services hereunder with WHCRWA. Contractor shall make periodic oral or written reports and recommendations to WHCRWA with respect to conditions, transactions, situations, or circumstances encountered by Contractor relating to the services to be performed under this Agreement.

2.2 Contractor shall make timely payments to all persons and entities supplying labor, materials, or equipment in connection with the Work to be performed under of this Agreement. **CONTRACTOR SHALL PROTECT, INDEMNIFY AND HOLD HARMLESS, WHCRWA, ITS DIRECTORS, OFFICERS, AGENTS AND EMPLOYEES FROM ANY EVERY KIND AND CHARACTER OF DAMAGES, LAWSUITS, EXPENSES, DEMANDS, CLAIMS AND CAUSES OF ACTION ARISING AGAINST WHCRWA, ITS OFFICERS, AGENTS OR EMPLOYEES, OR ITS SUBCONTRACTORS, THEIR OFFICERS, AGENTS AND EMPLOYEES, OR OTHER PERSONS, FIRMS, OR CORPORATIONS WHATSOEVER ARISING OUT OF CONTRACTOR'S PAYMENT OR NON-PAYMENT OF ANY FUNDS TO ANY SUBCONTRACTOR OR VENDOR.**

2.3 Contractor shall obtain, maintain, and pay for all licenses, permits, and certificates, including all professional licenses that are required by any statute, ordinance, rule, or regulation to be obtained by Contractor in connection with the performance of the Work under this Agreement. Contractor shall immediately notify WHCRWA of any suspension, revocation, or other detrimental action against any license, permit or certification required hereunder.

2.4 Contractor shall replace any of its personnel or consultants whose work product is deemed unsatisfactory by WHCRWA, in the WHCRWA's sole and absolute discretion.

2.5 Contractor expressly represents and warrants that all the Work to be performed by Contractor shall be of good quality and shall be performed in a professional manner using that degree of care and skill ordinarily exercised by and consistent with the standards of competent professionals providing similar services in connection with the same or similar projects, and that all work products provided by Contractor to WHCRWA shall be fit for the purposes intended by WHCRWA. Contractor's Work shall comply with all applicable federal, state and local laws, codes, rules and regulations.

2.6 Contractor agrees that it shall perform its obligations to WHCRWA under this Agreement so that the results thereof meet the specifications and requirements of this Agreement to the satisfaction of WHCRWA.

2.7 No Work of any nature shall be undertaken by Contractor under this Agreement until a written Work Authorization is executed and a notice to proceed is issued by WHCRWA.

3. Contractor's Compensation:

3.1 In complete compensation and satisfaction for all services to be provided by Contractor under this Agreement, WHCRWA shall pay the fees set forth in each Work Authorization and per rates included in Exhibit "B", attached and incorporated hereto. In the event the Work is delayed by Contractor, Contractor shall provide such overtime and additional manpower and equipment as is required to overcome such delays, and Contractor shall not be entitled to additional compensation to pay for any additional costs incurred in overcoming such delays. It is agreed that the fees specified in the Work Authorizations shall not be exceeded under any circumstances without prior written approval from WHCRWA.

3.2 Contractor shall invoice WHCRWA monthly in the proper amounts based on the services performed by Contractor. Dependant upon the payment option referenced on each Work Authorization, Contractor shall provide invoices as detailed in Exhibit "B" for the applicable payment option. All invoices are subject to approval by WHCRWA. WHCRWA shall approve, in whole or in part, or disapprove Contractor's invoices within 45 calendar days of receipt. Contractor will be notified if the invoice or any portion thereof is rejected by WHCRWA or is delayed for any reason.

3.3 WHCRWA shall pay Contractor within the above-mentioned 45 calendar day period the amount of any approved invoice. All remittances by WHCRWA of such compensation shall be made by check. Such checks will be made payable to Contractor and payments will be addressed to Contractor at its address specified herein for notices. Neither partial payments made hereunder nor approval of invoices or Work by WHCRWA shall be construed as final acceptance or approval of that part of Contractor's Work to which such partial payment or approval relates, nor shall such payments be construed as relieving the Contractor of any of its obligations hereunder.

3.4 Monthly invoices shall be submitted as follows:

Original copy to: West Harris County Regional Water Authority
c/o Mary Jarmon
Myrtle Cruz, Inc.
West Harris County Regional Water Authority
1621 Milam, 3rd Floor
Houston, Texas 77002-8017

Copies to: West Harris County Regional Water Authority
 c/o Wayne Ahrens
 Dannenbaum Engineering
 3100 West Alabama
 Houston, Texas 77098

West Harris County Regional Water Authority
 c/o Cam Postle
 Postle Property Services, Inc.
 1300 Post Oak Boulevard, Suite 1110
 Houston, Texas 77056

4. **Insurance:**

4.1 Contractor must obtain the types and limits of insurance, including special provisions as provided below:

COVERAGE	LIMITS OF LIABILITY
Workers' Compensation	Statutory for Workers' Compensation
Employer's Liability	Bodily Injury by Accident \$500,000 (each accident) Bodily Injury by Disease \$500,000 (policy limit) Bodily Injury by Disease \$500,000 (each employee)
Commercial General Liability	Bodily and Personal Injury; Products and Completed Operations, Bodily Injury and Property Damage, and Contractual Liability Combined Limits of \$1,000,000 each Occurrence, and \$2,000,000 aggregate
Excess/Umbrella Coverage	\$1,000,000 each occurrence, and \$1,000,000 aggregate
Automobile Liability	\$500,000 combined single limit
Professional Liability Coverage	\$1,000,000 per claim/\$2,000,000 aggregate

4.2 **Issuers of Policies.** The issuer of any policy (1) shall have a Certificate of Authority to transact insurance business in Texas and (2) shall be an admitted insurer in

the State of Texas and have a Best's rating of at least A and a Best's Financial size Category of Class VIII or better, according to the most current edition of *Best's Key Rating Guide*.

4.3 **Insured Parties.** Each policy, except those for Workers' Compensation, Employer's Liability, and Professional Liability, must name WHCRWA (and their officers, agents, and employees) as additional insured parties on the original policy and all renewals or replacements.

4.4 **Deductibles.** Contractor shall be responsible for and bear any claims or losses to the extent of any deductible amounts and waives any claim it may have for the same against WHCRWA and their officers, agents, or employees.

4.5 **Cancellation:**

(1) Each policy, with the exception of Professional Liability, must state that it may not be canceled, materially modified, or nonrenewed unless the insurance company gives WHCRWA 30 days' advance written notice. Professional liability policies must state that they may not be canceled, non-renewed, or have their limit of liability or types of coverage reduced by endorsement unless the insurance company gives WHCRWA 30 days advance written notice.

(2) Contractor shall give written notice to WHCRWA within 5 days of the date on which total claims by any party against Contractor reduce the aggregate amount of coverage below the amounts required by this Agreement.

4.6 **Subrogation.** Each policy, except Professional Liability, must contain an endorsement to the effect that the insurer waives any claim or right of subrogation to recover against WHCRWA and their officers, agents, or employees.

4.7 **Endorsement of Primary Insurance.** Each policy, except Worker's Compensation and Professional Liability, must contain an endorsement that the policy is primary to any other insurance available to the additional insureds with respect to claims arising under this Agreement.

4.8 **Liability for Premium.** Contractor shall pay all insurance premiums.

4.9 **Delivery of Policies.** Contractor shall provide certificates of insurance in accordance with the requirements of the Agreement and prior to the start of the Work.

4.10 **Indemnification.** CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS WHCRWA, ITS DIRECTORS, OFFICERS, AGENTS, AND EMPLOYEES FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, OR CAUSES OF ACTION (AND ALL LOSSES, LIABILITIES, EXPENSES, AND JUDGMENTS INCURRED IN CONNECTION THEREWITH, INCLUDING REASONABLE ATTORNEY'S FEES AND EXPENSES, COURT COSTS, AND OTHER EXPENSES

INCURRED IN ENFORCING THIS INDEMNITY PROVISION) BROUGHT BY CONTRACTOR OR ANY OF CONTRACTOR'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES, OR BY ANY THIRD PARTY, BASED UPON, OR IN CONNECTION WITH, RESULTING FROM, OR ARISING OUT OF, THE NEGLIGENCE OR MISCONDUCT OF CONTRACTOR, OR CONTRACTOR'S EMPLOYEES, DIRECTORS, OFFICERS, AGENTS, OUTSIDE ADVISORY OR SUPPORT CONSULTANTS, OR REPRESENTATIVES.

5. Term and Termination.

5.1 This Agreement shall be effective upon the date of execution by WHCRWA, and shall continue thereafter, subject to the notice to proceed and issuance of a Work Authorization, unless otherwise terminated as hereinafter provided.

5.2 WHCRWA may terminate, with or without cause, this Agreement, resultant Work Authorizations and Contractor's performance of the Work hereunder at any time by giving 14 calendar days written notice to the Contractor. As soon as possible, but not later than the effective date of such notice, the Contractor shall, unless the notice directs otherwise, immediately discontinue all Work in connection with this Agreement and shall proceed to promptly cancel all existing orders and subcontracts insofar as such orders or subcontracts are chargeable to this Agreement. Within 30 calendar days after the effective date of the notice of termination, Contractor shall deliver to WHCRWA all work products obtained by or prepared by Contractor as part of its Work hereunder (including but not limited to all reports, schedules, charts, analysis, maps, letters, notes, manuals, plans, models and photographs), and shall submit an invoice showing in detail Work performed under this Agreement to the date of termination. WHCRWA shall then pay the prescribed fees to the Contractor for Work actually performed under this Agreement up to the date of termination, less any previous payments, in the same manner as prescribed in Section 3. The Contractor may, if necessary, submit invoices for vendor and subcontractor charges which are incurred in connection with this Agreement prior to the effective date of termination and received by the Contractor after the termination invoice. WHCRWA shall not be obligated to pay Contractor any other termination expenses.

5.3 Contractor may terminate its performance under this Agreement if WHCRWA fails to pay the compensation owed to Contractor pursuant to the terms of this Agreement. Should such default occur, Contractor shall have the right to terminate all or part of its duties under this Agreement as of the 30th calendar day following the receipt by WHCRWA of a notice from Contractor describing such default and intended termination, provided: (i) such termination shall be ineffective if within the 30 calendar day period WHCRWA cures the default, and (ii) such termination may be stayed beyond such 30 calendar day period, at the sole option of the Contractor, pending cure of the default.

5.4 Contractor may terminate Contractor's performance under this Agreement, with or without cause, by giving 14 calendar days written notice to the WHCRWA.

5.5 Should WHCRWA desire to suspend or terminate a Work Authorization but not terminate the Agreement, WHCRWA may orally notify the Contractor followed by written confirmation, giving fourteen (14) days notice. Both parties may waive the fourteen day notice in writing. A Work Authorization may be reinstated and resumed in full force and effect upon written notice from WHCRWA to resume the work. If WHCRWA suspends a Work Authorization, the Work Authorization will terminate on the date specified unless the Work Authorization is amended to authorize additional time. WHCRWA shall have no liability for Work performed or costs incurred prior to the date authorized by WHCRWA to begin Work, during periods when Work is suspended, or after the completion date of the Work Authorization or termination of the Agreement.

5.6 No allowance for an extension of time for any cause whatsoever, shall be claimed by, or given to, Contractor unless Contractor shall have made written request upon WHCRWA for such extension within forty-eight (48) hours after the cause of such extension occurred.

6. The Ownership of Work Product.

6.1 WHCRWA shall be the Owner of all ideas and information created, developed or obtained by Contractor in the performance of the Work hereunder. Contractor shall furnish to WHCRWA all field notes, reports, the original tracings of all drawings, plans, maps, photographs, and other materials (including, if requested by WHCRWA, design computations, design sketches, and review drawings) prepared pursuant to this Agreement. The originals of all such documents shall be and remain the property of WHCRWA. With respect to the forms of expression of ideas reduced to a tangible medium of expression, such as engineering drawings, plans, maps, and the like, which are covered by federal copyright laws, WHCRWA shall be the Owner of such works and all exclusive rights of copyright therein. It is agreed that all such works shall be deemed to be "works made for hire," as that term is defined in 17 U.S.C. 101. However, in the event it should be determined that any of such works is not a "work made for hire," then Contractor agrees to assign, and does hereby assign unto WHCRWA all right, title, and interest in and to such works, including all right, title, and interest in and to all exclusive rights of copyright therein.

6.2 Notwithstanding the foregoing, Contractor may retain copies of such documents and shall have the right to use such copies for its own internal purposes, but Contractor may not provide such documents to others or sell, license, or otherwise market to others such documents or the information contained therein.

6.3 Contractor shall take all steps which may be necessary or appropriate to ensure that it or its nominee (which shall be WHCRWA) obtains title to the work product that may be created or developed by its employees and its subcontractors who assist in the performance of the Work hereunder. For example, in all Agreements entered into between Contractor and subcontractors, it shall be provided that the subcontractor assigns to Contractor or its nominee (which shall be WHCRWA) all of the subcontractor's rights in and to the Work and all exclusive rights of copyright herein.

7. **Confidential Information.**

7.1 During the term of this Agreement, Contractor may acquire from WHCRWA, or obtain or develop in connection with the performance of its Work hereunder, confidential information belonging to WHCRWA. As used herein, the term "confidential information" shall mean any information, written or oral, relating to the Work and which gives WHCRWA a business advantage over others, including but not limited to, processes, techniques, procedures, designs, drawings, plans, diagrams, specifications, computer programs, systems, know-how, trade secrets and other technical data, project information, policies and agreements, including this Agreement. Contractor shall not, without the prior written consent of WHCRWA, disclose or make available to any person, or use, directly or indirectly, except in connection with the performance of its Work hereunder, any of such confidential information. This obligation shall not apply to such portions of WHCRWA's confidential information which: (a) was previously known to Contractor (as evidenced by its written records) prior to obtaining the same from WHCRWA or developing the same for WHCRWA while performing the Work hereunder; or (b) was in the public domain prior to the time of disclosure by WHCRWA to the Contractor or prior to the time such information was developed by Contractor for WHCRWA under this Agreement; or (c) the information is later disclosed to Contractor by a third party who did not receive the same, directly or indirectly, from WHCRWA or who had no obligation of secrecy with respect thereto. No provision of this Agreement shall be construed to impose any confidentiality obligation or requirement upon the WHCRWA and the WHCRWA may (at its discretion) disclose to whomever any information or documents deemed appropriate by the WHCRWA.

7.2 Contractor further agrees that it shall not make any announcements or release any information or photographs concerning this Agreement or the Work or any part thereof to any member of the public or to the press or to any official body, unless prior written consent is obtained from WHCRWA.

7.3 Contractor shall take all steps which may be necessary or appropriate in order that its employees and its vendors and consultants are bound by and adhere to the confidentiality provisions of this Agreement (including but not limited to, the inclusion of appropriate clauses to carry out the purpose and intent hereof in all subcontracts, purchase orders and consulting agreements entered into by Contractor pursuant to the performance of this Agreement).

8. Miscellaneous.

8.1 This Agreement shall be construed and enforced for all purposes pursuant to the laws of the State of Texas and, to the extent applicable, all federal laws and all rules and regulations of any regulatory body or officer having jurisdiction. The parties agree that this Agreement is to be performed at least in part in Harris County, Texas and therefore the federal and state courts in Houston, Harris County, Texas shall have in personam jurisdiction over the parties to resolve any disputes between them arising out of this Agreement.

8.2 This Agreement shall inure to the benefit of WHCRWA and Contractor. This Agreement is personal to Contractor and may not be assigned or transferred without the written permission of WHCRWA. This Agreement shall not be construed in favor or against either party on the basis that such party did nor did not draft the Agreement.

8.3 This Agreement (including all documents incorporated by reference or attached as exhibits hereto) represents the entire Agreement between WHCRWA and Contractor with respect to the subject matter hereof and supersedes and merges all prior negotiations, representations, discussions or agreements, either written or oral, with respect to the subject matter hereof. This Agreement may be amended only by written instrument signed by duly authorized representatives of both WHCRWA and Contractor.

8.4 All Work Authorizations issued pursuant to this Agreement shall be incorporated herein by reference, be subject to the terms and conditions set forth herein and shall follow the format set forth in Exhibit "A-1".

8.5 All notices required or permitted hereunder shall be in writing and shall be deemed delivered on the date of delivery if by personal delivery or, if by mail, three days after deposit with the United States Postal Service (certified mail, return receipt requested) addressed to the respective other party at the addresses shown below:


West Harris County Regional
Water Authority
c/o Allen Boone Humphries LLP
3200 Southwest Freeway
Suite 2600
Houston, Texas 77027

Weisser Engineering Co.
19500 Park Row, Suite 100
Suite, 100
Houston, Texas 77084

8.6 The failure of either party to insist on performance of any of the provisions of this Agreement shall not be construed as a waiver of the requirements of such provision.

IN WITNESS WHEREOF, this Agreement is executed in duplicate originals by WHCRWA and Contractor.

**WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY**

By: 
Name: DAN SALLEE
Title: PRESIDENT
Date: 9-2-04

WEISSER ENGINEERING CO.


By: 
Name: WALTER P. SASS
Title: PRESIDENT
Date: 8/26/04

EXHIBIT "A"

SCOPE OF WORK

Contractor agrees to furnish all supervision, labor, materials, supplies and equipment, and other items necessary to **perform professional surveying services** as directed, set forth and specified in individual Work Authorizations to be issued periodically pursuant to this agreement.

WHCRWA will issue Work Authorization(s) to authorize all work under this contract. The Contractor must sign and return a Work Authorization within seven (7) working days after receipt. Refusal to accept a Work Authorization may be grounds for termination of the Agreement. WHCRWA shall not be responsible for any action by the Contractor or any costs incurred by the Contractor relating to work not directly associated with or begun prior to the execution of a Work Authorization.

Work Authorizations are issued at the discretion of WHCRWA. While it is WHCRWA's intent to issue Work Authorizations hereunder, the Contractor shall have **no cause of action conditioned upon the lack of quantity or dollar amount of Work Authorizations issued. Contractor is not guaranteed Work Authorizations in the maximum total amount set forth in Exhibit "B", nor in any amount whatsoever. The amount set forth in Exhibit "B" represents the potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement.** Each Work Authorization shall be signed by both parties and become a part of the Agreement. No Work Authorization will waive WHCRWA's or the Contractor's responsibilities and obligations established in this Agreement. The Contractor shall promptly notify WHCRWA of any event that will affect completion of a Work Authorization.

Before additional Work may be performed or additional costs incurred a written Supplemental Work Authorization must be issued. Both parties must execute a Supplemental Work Authorization within the period of performance specified in the original Work Authorization. WHCRWA shall not be responsible for actions by the Contractor or any costs incurred by Contractor for work begun prior to the execution of the Supplemental Work Authorization. If the Contractor determines or reasonably anticipates that a Work Authorization cannot be completed before the specified completion date, the Contractor shall promptly notify WHCRWA. WHCRWA may, at its sole discretion, extend the work authorization period by execution of a Supplemental Work Authorization.

EXHIBIT "A-1"

WORK AUTHORIZATION NO. ____

West Harris County Regional Water Authority District

Contractor: Weisser Engineering Co.
19500 Park Row, Suite 100
Houston, Texas 77084

THIS WORK AUTHORIZATION is made pursuant to and is subject to the terms and conditions of the Agreement dated as of August 17, 2004 entered into by and between West Harris County Regional Water Authority (WHCRWA), and Weisser Engineering Co. (Contractor).

Description of Work: The Contractor will perform surveying services generally described as _____ in accordance with the project description referenced above. The responsibilities of the Contractor as well as the work schedule are further detailed in the attached Exhibit WA__-A which is made a part of this Work Authorization.

Total Authorization: The maximum amount payable under this Work Authorization is \$_____. This amount is based upon fees set forth in Exhibit B-1, Rate Schedule, of the Agreement.

Payment: Payment to the Contractor for the services established under this Work Authorization shall be made in accordance with Option 1 - Lump Sum Basis or Option 2 - Specified Rate Basis (pick one and omit other option) of the Agreement.

Work Period: This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate on _____, 2004, unless extended by a supplemental Work Authorization.

Miscellaneous: This Work Authorization does not waive the parties' responsibilities and obligations provided under the original Agreement.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

Engineer: West Harris County Regional Water Authority Contractor: Weisser Engineering Co.

Signature: _____ Signature: _____

Name/Title: _____ Name/Title: _____

Date: _____ Date: _____

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$100,000

All Work Authorizations shall specify one of the payment options listed below.

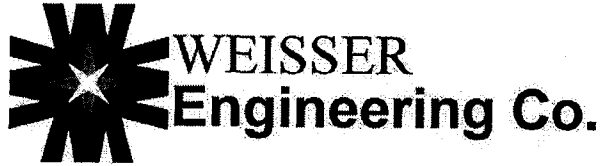
Option 1 - Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and expenses and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment, the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost or expenses.

Option 2 - Specified Rate and Expenses Basis

The specified rates for each classification are shown in the attached Rate Schedule, Exhibit "B-1". Payment shall be based on: (i) actual reimburseable expenses incurred (without any mark-up); plus (ii) actual hours worked multiplied by the specified personnel rate.

EXHIBIT B-1



19500 Park Row, Suite 100 • Houston, Texas 77084
P.O. Box 219315 • Houston, Texas 77218
Phone (281) 579-7300 • Fax (281) 579-7577

**WEST HARRIS COUNTY REGIONAL WATER
AUTHORITY RATE SCHEDULE
EFFECTIVE 07/07/04**

CADD OPERATOR/DRAFTER	\$55.00/HR
CADD DRAFTSMAN	\$65.00/HR
CLERICAL	\$38.00/HR
CONSULTING ENGINEER	\$90.00/HR
DESIGN DRAFTSMAN	\$65.00/HR
DESIGN ENGINEER	\$80.00/HR
DRAFTSPERSON (BOARD)	\$55.00/HR
ENGINEER TECHNICIAN	\$65.00/HR
EXPERT WITNESS	\$175.00/HR
GPS STATION	\$30.00/HR
PROJECT SURVEYOR/SUPERVISOR	\$80.00/HR
4 PERSON SURVEY CREW	\$115.00/HR
3 PERSON SURVEY CREW	\$100.00/HR
2 PERSON SURVEY CREW	\$85.00/HR
PRINCIPAL	\$110.00/HR
PROJECT MANAGER	\$90.00/HR
RECORDS RESEARCHER	\$48.00/HR
REGISTERED PROFESSIONAL LAND SURVEYOR	\$90.00/HR
SURVEY MANAGER	\$90.00/HR
SURVEY TECHNICIAN/SENIOR TECHNICIAN	\$65.00/HR

**ADDENDUM No. 1 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 9th day of March, 2006.

WHEREAS, the Authority and Engineer originally entered into an Agreement for Professional Services, dated August 17, 2004 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement, is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.



Dan H. Sallee, President

Date: 4-12-06



Walter P. Sass

Date: 3/01/06

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$200,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 12th day of October, 2006.

WHEREAS, the Authority and Engineer originally entered into an Agreement for Professional Services, dated August 17, 2004 and amended March 9, 2006 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and as amended on March 9, 2006, is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

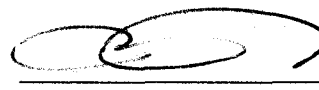
WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.



Dan H. Sallee, President

Date: 10/14/06



Walter P. Sass

Date: 10/16/06

**ADDENDUM No. 2 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 12th day of October, 2006.

WHEREAS, the Authority and Engineer originally entered into an Agreement for Professional Services, dated August 17, 2004 and amended March 9, 2006 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:


1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and as amended on March 9, 2006, is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.


Dan H. Sallee, President

Date: 10/16/06


Walter P. Sass

Date: 10/16/06

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$300,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 3 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 20th day of November, 2006.

WHEREAS, the Authority and Engineer originally entered into an Agreement for Professional Services, dated August 17, 2004, and amended on March 9, 2006 and October 12, 2006 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and as amended on March 9, 2006 and October 12, 2006, is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.


Dan H. Sallee, President

Date: 12-13-06


Walter P. Sass

Date: 11/17/06

EXHIBIT "A"

SCOPE OF WORK

Contractor agrees to furnish all supervision, labor, materials, supplies and equipment, and other items necessary to **perform professional surveying services** as directed, set forth and specified in individual Work Authorizations to be issued periodically pursuant to this agreement.

WHCRWA will issue Work Authorization(s) to authorize all work under this contract. The Contractor must sign and return a Work Authorization within seven (7) working days after receipt. Refusal to accept a Work Authorization may be grounds for termination of the Agreement. WHCRWA shall not be responsible for any action by the Contractor or any costs incurred by the Contractor relating to work not directly associated with or begun prior to the execution of a Work Authorization.

Work Authorizations are issued at the discretion of WHCRWA. While it is WHCRWA's intent to issue Work Authorizations hereunder, the **Contractor shall have no cause of action conditioned upon the lack of quantity or dollar amount of Work Authorizations issued. Contractor is not guaranteed Work Authorizations in the maximum total amount set forth in Exhibit "B", nor in any amount whatsoever. The amount set forth in Exhibit "B" represents the potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement.** Each Work Authorization shall be signed by both parties and become a part of the Agreement. No Work Authorization will waive WHCRWA's or the Contractor's responsibilities and obligations established in this Agreement. The Contractor shall promptly notify WHCRWA of any event that will affect completion of a Work Authorization.

Before additional Work may be performed or additional costs incurred a written Supplemental Work Authorization must be issued. Both parties must execute a Supplemental Work Authorization within the period of performance specified in the original Work Authorization. WHCRWA shall not be responsible for actions by the Contractor or any costs incurred by Contractor for work begun prior to the execution of the Supplemental Work Authorization. If the Contractor determines or reasonably anticipates that a Work Authorization cannot be completed before the specified completion date, the Contractor shall promptly notify WHCRWA. WHCRWA may, at its sole discretion, extend the work authorization period by execution of a Supplemental Work Authorization.

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$350,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 4 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 11th day of January, 2007.

WHEREAS, the Authority and Engineer originally entered into an Agreement for Professional Services, dated August 17, 2004, and amended on March 9, 2006, October 12, 2006, and November 20, 2006 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and as amended on March 9, 2006, October 12, 2006, and November 20, 2006 and is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.


Dan H. Sallee, President

Date: 1/10/07


Walter P. Sass

Date: 1/16/07

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$450,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 5 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 21st day of March, 2007.

WHEREAS, the Authority and Engineer originally entered into an Agreement for Professional Services, dated August 17, 2004, and amended on March 9, 2006, October 12, 2006, November 20, 2006 and January 11, 2007 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and as amended on March 9, 2006, October 12, 2006, November 20, 2006 and January 11, 2007 and is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.

 Date: 3/21/2007
Dan H. Sallee, President

 Date: 3/21/2007
Walter P. Sass

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$550,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 6 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 21st day of March, 2007.

WHEREAS, the Authority and Engineer originally entered into an Agreement for Professional Services, dated August 17, 2004, and amended on March 9, 2006, October 12, 2006, November 20, 2006 and January 11, 2007 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and as amended on March 9, 2006, October 12, 2006, November 20, 2006 and January 11, 2007 and is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.


WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.



Dan H. Sallee, President

Date: 7/10/07



Walter P. Sass

Date: 7/25/07

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$650,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 7 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 13th day of February, 2008.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated August 17, 2004 (the "Agreement"), and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, and March 21, 2007 to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:


1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, and March 21, 2007 and is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.


Dan H. Sallee, President

Date: 2-13-2008


Walter P. Sass

Date: 2/07/08

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$750,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 8 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 10th day of March, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated August 17, 2004 (the "Agreement"), and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, March 21, 2007, and February 13, 2008 to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and

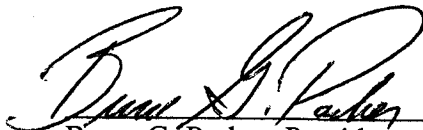
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, March 21, 2007, and February 13, 2008 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.


Bruce G. Parker, President Date: 3/10/10


Walter P. Sass Date: 3/17/2010

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$850,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 9 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 11th day of August, 2010.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated August 17, 2004 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, March 21, 2007, February 13, 2008, and March 10, 2010 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

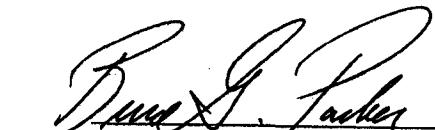
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, March 21, 2007, February 13, 2008, and March 10, 2010 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.


Bruce G. Parker, President

Date: 8/11/2010


Walter P. Sass

Date: 8/18/2010

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$1,150,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 10 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 9th day of February, 2011.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated August 17, 2004 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, March 21, 2007, February 13, 2008, March 10, 2010, and August 11, 2010 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

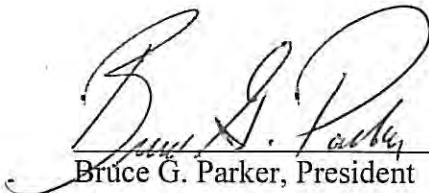
WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, March 21, 2007, February 13, 2008, March 10, 2010, and August 11, 2010 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.


Bruce G. Parker, President Date: 2/16/11


Walter P. Sass Date: 2/29/11

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$1,300,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 11 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 8th day of June, 2011.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated August 17, 2004 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, March 21, 2007, February 13, 2008, March 10, 2010, August 11, 2010, and February 9, 2011 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and


WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, March 21, 2007, February 13, 2008, March 10, 2010, August 11, 2010, and February 9, 2011 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.


Date: 6/8/11
Bruce G. Parker, President


Date: 6/14/11
Walter P. Sass

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$1,400,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

**ADDENDUM No. 12 TO AGREEMENT FOR PROFESSIONAL SERVICES
(Weisser Engineering Co.)**

This Addendum to Agreement for Professional Surveying Services (the "Addendum") is by and between the West Harris County Regional Water Authority (the "Authority") and Weisser Engineering Co. ("Contractor"), to be effective the 13th day of February, 2013.

WHEREAS, the Authority and Contractor originally entered into an Agreement for Professional Services, dated August 17, 2004 (the "Agreement") to perform certain professional surveying services or such other related services that may be required in connection with the project as defined in the Agreement and more specifically described in the Scope of Work attached as Exhibit A to the Agreement; and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, March 21, 2007, February 13, 2008, March 10, 2010, August 11, 2010, February 9, 2011, and June 8, 2011 to increase the potential maximum amount that the Contractor may earn for all Work Authorizations; and

WHEREAS, the Authority and Contractor now desire to amend the Agreement as reflected herein.

NOW, THEREFORE, the Authority and Contractor, in consideration of the mutual covenants and agreements herein contained, do mutually agree as follows:

1. Exhibit B – Basis of Payment, originally attached to and made a part of the Agreement and amended on March 9, 2006, October 12, 2006, November 20, 2006, January 11, 2007, March 21, 2007, February 13, 2008, March 10, 2010, August 11, 2010, February 9, 2011, and June 8, 2011 is hereby replaced with the Revised Exhibit B – Basis of Payment attached hereto and made a part hereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

WEISSER ENGINEERING CO.


Bruce G. Parker, President Date: 2/13/13


Walter P. Sass Date: 2/21/13

EXHIBIT "B"

BASIS OF PAYMENT

The potential maximum amount that Contractor may earn for all Work Authorizations issued pursuant to this Agreement is \$1,750,000.00

All Work Authorizations shall specify one of the payment options listed below.

Option 1 – Lump Sum Basis

The lump sum shall be equal to the maximum amount payable and based on an approved Level of Effort proposal. The lump sum includes all direct and indirect costs and fixed fee. The Contractor shall be paid pro rata based on the percentage of work completed and per the provided draw schedule (if applicable). For payment the Contractor is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

Option 2 – Specified Rate Basis

The specified rates for each billing classification are shown in the attached Hourly Rate Schedule, Exhibit "B-1". Payment shall be based on actual hours worked multiplied by the specified personnel rate which includes direct labor and indirect cost and fixed fee.

Part B

PRIVATE PLACEMENT MEMORANDUM DATED _____, 2017**NEW ISSUE BOOK-ENTRY-ONLY**

On the date of initial delivery of the Bonds (defined below), Bond Counsel (defined on page 2) will render its opinion substantially in the form attached in APPENDIX C - FORM OF OPINION OF BOND COUNSEL.

\$_____,000

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
WATER SYSTEM JUNIOR LIEN REVENUE BONDS, SERIES 2017(the "Bonds")**

Dated: October 1, 2016

Due: December 15, as set forth in Appendix A

- Interest Date:** Interest on the Bonds will be payable on June 15 and December 15 of each year, commencing June 15, 2018 (each an "Interest Payment Date"). The Bonds will bear interest at the rates per annum set forth in "APPENDIX A - MATURITY SCHEDULE."
- Record Date:** The term "Record Date" shall mean the 15th day of the calendar month immediately prior to the Interest Payment Date.
- Date Interest Accrues:** Each Bond shall bear interest from the later of the Delivery Date thereof or the most recent Interest Payment Date to which interest has been paid or duly provided for, calculated on the basis of a 360-day year composed of twelve 30 day months, until the maturity or redemption of the Bonds, or until the Authority's obligation with respect to the payment of the Bonds has been satisfied.
- Redemption:** The Bonds are subject to redemption prior to maturity as provided herein. See "THE BONDS - Redemption Provisions" herein.
- Authorized Denominations:** The Bonds are being issued as fully registered bonds in denominations of \$5,000, or any integral multiple thereof.
- Paying Agent/Registrar:** The initial paying agent and registrar ("Paying Agent/Registrar") for the Bonds is Regions Bank, an Alabama state banking corporation.
- Book-Entry-Only System:** Upon initial issuance, the ownership of the Bonds will be registered on the registration books of the Authority kept by the Paying Agent/Registrar, in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC") to which principal, redemption premium, if any, and interest payments on the Bonds will be made. The purchaser of the Bonds will not receive physical delivery of bond certificates. Principal of, interest, and premium, if any, on the Bonds will be payable at the designated office of the Paying Agent/Registrar in Houston, Texas as the same become due and payable.
- Issuer:** The West Harris County Regional Water Authority (the "Authority") was created as a political subdivision of the State of Texas pursuant to Act of May 28, 2001, 77th Texas Legislature, Regular Session, Chapter 414, 2001 Tex. Gen. Laws, as amended (the "Act").
- Official Action:** RESOLUTION AUTHORIZING THE ISSUANCE, SALE, AND DELIVERY OF THE WEST HARRIS COUNTY REGIONAL WATER AUTHORITY WATER SYSTEM JUNIOR LIEN REVENUE BONDS, SERIES 2017; APPROVING THE FORM AND SUBSTANCE AND AUTHORIZING THE EXECUTION OF A THIRTEENTH SUPPLEMENTAL INDENTURE OF TRUST RELATING TO SUCH BONDS; AUTHORIZING AND RATIFYING OTHER ACTIONS OF THE AUTHORITY; MAKING CERTAIN FINDINGS AND CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT, dated _____, 2017 ("Bond Resolution") and THE THIRTEENTH SUPPLEMENTAL INDENTURE OF TRUST, dated October 1, 2017.
- Purpose:** See "APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST, AND THIRTEENTH SUPPLEMENTAL INDENTURE OF TRUST."
- Security for the Bonds:** See "APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST, AND THIRTEENTH SUPPLEMENTAL INDENTURE OF TRUST."
- Ratings:** See "OTHER INFORMATION - Ratings"
- Delivery Date:** October __, 2017 or the actual date of delivery of the Bonds to the initial purchaser thereof.

See APPENDIX A – MATURITY SCHEDULE for Principal Amounts, Maturities, Interest Rates, and Initial CUSIP Numbers

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

Board of Directors

<u>Name</u>	<u>Office</u>	<u>Term Expires</u>
Bruce G. Parker	President	May 2018
Larry A. Weppler	Vice-President	May 2018
Douglas C. Postle	Secretary	May 2020
Eric Hansen	Asst. Secretary	May 2020
Gary Struzick	Asst. Vice President	May 2020
Mark G. Janneck	Director	May 2020
Karla Cannon	Director	May 2018
Michael Thornhill	Director	May 2018
Dennis Gordon	Director	May 2018

Regions Bank, an Alabama state banking corporation, Paying Agent/Registrar

Principal Consultants

Allen Boone Humphries Robinson LLP, Bond Counsel

Robert W. Baird & Co. Incorporated, Co-Financial Advisor
FirstSouthwest A Division of Hilltop Securities Inc., Co-Financial Advisor

Dannenbaum Engineering Corporation, Consulting Engineer

Myrtle Cruz, Inc., Bookkeeper

McCall Gibson Swedlund Barfoot, PLLC, Auditor

Severn Trent Environmental Services, Inc., Operator

TABLE OF CONTENTS

	Page
INTRODUCTION	2
THE BONDS.....	2
General Description	2
Purpose	2
Authority for Issuance	2
Security for the Bonds	2
Redemption Provisions.....	3
Notice of Redemption; Selection of Bonds to Be Redeemed	3
Book-Entry-Only System	3
TAX MATTERS	4
Opinion	4
OTHER INFORMATION	4
Forward Looking Statements.....	4
Ratings.....	4
LITIGATION	4
General	4
The Authority	4
CONTINUING DISCLOSURE OF INFORMATION.....	4
Compliance with Prior Undertakings	4
MISCELLANEOUS.....	4
ADDITIONAL INFORMATION.....	5
APPENDIX A	MATURITY SCHEDULE
APPENDIX B	BOND RESOLUTION, MASTER INDENTURE OF TRUST AND THIRTEENTH SUPPLEMENTAL INDENTURE OF TRUST
APPENDIX C	FORM OF OPINION OF BOND COUNSEL
APPENDIX D	ANNUAL FINANCIAL REPORT OF THE AUTHORITY FOR FISCAL YEAR ENDED DECEMBER 31, 2015

**Private Placement Memorandum
relating to**

\$ _____,000

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
(A political subdivision of the State of Texas)
WATER SYSTEM JUNIOR LIEN REVENUE BONDS, SERIES 2017 (the “Bonds”)

INTRODUCTION

This Private Placement Memorandum, including the cover page and appendices, contains brief descriptions of the Authority, provides certain information with respect to the issuance by the Authority, and summaries of certain provisions of the “Bonds” pursuant to the Bond Resolution, and to the Indenture of Trust dated as of August 1, 2003 and the Thirteenth Supplemental Indenture of Trust dated as of October 1, 2017 (collectively, the “Indenture”). Except as otherwise set forth herein, capitalized terms used but not defined in this Private Placement Memorandum have the meanings assigned to them in the Bond Resolution and Indenture. See “APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST AND THIRTEENTH SUPPLEMENTAL INDENTURE OF TRUST” attached hereto.

APPENDIX A contains the maturity schedule for the Bonds. APPENDIX B contains the Bond Resolution and the Indenture and a description of the purpose for the proceeds of the Bonds. APPENDIX C contains a copy of the proposed opinion of Bond Counsel with respect to the Bonds. The summaries of the documents contained in the forepart of this Private Placement Memorandum are not complete or definitive, and every statement made in this Private Placement Memorandum concerning any provision of any document is qualified by reference to such document in its entirety.

THE BONDS

General Description

The Bonds are being issued in the aggregate principal amount set forth in “APPENDIX A - MATURITY SCHEDULE” of this Private Placement Memorandum and will mature and be subject to redemption prior to maturity as described therein. The Bonds are being issued as fully registered bonds in denominations of \$5,000, or any integral multiple thereof. The Bonds will be dated as of the stated date of issue and will mature on the dates referenced thereon, and will bear interest at the rates per annum set forth in “APPENDIX A - MATURITY SCHEDULE”.

Interest on the Bonds is payable semiannually on each Interest Payment Date, and will be calculated on the basis of a 360-day year consisting of twelve 30-day months. Principal of and the redemption price with respect to the Bonds will be payable to the owners upon presentation and surrender at the principal office of the Paying Agent/Registrar.

Purpose

See “APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST AND THIRTEENTH SUPPLEMENTAL INDENTURE OF TRUST.”

Authority for Issuance

The Bonds are being issued pursuant to Texas law (including particularly the Act of May 28, 2001, 77th Texas Legislature, Regular Session, Chapter 414, 2001 Tex. Gen. Laws, as amended and Chapter 1371 of the Texas Government Code, as amended), the Indenture and the Bond Resolution adopted by the Board of Directors of the Authority.

Security for the Bonds

See “APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST AND THIRTEENTH SUPPLEMENTAL INDENTURE OF TRUST.”

The Bonds are being issued as “Junior Lien Bonds” (and not as “Parity Bonds”) under the Indenture. Under the Indenture: (i) Parity Bonds, Parity Notes and Parity Obligations are secured by a lien on Pledged Revenues that is senior and superior to the lien on Pledged Revenues securing the Junior Lien Bonds (including the Bonds), Junior Lien Notes and Junior Lien Obligations, and (ii) Pledged Revenues are first applied to make all required deposits in

and transfers to the Debt Service Fund and Debt Service Reserve Fund before making required deposits in and transfers to the Junior Lien Debt Service Fund and Junior Lien Debt Service Reserve Fund.

Redemption Provisions

On December 15, 2027, or on any date thereafter, the Bonds maturing on and after December 15, 2028 may be redeemed prior to their scheduled maturities, upon the written direction of the Authority, with funds provided by the Authority, for an amount equal to the principal amount redeemed plus accrued interest to the date fixed for redemption as a whole, or in part, and if less than all of a maturity is to be redeemed the Paying Agent/Registrar will determine by lot the Bonds, or portions thereof within such maturity to be redeemed (provided that a portion of a Bond may be redeemed only in Authorized Denominations).

Notice of Redemption; Selection of Bonds to Be Redeemed

See “APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST AND THIRTEENTH SUPPLEMENTAL INDENTURE OF TRUST.”

The Paying Agent/Registrar, so long as a Book-Entry-Only System is used for the Bonds, will send any notice of redemption of the Bonds, notice of proposed amendment to the Indenture or other notices with respect to the Bonds only to DTC. Any failure by DTC to advise any DTC participant, or of any DTC participant or indirect participant to notify the beneficial owner, shall not affect the validity of the redemption of the Bonds called for redemption or any other action premised on any such notice. Redemption of portions of the Bonds by the Authority will reduce the outstanding principal amount of such Bonds held by DTC.

Book-Entry-Only System

The information in this caption concerning The Depository Trust Company, New York, New York (“DTC”) and DTC’s book entry system has been obtained from DTC and the Authority makes no representation or warranty nor takes any responsibility for the accuracy or completeness of such information.

DTC will act as securities depository for the Bonds. The Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered certificate will be issued for each maturity of the Bonds and deposited with DTC. See “APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST AND THIRTEENTH SUPPLEMENTAL INDENTURE OF TRUST.”

DTC is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity, corporate and municipal debt issues, and money market instrument (from over 100 countries) that DTC’s participants (the “Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions, in deposited securities, through electronic computerized book entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearance Corporation, and Fixed Income Clearance Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has a Standard & Poor’s rating: “AA+.” The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com and www.dtc.org.

TAX MATTERS

Opinion

Bond Counsel will deliver its opinion on the date of delivery of the Bonds substantially in the form as attached in "APPENDIX C - FORM OF OPINION OF BOND COUNSEL."

OTHER INFORMATION

Forward-Looking Statements

The statements contained in this Private Placement Memorandum, including the cover page, appendices, and any other information or documents provided by the Authority, that are not purely historical, are forward-looking statements, including statements regarding the Authority's expectations, hopes, intentions, or strategies regarding the future. Holders and beneficial owners of the Bonds have placed reliance on forward-looking statements. All forward-looking statements included in this Private Placement Memorandum are based on information available to the Authority on the date hereof. It is important to note that the Authority's actual results could differ materially from those in such forward-looking statements.

Ratings

No application has been made to any ratings agency or municipal bond insurance company for qualification of the Bonds for ratings or municipal bond insurance, respectively.

LITIGATION

General

On the date of delivery of the Bonds to the initial purchaser thereof, the Authority will execute and deliver a certificate to the effect that, except as disclosed herein, no litigation of any nature has been filed or is pending, as of that date, to restrain or enjoin the issuance or delivery of the Bonds or which would affect the provisions made for their payment or security or in any manner questioning the validity of the Bonds.

The Authority

There is no litigation, proceeding, inquiry, or investigation pending by or before any court or other governmental authority or entity (or, to the best knowledge of the Authority, threatened) that adversely affects the power, authority or obligation of the Authority to deliver the Bonds, the security for, or the validity of, the Bonds or the financial condition of the Authority.

CONTINUING DISCLOSURE OF INFORMATION

In the Official Action, the Authority has made the following agreement for the benefit of the holders and beneficial owners of the Bonds. The Authority is required to observe the agreement for so long as it remains obligated to advance funds to pay the Bonds. Under the agreement, the Authority will be obligated to provide certain updated financial information and operating data, and timely notice of specified events, to the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access system. SEE "APPENDIX B – BOND RESOLUTION, MASTER INDENTURE OF TRUST AND THIRTEENTH SUPPLEMENTAL INDENTURE OF TRUST."

Compliance with Prior Undertakings

During the last five years, the Authority has complied in all material respects with its continuing disclosure agreements in accordance with SEC Rule 15c2-12.

On December 11, 2012, Standard & Poor's Ratings Services upgraded the Authority's long term rating and unenhanced rating from "A" to "A+." On May 30, 2013, the Official Statement for the Authority's Water System Revenue Refunding Bonds, Series 2013 was filed with EMMA, and the Authority's Financial Statements attached thereto included certain information regarding such A+ rating from Standard & Poor's. On June 28, 2013, the Authority's Annual Report for the year ended December 31, 2012, was filed with EMMA with these same Financial Statements attached thereto. On July 30, 2014, the Authority filed a notice of such rating upgrade with EMMA.

MISCELLANEOUS

Any statements made in this Private Placement Memorandum involving matters of opinion or of estimates, whether or not so expressly stated, are set forth as such and not as representations of fact, and no representation is

made that any of the estimates will be realized. Neither this Private Placement Memorandum nor any statement that may have been made verbally or in writing is to be construed as a contract with the owners of the Bonds.

The information contained above is neither guaranteed as to accuracy or completeness nor to be construed as a representation by the Authority. The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Private Placement Memorandum nor any sale made hereunder is to create, under any circumstances, any implication that there has been no change in the affairs of the Authority or the Authority from the date hereof.

The Private Placement Memorandum is submitted in connection with the sale of the securities as referred to herein to the Texas Water Development Board on the Delivery Date and may not be reproduced or used, as a whole or in part, for any other purpose.

ADDITIONAL INFORMATION

The Private Placement Memorandum speaks only as of its date and the information contained herein is subject to change. Descriptions of the Bonds, the Indenture and the Bond Resolution and any other agreements and documents contained herein constitute summaries of certain provisions thereof and do not purport to be complete. This Private Placement Memorandum was approved by the Authority.

APPENDIX A
MATURITY SCHEDULE

<u>Maturity (December 15)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>CUSIP Nos. 95308R(a)</u>	<u>Maturity (December 15)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>CUSIP Nos. 95308R(a)</u>
2019	\$____,000			2034(b)	\$____,000		
2020	____,000			2035(b)	____,000		
2021	____,000			2036(b)	____,000		
2022	____,000			2037(b)	____,000		
2023	____,000			2038(b)	____,000		
2024	____,000			2039(b)	____,000		
2025	____,000			2040(b)	____,000		
2026	____,000			2041(b)	____,000		
2027	____,000			2042(b)	____,000		
2028(b)	____,000			2043(b)	____,000		
2029(b)	____,000			2044(b)	____,000		
2030(b)	____,000			2045(b)	____,000		
2031(b)	____,000			2046(b)	____,000		
2032(b)	____,000			2047(b)	____,000		
2033(b)	____,000						

(a) CUSIP numbers have been assigned to this issue by the CUSIP Service Bureau and are included solely for the convenience of the purchaser of the Bonds. Neither the Authority nor the Financial Advisors shall be responsible for the selection or correctness of the CUSIP numbers set forth herein. CUSIP data herein is provided by CUSIP Global Services, managed by S&P Capital IQ on behalf of The American Bankers Association. This data is not intended to create a database and does not serve in any way as a substitute for the CUSIP Services.

(b) The Bonds scheduled to mature on or after December 15, 2028, are subject to redemption, in whole or in part and in inverse order, prior to their scheduled maturities, on December 15, 2027, or on any date thereafter, for an amount equal to the principal amount redeemed plus accrued interest thereon to the date fixed for redemption. See “THE BONDS –Redemption Provisions.”

APPENDIX B

**BOND RESOLUTION, MASTER INDENTURE OF TRUST, AND THIRTEENTH SUPPLEMENTAL
INDENTURE OF TRUST**

APPENDIX C

FORM OF OPINION OF BOND COUNSEL

APPENDIX D

ANNUAL FINANCIAL REPORT FOR THE YEAR ENDED DECEMBER 31, 2016

Application Filing and Authorized Representative Resolution

A RESOLUTION by the Board of Directors of the West Harris County Regional Water Authority (WHCRWA) requesting financial assistance from the Texas Water Development Board; authorizing the filing of an application for assistance; and making certain findings in connection therewith.

BE IT RESOLVED BY THE Board of Directors OF THE WHCRWA:

SECTION 1: That an application is hereby approved and authorized to be filed with the Texas Water Development Board seeking financial assistance in an amount not to exceed \$50,000,000 to provide for the costs of WHCRWA's share of the City of Houston's Northeast Water Purification Plant Expansion Project (the "Treatment Expansion Project").

SECTION 2: That Bruce Parker be and is hereby designated the authorized representative of the WHCRWA for purposes of furnishing such information and executing such documents as may be required in connection with the preparation and filing of such application for financial assistance and the rules of the Texas Water Development Board.

SECTION 3: That the following firms and individuals are hereby authorized and directed to aid and assist in the preparation and submission of such application and appear on behalf of and represent the WHCRWA before any hearing held by the Texas Water Development Board on such application, to wit:

Financial Advisor: Terrell Palmer, FirstSouthwest, a Division of HillTop Securities
700 Milam Street, Suite 500, Houston, Texas 77002
Ph: (713) 654-8664 Email: terrell.palmer@hilltopsecurities.com

Engineer: Melinda Silva, Dannenbaum Engineering Corp
3100 West Alabama, Houston, Texas 77098
Ph: (713) 527-6427 Email: melinda.silva@dannenbaum.com

Bond Counsel: Alia Vinson, Allen Boone Humphries Robinson, LLP
3200 Southwest Freeway, Suite 2600, Houston, Texas 77027
Ph: (713) 860-6449 Email: avinson@abhr.com

PASSED AND APPROVED, this the 12th day of April, 2017.

ATTEST: _____



By: _____



(Seal)

Application Affidavit

THE STATE OF TEXAS §
COUNTIES OF HARRIS AND FORT BEND §
APPLICANT West Harris County Regional Water Authority §

BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, on this day personally appeared Bruce Parker as the Authorized Representative of the West Harris County Regional Water Authority, who being by me duly sworn, upon oath says that:

1. The decision by the West Harris County Regional Water Authority (authority, city, county, corporation, district) to request financial assistance from the Texas Water Development Board ("TWDB") was made in a public meeting held in accordance with the Open Meetings Act (Government Code, §551.001, et seq.) and after providing all such notice as required by such Act as is applicable to the West Harris County Regional Water Authority (authority, city, county, corporation, district).

2. The information submitted in the application is true and correct according to my best knowledge and belief.

3. The West Harris County Regional Water Authority (authority, city, county, corporation, district) has no pending, threatened, or outstanding judgments, orders, fines, penalties, taxes, assessment or other enforcement or compliance issue of any kind or nature by the Environmental Protection Agency, Texas Commission on Environmental Quality, Texas Comptroller, Texas Secretary of State, or any other federal, state or local government, except for the following (if no such outstanding compliance issues, write in "none").

None

4. The West Harris County Regional Water Authority (authority, city, county, corporation, district) warrants compliance with the representations made in the application in the event that the TWDB provides the financial assistance; and

5. The West Harris County Regional Water Authority (authority, city, county, corporation, district) will comply with all applicable federal laws, rules, and regulations as well as the laws of this state and the rules and regulations of the TWDB.

Bruce Parker

Official Representative

Title: President

SWORN TO AND SUBSCRIBED BEFORE ME, by Bruce Parker

on this 12th day of April, 2017.

(NOTARY'S SEAL)



Tracy Faucette
Notary Public, State of Texas

Application Resolution - Certificate of Secretary

THE STATE OF TEXAS §
COUNTIES OF HARRIS AND FORT BEND §
APPLICANT West Harris County Regional Water Authority §

I, the undersigned, Secretary of the West Harris County Regional Water Authority Texas,
DO HEREBY CERTIFY as follows:

1. That on the 12th day of April, 20 17, a regular/special meeting of the West Harris County Regional Water Authority (WHCRWA) was held; the duly constituted members of the WHCRWA being as follows Bruce Parker, Larry Wepler, Douglas (Cam) Postle, Gary Struzick, Eric Hansen, Mark Janneck, Michael Thornhill, Karla Cannon, Dennis Gorden; all of whom were present at the meeting, except the following:

Director Janneck

Among other business considered at the meeting, the attached resolution entitled:

"A RESOLUTION by the Board of Directors of the West Harris County Regional Water Authority requesting financial participation from the Texas Water Development Board; authorizing the filing of an application for financial participation; and making certain findings in connection therewith."

was introduced and submitted to the Board of Directors for passage and adoption. After presentation and consideration of the resolution, and upon a motion made by Director Struzick and seconded by Director Wepler, the resolution was passed and adopted by the Board of Directors by the following vote:

8 voted "For" 0 voted "Against" 0 abstained

all as shown in the official minutes of the WHCRWA for this meeting.

2. That the attached resolution is a true and correct copy of the original on file in the official records of the WHCRWA; the qualified and acting members of the Board of Directors on the date of this meeting are those persons shown above and, according to the records of my office, advance notice of the time, place, and purpose of meeting was given to each member of the Board of Directors; and that the meeting, and the deliberations of the public business described above, was open to the public and written notice of the meeting, including the subject of the resolution described above, was posted and given in advance of the meeting in compliance with the provisions of Chapter 551 of the Texas Government Code.

IN WITNESS WHEREOF, I have signed my name and affixed the seal of the WHCRWA,
this the 12th day of April, 20 17.


Secretary

(SEAL)

Water Conservation Plan Annual Report Wholesale Water Supplier

PART B25

CONTACT INFORMATION

Name of Entity: _____

Public Water Supply Identification Number (PWS ID): _____

CCN Number: _____

Water Rights ID Number: _____

Wastewater ID Number: _____

Check all that apply:

Retail Water Supplier

Wholesale Water Supplier

Wastewater Treatment Utility

Address: _____ City: _____ Zip Code: _____

Email: _____ Telephone Number: _____

Regional Water Planning Group: _____ [Map](#)

Groundwater Conservation District: _____ [Map](#)

Form Completed By: _____ Title: _____

Date: _____

Reporting Period (**calendar year**):

Period Begin (mm/yyyy) _____ Period End (mm/yyyy) _____

Check all that apply:

Received financial assistance of \$500,000 or more from TWDB

Have 3,300 or more retail connections

Have a surface water right with TCEQ

SYSTEM DATA

1. For this reporting period, provide the **total volume of wholesale water exported** (transferred or sold): _____ gallons SEE NOTE 1

2. For this reporting period, does your billing/accounting system have the capability to classify customers into the Wholesale Customer Categories?

Yes No

Wholesale Customer Categories*

- Municipal
- Industrial
- Commercial
- Institutional
- Agricultural

*Recommended Customer Categories for classifying customer water use. For definitions, refer to [Guidance and Methodology on Water Conservation and Water Use](#).

3. For this reporting period, select the category(s) used to calculate wholesale customer water usage:

- Municipal
- Industrial
- Commercial
- Institutional
- Agricultural

SEE NOTE 2

4. For this reporting year, enter the gallons of **WHOLESALE water exported** (transferred or sold). Enter zero if a Customer Category does not apply. SEE NOTE 1

Wholesale Customer Category	Gallons Exported (transferred or sold)	Number of Customers
Municipal		
Industrial		
Commercial		
Institutional		
Agricultural		
Total Gallons¹		

¹ Municipal + Industrial + Commercial + Institutional + Agricultural = Wholesale Water Exported

NOTE 1:
 The West Harris County Regional Water Authority supplied 7,604,521,300 gallons of treated surface water to 54 water plants within 42 Municipal Utility Districts in 2015. The WHCRWA used 46,016,300 gallons for surface water for flushing [7,604,521,300 gallons + 46,016,300 gallons = 7,650,637,600 gallons]. The estimated 2015 population of the Municipal Utility Districts served by the West Harris County Regional Water Authority was 151,567.

NOTE 2:
 The West Harris County Regional Water Authority provides treated surface water only to Municipal Utility Districts.

Water Use Accounting

SEE NOTE 3

	Total Gallons During the Reporting Period
Water Produced: Water from permitted sources such as rivers, lakes, streams, and wells.	
Wholesale Water Imported: Purchased wholesale water transferred into the system.	
System Input: Total water supplied to system and available for use.	Produced + Imported = System Input
Wholesale Water Exported: Wholesale water sold or transferred out of the system.	
Gallons Per Day:	Wholesale Water Exported ÷ 365 = Gallons Per Day
Population: Estimated total population for municipal customers.	
Gallons Per Capita Per Day:	(Wholesale Exported ÷ Population) ÷ 365 = Gallons Per Capita Per Day

Provide the breakdown of Wholesale Water Exported into Raw and Treated water volumes.

	Gallons
Raw Wholesale Water Exported	
Treated Wholesale Water Exported	

Provide the **specific and quantified five and ten-year targets** as listed in your most current Water Conservation Plan.

	Date to Achieve Target	Specified and Quantified Targets
Five-year target		
Ten-year target		

Water Conservation Programs and Activities

1. Water Conservation Plan

What year did your entity adopt or revise their most recent Water Conservation Plan? _____
The WHCRWA Amended And Restated Its Water Conservation Plan On April 5, 2015

2. Water Conservation Programs

Has your entity implemented any type of water conservation activity or program?

Yes No

If yes, select the type(s) of Best Management Practices or water conservation strategies implemented during this reporting period.

Wholesale Supplier Activities and Practices
Agricultural Conservation Programs Conservation Analysis & Planning Conservation Rate Structures Conservation Technology Education & Public Awareness Industrial Conservation Programs Leak Detection/ Water Loss Program Rebate, Retrofit, and Incentive Programs Regulatory & Enforcement System Operations Water Efficient Landscape Programs Water Use Audits

Other activities, list or describe.

3. Recycle/Reuse (Water or Wastewater Effluent)

For this reporting period, provide direct and indirect reuse activities.

Reuse Activity	Estimated Volume (in gallons)
On-site irrigation	
Plant wash down	
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (parks, golf courses)	
Agricultural	
Other, please describe:	
Estimated Volume of Reuse	

4. Water Savings

For this reporting period, estimate the savings that resulted from water conservation activities and programs. **WHCRWA Rate: January, 2015 - December, 2015 = \$2.45 Per 1000/Gallons**

Estimated Gallons Saved/Conserved	Estimated Gallons Recycled/Reused	Total Volume of Water Saved ¹	Dollar Value of Water Saved ²

- Estimated Gallons Saved + Estimated Gallons Recycled/Reused = Total Volume Saved
- Estimate this value by taking into account water savings, the cost of treatment or purchase of water, and deferred capital costs due to conservation.

Dollar Value Of Water Saved = [2.45 * (350,323,503/1000 GALLONS)] = \$858,293

5. Program Effectiveness

In your opinion, how would you rank the overall effectiveness of your conservation programs and activities?

Less Than Effective	Somewhat Effective	Highly Effective	Does Not Apply

6. What might your entity do to improve the effectiveness of your water conservation program?

SEE NOTE 4

7. Select the areas for which you would like to receive technical assistance:

- Agricultural Best Management Practices
- Wholesale Best Management Practices
- Industrial Best Management Practices
- Drought Contingency Plans
- Landscape Efficient Systems
- Leak Detection and Equipment
- Educational Resources

- Water Conservation Plans
- Water IQ: Know Your Water
- Water Loss Audits
- Rainwater Harvesting Systems
- Recycling and Reuse

Texas Water Development Board
 2015 Water Conservation Annual Report
for the
 West Harris County Regional Water Authority

NOTE 3: Water Use Accounting – A Summary Of The 2015 Water Use Within The West Harris County Regional Water Authority (WHCRWA).

Surface Water Provided to MUDs In 2015	7,604,521,300 Gallons
Surface Water Used for Pipeline Flushing In 2015	46,016,300 Gallons
Groundwater Used by WHCRWA GRP Participants In 2015	12,798,696,779 Gallons
Alternate Water Used by WHCRWA GRP Participants In 2015	350,323,503 Gallons
Total Water Usage In WHCRWA In 2015	20,799,557,882 Gallons

The WHCRWA purchased 7,744,495,000 gallons of surface water from the City of Houston in 2015. The Gallons Per Capita Per Day was calculated based on surface water use only.

The estimated 2015 population of the municipal customers within the WHCRWA is 151,567.

- 7,650,537,600 Gallons of Surface Water Exported ÷ 365 Days
 = 20,960,377 Gallons per Day
- 20,960,377 Gallons per Day/Population Served of 151,567
 = 138.29 GPCD ≈ **138 GPCD**

LEGEND
 GPCD = Gallons Per Capital Per Day
 GRP = Groundwater Reduction Plan
 MUDs = Municipal Utility Districts
 WHCRWA = West Harris County Regional Water Authority

The WHCRWA does not supply 100 percent of the municipal customers' total water demand. The 42 municipal utility districts that receive surface water used between 91-98 percent surface water in 2015 and between 2–9 percent groundwater. Only treated surface water flows through the West Harris County Regional Water Authority's surface water transmission system; (not well water or water from permitted sources).

The WHCRWA's water loss goals as reflected in the submitted Water Conservation Plan are due to the newness of the WHCRWA's system. Today, the WHCRWA's system is relatively new and has extremely low water loss of 1.21%. However, it is anticipated that as the system ages, the water loss will increase to approximately 5% (which is quite common and is a relatively low water loss percentage for older systems).

NOTE 4: Water Conservation Activities That The West Harris County Regional Water Authority (WHCRWA) Participates In To Improve The Effectiveness Of Its Water Conservation Program:

The WHCRWA continues to sponsor educational outreach programs that focus on providing information to the community in order to enlist their help in conserving water.

The WHCRWA's educational outreach programs include publishing water conservation and water management articles in the WHCRWA's newsletters and pamphlets, and creating active links to water conservation-related websites via the WHCRWA's Website. Water conservation has been and will continue to be discussed at the WHCRWA Town Hall Meetings.

In addition to the educational outreach programs, the WHCRWA sponsors two Mobile Teaching Labs. The "Water is Life" Teaching Lab is jointly sponsored by the WHCRWA and the North Harris County Regional Water Authority (NHCRWA). The "Water is Life" Teaching Lab travels to the campuses of Cypress-Fairbanks, Klein, Spring, and Tomball Independent School Districts. The second Mobile Teaching Lab is sponsored solely by the WHCRWA. It travels to the campuses Katy and Alief Independent School Districts. Approximately 7,000 elementary school students, teachers, and family members accessed the second Mobile Teaching Lab when they visited campuses and the annual Folk Life Festival sponsored by Katy ISD during 2015. Another Lab, WATER IS LIFE, co-owned by the North and West Authorities, visits 5-6 Cy-Fair ISD Junior Highs and Intermediate schools each year. Reservation for these Mobile Teaching Labs can be made through the WHCRWA's website.

The WHCRWA along with the other water authorities, law firms and engineering firms, generously sponsor educational materials for classroom use. These materials include story books such as "Journey to Gunk Junction" for middle-school-age children and "Water Is Life" for elementary-school-age children.

The WHCRWA continues its commitment to public education by supporting the State of Texas' official curriculum program called Texas Essential Knowledge and Skills (TEKS). The program is offered at no charge to the schools in grades 2, 4, and 7. The WHCRWA supports TEKS by sponsoring educator workshops, which provides hands-on learning opportunities about critical, water conservation related topics.

During the reporting period, the WHCRWA provided approximately 300,000 Water Conservation Brochures and 97,000 billing inserts to Municipal Utility Districts within the WHCRWA service area for distribution to their customers. Two other publications, – *What Landscapers (and homeowners) should know about Stormwater Pollution and how to help prevent it!* – is also reprinted annually for distribution to about 5,000 residents. *WATERWORKS* newsletter – sent to more than 100,000 families within the WHCRWA boundaries. There is generally a reference or article about Stormwater topics in these publications.

Water Conservation Educational Materials can be downloaded via a link on the WHCRWA's web site at:

<http://www.whcrwa.com/education/>

The WHCRWA implements incentives in the form of water credits to encourage reuse of treatment plant effluent, untreated surface water, or rainwater capture. Credits may be applied against the WHCRWA Groundwater Reduction Plan participant's monthly groundwater pumpage fees, surface water fees, or any other fees due to the WHCRWA.





APPLICATIONS FOR FINANCIAL ASSISTANCE

To The

Texas Water Development Board (TWDB)

Request For Funding Projects:

WHCRWA – City of Houston (COH) Treatment Expansion (NEWPP)

WHCRWA – Internal Distribution (CIP)

WHCRWA – Transmission Second Source Project (SS)



Submitted By:

West Harris County Regional Water Authority

Prepared by:

DANNENBAUM

ENGINEERING CORPORATION

T.B.P.E. FIRM REGISTRATION #392
3100 WEST ALABAMA HOUSTON, TX 77098 (713) 520-9570

JUNE 2015

Part C

CERTIFICATE FOR RESOLUTION

THE STATE OF TEXAS §
COUNTIES OF HARRIS AND FORT BEND §

I, the undersigned officer of the Board of Directors of the West Harris County Regional Water Authority, do hereby certify as follows:

1. The Board of Directors of the West Harris County Regional Water Authority convened in regular session on the 29th day of September, 2016, inside the boundaries of the Authority, and the roll was called of the duly constituted officers and members of the Board, to-wit:

- | | |
|----------------------|--------------------------|
| Bruce Parker | President |
| Larry Weppler | Vice President |
| Douglas (Cam) Postle | Secretary |
| Gary Struzick | Assistant Vice President |
| Eric Hansen | Assistant Secretary |
| Mark Janneck | Director |
| Michael Thornhill | Director |
| Karla Cannon | Director |
| Vacant | Director |

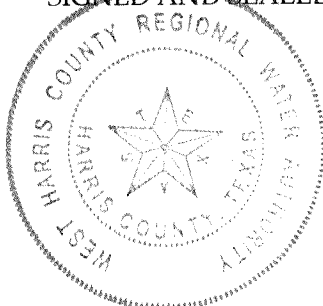
and all of said persons were present except Director(s) _____, thus constituting a quorum. Whereupon, among other business, the following was transacted at the meeting: a written

RESOLUTION AUTHORIZING THE ISSUANCE, SALE, AND DELIVERY OF THE WEST HARRIS COUNTY REGIONAL WATER AUTHORITY WATER SYSTEM JUNIOR LIEN REVENUE BONDS, SERIES 2016; APPROVING THE FORM AND SUBSTANCE AND AUTHORIZING THE EXECUTION OF AN ELEVENTH SUPPLEMENTAL INDENTURE OF TRUST RELATING TO SUCH BONDS; AUTHORIZING AND RATIFYING OTHER ACTIONS OF THE AUTHORITY; MAKING CERTAIN FINDINGS AND CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT

was introduced for the consideration of the Board. It was then duly moved and seconded that the Resolution be adopted; and, after due discussion, the motion, carrying with it the adoption of the Resolution, prevailed and carried unanimously.

2. That a true, full and correct copy of the aforesaid Resolution adopted at the meeting described in the above and foregoing paragraph is attached to and follows this certificate; that the Resolution has been duly recorded in the Board's minutes of the meeting; that the persons named in the above and foregoing paragraph are the duly chosen, qualified and acting officers and members of the Board as indicated therein; that each of the officers and members of the Board was duly and sufficiently notified officially and personally, in advance, of the time, place and purpose of the aforesaid meeting, and that the Resolution would be introduced and considered for adoption at the meeting, and each of the officers and members consented, in advance, to the holding of the meeting for such purpose; that the meeting was open to the public as required by law; and that public notice of the time, place and subject of the meeting was given as required by Chapter 551, Texas Government Code, and Section 49.063, Texas Water Code.

SIGNED AND SEALED the 29TH day of September, 2016




Secretary

RESOLUTION AUTHORIZING THE ISSUANCE, SALE, AND DELIVERY OF THE WEST HARRIS COUNTY REGIONAL WATER AUTHORITY WATER SYSTEM JUNIOR LIEN REVENUE BONDS, SERIES 2016; APPROVING THE FORM AND SUBSTANCE AND AUTHORIZING THE EXECUTION OF AN ELEVENTH SUPPLEMENTAL INDENTURE OF TRUST RELATING TO SUCH BONDS; AUTHORIZING AND RATIFYING OTHER ACTIONS OF THE AUTHORITY; MAKING CERTAIN FINDINGS AND CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT

WHEREAS, pursuant to Act of May 28, 2001, 77th Texas Legislature, Regular Session, Chapter 414, 2001 Tex. Gen. Laws, as amended, (the "Act"), the Authority was created as a political subdivision of the State of Texas; and

WHEREAS, pursuant to the Act, the Authority was created under and is essential to accomplish the purposes of Section 59, Article XVI, of the Texas Constitution, including the acquisition and provision of surface water and groundwater for residential, commercial, industrial, agricultural, and other uses, the reduction of groundwater withdrawals, the conservation, preservation, protection, recharge and prevention of waste of groundwater, and of groundwater reservoirs or their subdivisions, the control of subsidence caused by withdrawal of water from those groundwater reservoirs or their subdivisions, and other public purposes stated in the Act; and

WHEREAS, pursuant to the laws of the State, including particularly the Act, as amended, and Chapter 1201, Texas Government Code, as amended, the Authority is authorized and has the power to issue, sell, and deliver revenue bonds and notes for the purpose, among others, of financing the construction and acquisition of a water system; and

WHEREAS, in order to secure certain bonds, notes and other obligations to be issued by it from time to time to finance projects to fulfill its purposes, the Authority has entered into an Indenture of Trust (as amended, the "Master Indenture") with Regions Bank as Successor Trustee under the Master Indenture (the "Trustee") pursuant to which the Authority has assigned and pledged to the Trustee the Trust Estate (as defined in the Master Indenture) including the Pledged Revenues (as defined in the Master Indenture), for the purpose of establishing the Funds (as defined in the Master Indenture) and assigning and pledging the Pledged Funds (as defined in the Master Indenture) pursuant to the Master Indenture and thereby providing the Pledged Revenues and Pledged Funds to be held by the Trustee to secure the payment of principal of and interest on all bonds and notes and the payment of all obligations issued under the Master Indenture and any indentures supplemental thereto; and

WHEREAS, the Authority has entered into a water supply contract, as amended and supplemented (the "Supply Contract") with the City of Houston, Texas (the "City") pursuant to which the Authority acquired from the City certain rights to surface water, treatment and transmission; and

WHEREAS, the Authority has determined to issue its Water System Junior Lien Revenue Bonds, Series 2016 in the principal amount of \$37,960,000 (the "Series 2016 Bonds") under the Master Indenture as amended and supplemented by an Eleventh Supplemental Indenture of Trust (the "Eleventh Supplemental Indenture"), by and between the Authority and the Trustee, to: (i) fund costs of the Project (as defined in the Eleventh Supplemental Indenture); (ii) fund the Junior Lien Reserve Fund Requirement (as defined in the Eleventh Supplemental Indenture) attributable to the Series 2016 Bonds, and (iii) pay for the costs of issuance of the Series 2016 Bonds; and

WHEREAS, for the purposes set forth hereinabove and in order to issue and secure the Series 2016 Bonds, the Authority shall, pursuant to this resolution (the "Bond Resolution"), approve the Eleventh Supplemental Indenture, and shall confirm certain funds and accounts (the "Authority Funds") in connection with the Series 2016 Bonds; and

WHEREAS, to effectuate the issuance, sale and delivery of the Series 2016 Bonds, the Authority has entered into a financing agreement (the "Financing Agreement") dated September 6, 2016, with the Texas Water Development Board (the "TWDB"), relating to and setting forth certain terms and conditions upon which the TWDB will purchase the Series 2016 Bonds from the Authority and the Authority will sell the Bonds to the TWDB; and

WHEREAS, under the Eleventh Supplemental Indenture, the Authority is required to be deposit a portion of the proceeds of the Series 2016 Bonds to the credit of a special escrow account maintained on behalf of the Authority pursuant to an escrow agreement (the "Escrow Agreement");

WHEREAS, the form and substance of the Eleventh Supplemental Indenture (together with the Master Indenture, herein, the "Indenture"), the Financing Agreement, the Escrow Agreement, together with such other documents and instruments as may be executed pursuant to the authority granted herein, including, without limitation, any certificates, agreements, consents or financing statements, shall be collectively referred to herein as the "Transaction Document(s)."

NOW, THEREFORE, IT IS HEREBY RESOLVED BY THE BOARD OF DIRECTORS OF WEST HARRIS COUNTY REGIONAL WATER AUTHORITY THAT:

ARTICLE I
THE SERIES 2016 BONDS

Section 1.1 Findings and Determinations. The Authority hereby finds and declares that:

- (i) the recitals contained in this Bond Resolution are true and correct;
- (ii) the actions, documents, instruments and other matters herein authorized and approved by the Authority are carried out pursuant to the Constitution and the laws of the State of Texas, including the Act and Chapter 1201, et. seq., Texas Government Code, as amended;
- (iii) the Authority is authorized to impose, assess and collect fees, user fees, rates and charges for or related to the sale of water from the System (as defined in the Master Indenture, as supplemented) (including standby fees, capacity charges and transportation fees and other fees, user fees, rates and charges for the use, services or availability of the System); fees, user fees, rates and charges imposed for the use, services or benefits derived from the Groundwater Reduction Plan (as defined in the Master Indenture, as supplemented) or other groundwater withdrawal conservation efforts (including those imposed for the pumpage of water from water wells and those imposed for regulatory purposes); fees, user fees, or charges for the importation of water into the Authority's boundaries, and to increase such rates and charges to satisfy the covenant relating to rates and charges set forth in Section 703 of the Master Indenture;
- (iv) the Authority is authorized to pledge and assign the Trust Estate (as defined in the Master Indenture) pursuant to the Master Indenture; and
- (v) the Authority is authorized to fulfill its obligations under the Transaction Documents.

Section 1.2 Issuance, Execution and Delivery of the Bonds. That the issuance of the Series 2016 Bonds is hereby authorized under and in accordance with the Transaction Documents, and that, upon execution and delivery of the Transaction Documents, the President or Vice President and Secretary or Assistant Secretary of the Authority (or such other board member or officer of the Authority as the President or Vice President may authorize in writing) are hereby authorized to execute and attest the Bonds by manual or facsimile signature and to deliver the Bonds to the Attorney General of the State of Texas for approval, the Comptroller of Public Accounts for registration, and the Trustee for authentication, and thereafter to deliver such Bonds to the TWDB pursuant to the Financing Agreement.

Section 1.3 Approval, Execution and Delivery of the Eleventh Supplemental Indenture and the Escrow Agreement. That the Eleventh Supplemental Indenture and the Escrow Agreement, are hereby approved, and that the President or Vice President and Secretary or Assistant Secretary of the Authority (or such other board member or officer of the Authority as the President or Vice President may authorize in writing) are hereby authorized to execute and attest to the Eleventh Supplemental Indenture, the Escrow Agreement and any other related Transaction Documents and to deliver the Eleventh Supplemental Indenture, the Escrow Agreement and any other related Transaction Documents to the Trustee, the TWDB or any other third party.

Section 1.4 Establishment of Authority Funds. The following funds and accounts (the "Authority Funds") are hereby confirmed:

- A. Revenue Fund;
- B. Debt Service Fund;
- C. Debt Service Reserve Fund;
- D. Junior Lien Debt Service Fund;
- E. Junior Lien Debt Service Reserve Fund;
- F. Coverage Fund; and
- G. Construction Fund.

The Authority Funds, including all Accounts within them, shall be established, held and maintained by the Authority and shall be governed by the provisions of the Indenture. The Authority may from time to time establish accounts and subaccounts within such Funds for any lawful purposes.

For the purpose of maintaining a separate accounting of amounts allocable to Series 2016 Bonds, within certain of the Funds confirmed above, the following Accounts are hereby established: Series 2016 Escrow Account and Series 2016 Construction Account within the Construction Fund.

Section 1.5 Approval of the Private Placement Memorandum. That the Private Placement Memorandum dated September 29, 2016, prepared in connection with the Series 2016 Bonds is approved by the Authority solely in connection with the sale of the Series 2016 Bonds to the Texas Water Development Board in October 2016, and may not be used, reproduced or relied upon for any other purpose or by any third party.

ARTICLE II
MISCELLANEOUS PROVISIONS

Section 2.1 Ratifying Other Actions. That all other actions taken by the Board of Directors of the Authority, the President of the Authority and the other Authority officers in connection with the issuance of the Series 2016 Bonds are hereby ratified and confirmed.

Section 2.2 Authority to Invest Proceeds. That the Authority officers and its authorized consultants are hereby authorized to invest and reinvest, or direct the Trustee or any depository bank of the Authority to invest and reinvest, the proceeds of the Series 2016 Bonds and the Trust Estate.

Section 2.3 Execution and Delivery of Other Documents. That each of the President, any member of the board and the officers of the Authority is hereby authorized to execute and attest such other agreements, advance commitment agreements, assignments, bonds, certificates, contracts, documents, licenses, instruments, releases, financing statements, letters of instruction, notices of acceptance, notices of final payment, written requests and other documents, and to take all actions and to do all things whether or not mentioned herein, as may be necessary or convenient to carry out or assist in carrying out the purposes of this Bond Resolution, the Series 2016 Bonds, the Master Indenture and the Transaction Documents.

Section 2.4 Documents Incorporated Herein. That all of the terms and provisions of each of the documents listed below shall be and are hereby incorporated into and made a part of this Bond Resolution for all purposes:

Master Indenture
Eleventh Supplemental Indenture
Escrow Agreement

Section 2.5 Power to Revise Form of Documents and Execute Additional Documents. That, notwithstanding any other provision of this Bond Resolution, the President or Vice President of the Authority is hereby authorized to make or approve such revisions, additions, deletions and variations in the form of the Transaction Documents as, in the judgment of the President or Vice President, and in the opinion of bond counsel to the Authority, may be necessary or convenient to carry out or assist in carrying out the purposes of this Bond Resolution, the Master Indenture, the Eleventh Supplemental Indenture, or the Financing Agreement; furthermore, the President or Vice President of the Authority shall have the power and authority to execute and deliver, and to authorize any other member of the board and officers of the Authority to execute and deliver, such other instruments, documents, receipts and certificates as he may deem necessary or distribute in order to effectuate the transaction described herein or

otherwise appropriate, in the President or Vice President's discretion, in relation thereto or in supplement thereof; and any and all actions taken by the President or Vice President (or such other authorized parties) to that end are hereby ratified and confirmed as the acts and deeds of the Authority.

Section 2.6 Effective Date. That this Bond Resolution shall be in full force and effect from and upon its adoption.

Section 2.7 Open Meeting. It is hereby found, determined and declared that a sufficient written notice of the date, hour, place and subject of the meeting of the Board at which this Resolution was adopted was given, as required by law, and that this meeting has been open to the public as required by law at all times during which this Resolution and the subject matter thereof have been discussed, considered and fully acted upon. The Board further ratifies, approves and confirms such written notice and the contents and posting thereof.

ADOPTED, PASSED AND APPROVED, this 29th day of September, 2016.



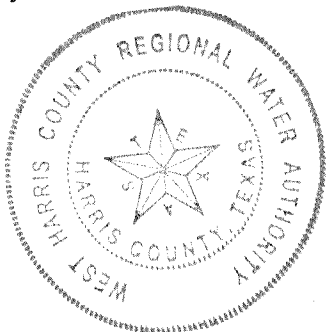
President, Board of Directors

ATTEST:



Secretary, Board of Directors

(SEAL)



040 HARRIS COUNTY
2016 APPRAISAL ROLLHARRIS COUNTY APPRAISAL DISTRICT
CERTIFIED ROLL (TO DATE)
PROPERTY USE CATEGORY RECAPLAST UPDATED : 3/3/2017
ALL PROPERTY

<u>PROPERTY USE CATEGORY</u>	<u>UNITS</u>	<u>ACREAGE</u>	<u>MARKET</u>	<u>APPRAISED</u>	<u>PRODUCTIVITY</u>	<u>EXEMPTIONS</u>	<u>TAXABLE VALUE</u>
A1 Real, Residential, Single-Family	1,079,200	214,187.00	\$243,979,813,929	\$233,011,017,681	\$0	\$61,975,103,863	\$171,035,913,818
A2 Real, Residential, Mobile Homes	10,850	7,407.00	\$489,401,973	\$468,028,159	\$0	\$88,142,663	\$379,885,496
B1 Real, Residential, Multi-Family	5,871	19,963.00	\$34,320,341,150	\$34,319,678,150	\$0	\$15,179,684	\$34,304,498,466
B2 Real, Residential, Two-Family	7,042	1,131.00	\$1,393,697,133	\$1,361,579,379	\$0	\$123,332,210	\$1,238,247,169
B3 Real, Residential, Three-Family	493	82	\$121,205,872	\$119,058,613	\$0	\$9,789,830	\$109,268,783
B4 Real, Residential, Four- or More-Family	136	27	\$29,137,747	\$28,677,028	\$0	\$737,275	\$27,939,753
C1 Real, Vacant Lots/Tracts	52,699	12,175.00	\$2,356,900,793	\$2,304,851,414	\$0	\$37,170,266	\$2,267,681,148
C2 Real, Vacant Commercial	29,767	61,756.00	\$6,833,176,256	\$6,807,392,831	\$0	\$28,378,691	\$6,779,014,140
C3 Real, Vacant	43,386	30,112.00	\$1,105,531,591	\$1,056,990,380	\$0	\$11,399,722	\$1,045,590,658
D1 Real, Qualified Agricultural Land	5,612	183,659.00	\$3,360,252,304	\$0	\$70,459,779	\$55,718	\$70,404,061
D2 Real, Unqualified Agricultural Land	2,987	40,071.00	\$1,291,311,469	\$1,259,094,596	\$0	\$8,167,290	\$1,250,927,306
E1 Real, Farm & Ranch Improved	401	576	\$140,820,333	\$131,864,038	\$0	\$31,605,273	\$100,258,765
F1 Real, Commercial	60,968	940,438.00	\$109,698,484,704	\$109,508,095,769	\$0	\$384,083,745	\$109,124,012,024
F2 Real, Industrial	2,134	37,675.00	\$26,645,776,014	\$26,645,776,014	\$0	\$1,932,720,770	\$24,713,055,244
G1 Oil and Mineral Gas Reserves	4,441	0	\$87,813,439	\$87,813,439	\$0	\$1,686,600	\$86,126,839
G2 Real Property Other Mineral Reserves	1	0	\$1,521,450	\$1,521,450	\$0	\$0	\$1,521,450
H1 Tangible, Vehicles	0	0	\$0	\$0	\$0	\$0	\$0
H2 Tangible, Goods In Transit	0	0	\$0	\$0	\$0	\$0	\$0
I1 Real, Banks	0	0	\$0	\$0	\$0	\$0	\$0
J1 Real & Tangible Personal, Utility Water	129	46	\$11,139,804	\$11,139,804	\$0	\$0	\$11,139,804
J2 Gas Companies	51	144	\$385,177,371	\$385,177,371	\$0	\$0	\$385,177,371
J3 Electric Companies	1,839	6,721.00	\$2,350,465,152	\$2,350,465,152	\$0	\$1,549,034	\$2,348,916,118
J4 Telephone Companies	173	242	\$657,446,304	\$657,438,686	\$0	\$21,319	\$657,417,367
J5 Railroads	1,177	6,696.00	\$386,874,806	\$386,874,806	\$0	\$0	\$386,874,806
J6 Pipelines	4,446	209	\$869,532,554	\$869,532,554	\$0	\$5,623,320	\$863,909,234
J7 Major Cable Television Systems	12	0	\$369,291,960	\$369,291,960	\$0	\$0	\$369,291,960
L1 Tangible, Commercial	165,206	0	\$27,986,607,976	\$27,986,607,976	\$0	\$652,310,753	\$27,334,297,223
L2 Tangible, Industrial	15,146	0	\$37,326,154,138	\$37,326,154,138	\$0	\$4,068,091,573	\$33,258,062,565
M1 Tangible, Nonbusiness Watercraft	0	0	\$0	\$0	\$0	\$0	\$0
M2 Tangible, Nonbusiness Aircraft	0	0	\$0	\$0	\$0	\$0	\$0
M3 Tangible, Mobile Homes	27,064	0	\$367,672,773	\$366,876,457	\$0	\$45,543,172	\$321,333,285
M4 Tangible, Miscellaneous	0	0	\$0	\$0	\$0	\$0	\$0
N1 Intangibles	0	0	\$0	\$0	\$0	\$0	\$0
O1 Inventory	11,529	296	\$424,791,576	\$424,791,576	\$0	\$1,014,274	\$423,777,302
O2 Inventory	3,970	24	\$743,981,376	\$743,981,376	\$0	\$10,610,565	\$733,370,811
S1 Dealer Inventory	3,125	0	\$1,515,713,274	\$1,515,713,274	\$0	\$10,976	\$1,515,702,298
U0 Unknown	0	0	\$0	\$0	\$0	\$0	\$0
XA Public Property for Housing Indigent Persons	0	0	\$0	\$0	\$0	\$0	\$0
XB Income Producing Personal Property (<\$500)	0	0	\$0	\$0	\$0	\$0	\$0
XC Mineral Interest (<\$500)	0	0	\$0	\$0	\$0	\$0	\$0
XD Improving Property for Housing w/ Volunteer Labor	38	4	\$836,059	\$836,059	\$0	\$836,059	\$0

**040 HARRIS COUNTY
2016 APPRAISAL ROLL**

**HARRIS COUNTY APPRAISAL DISTRICT
CERTIFIED ROLL (TO DATE)
PROPERTY USE CATEGORY RECAP**

**LAST UPDATED : 3/3/2017
ALL PROPERTY**

<u>PROPERTY USE CATEGORY</u>	<u>UNITS</u>	<u>ACREAGE</u>	<u>MARKET</u>	<u>APPRAISED</u>	<u>PRODUCTIVITY</u>	<u>EXEMPTIONS</u>	<u>TAXABLE VALUE</u>
XE Community Housing Development Organizations	39	210	\$198,094,712	\$198,094,712	\$0	\$198,094,712	\$0
XF Assisting Ambulatory Health Care Centers	0	0	\$0	\$0	\$0	\$0	\$0
XG Primarily Performing Charitable Functions	56	85	\$43,234,886	\$43,234,886	\$0	\$43,234,886	\$0
XH Developing Model Colonia Subdivisions	0	0	\$0	\$0	\$0	\$0	\$0
XI Youth Spiritual, Mental and Physical Development	50	336	\$147,007,953	\$147,007,953	\$0	\$147,007,953	\$0
XJ Private Schools	640	2,061.00	\$1,792,290,305	\$1,792,290,305	\$0	\$1,791,323,046	\$967,259
XL Economic Development Services to Local Commur	8	22	\$49,622,783	\$49,622,783	\$0	\$49,622,783	\$0
XM Marine Cargo Containers	0	0	\$0	\$0	\$0	\$0	\$0
XN Motor Vehicles Leased for Personal Use	0	0	\$0	\$0	\$0	\$0	\$0
XO Motor Vehicles (Income Production & Personal Us	0	0	\$0	\$0	\$0	\$0	\$0
XP Offshore Drilling Equipment Not In Use	0	0	\$0	\$0	\$0	\$0	\$0
XQ Intracoastal Waterway Dredge Disposal Site	0	0	\$0	\$0	\$0	\$0	\$0
XR Nonprofit Water or Wastewater Corporations	1	0	\$54,190	\$54,190	\$0	\$54,190	\$0
XS Raw Cocoa and Green Coffee Held in Harris Coun	0	0	\$0	\$0	\$0	\$0	\$0
XT Limitation on Taxes in Certain Municipalities	0	0	\$0	\$0	\$0	\$0	\$0
XU Miscellaneous Exemptions	93	213	\$584,731,432	\$584,731,432	\$0	\$584,731,432	\$0
XV Other Exempt (Incl Public, Religious, Charitable)	73469	222200	\$43,636,491,765	\$43,636,226,162	\$0	\$43,627,679,031	\$8,547,131
HARRIS COUNTY Totals :	1,614,249	1,788,768.00	\$551,702,399,306	\$536,957,582,553	\$70,459,779	\$115,874,912,678	\$421,153,129,654

040 HARRIS COUNTY
2015 APPRAISAL ROLL

HARRIS COUNTY APPRAISAL DISTRICT
CERTIFIED ROLL (TO DATE)
PROPERTY USE CATEGORY RECAP

LAST UPDATED : 3/3/2017
ALL PROPERTY

<u>PROPERTY USE CATEGORY</u>	<u>UNITS</u>	<u>ACREAGE</u>	<u>MARKET</u>	<u>APPRAISED</u>	<u>PRODUCTIVITY</u>	<u>EXEMPTIONS</u>	<u>TAXABLE VALUE</u>
A1 Real, Residential, Single-Family	1,065,160	214,570.00	\$230,757,887,313	\$213,538,437,217	\$0	\$57,396,991,821	\$156,141,445,396
A2 Real, Residential, Mobile Homes	10,992	7,658.00	\$483,171,631	\$464,000,705	\$0	\$89,672,245	\$374,328,460
B1 Real, Residential, Multi-Family	5,902	19,421.00	\$28,736,912,771	\$28,736,514,077	\$0	\$18,595,875	\$28,717,918,202
B2 Real, Residential, Two-Family	7,102	1,137.00	\$1,329,002,469	\$1,288,943,680	\$0	\$117,400,042	\$1,171,543,638
B3 Real, Residential, Three-Family	504	84	\$118,035,901	\$115,363,023	\$0	\$9,404,751	\$105,958,272
B4 Real, Residential, Four- or More-Family	135	27	\$28,039,463	\$27,418,180	\$0	\$691,788	\$26,726,392
C1 Real, Vacant Lots/Tracts	53,237	12,516.00	\$2,297,389,448	\$2,242,263,620	\$0	\$41,458,019	\$2,200,805,601
C2 Real, Vacant Commercial	30,323	62,500.00	\$6,568,744,290	\$6,549,749,782	\$0	\$37,148,110	\$6,512,601,672
C3 Real, Vacant	43,863	23,886.00	\$1,065,175,025	\$1,018,699,222	\$0	\$11,691,048	\$1,007,008,174
D1 Real, Qualified Agricultural Land	5,991	200,843.00	\$3,267,967,086	\$0	\$77,715,999	\$145,274	\$77,570,725
D2 Real, Unqualified Agricultural Land	4,123	52,943.00	\$1,416,567,758	\$1,386,516,339	\$0	\$7,800,894	\$1,378,715,445
E1 Real, Farm & Ranch Improved	388	570	\$131,068,260	\$121,440,432	\$0	\$28,841,273	\$92,599,159
F1 Real, Commercial	60,341	111,712.00	\$95,768,201,403	\$95,626,869,320	\$0	\$544,099,255	\$95,082,770,065
F2 Real, Industrial	2,121	36,833.00	\$24,083,874,230	\$24,083,874,230	\$0	\$1,867,424,539	\$22,216,449,691
G1 Oil and Mineral Gas Reserves	6,152	0	\$175,184,498	\$175,184,498	\$0	\$3,801,490	\$171,383,008
G2 Real Property Other Mineral Reserves	1	0	\$1,552,500	\$1,552,500	\$0	\$0	\$1,552,500
H1 Tangible, Vehicles	0	0	\$0	\$0	\$0	\$0	\$0
H2 Tangible, Goods In Transit	0	0	\$0	\$0	\$0	\$0	\$0
I1 Real, Banks	0	0	\$0	\$0	\$0	\$0	\$0
J1 Real & Tangible Personal, Utility Water	156	53	\$13,555,177	\$13,555,177	\$0	\$0	\$13,555,177
J2 Gas Companies	51	144	\$320,124,156	\$320,124,156	\$0	\$0	\$320,124,156
J3 Electric Companies	1,821	6,577.00	\$2,158,927,317	\$2,158,927,317	\$0	\$1,095,332	\$2,157,831,985
J4 Telephone Companies	176	243	\$654,868,248	\$654,868,248	\$0	\$23,080	\$654,845,168
J5 Railroads	1,182	6,603.00	\$363,683,395	\$363,683,395	\$0	\$0	\$363,683,395
J6 Pipelines	4,433	209	\$799,437,392	\$799,437,392	\$0	\$4,102,492	\$795,334,900
J7 Major Cable Television Systems	16	0	\$356,337,610	\$356,337,610	\$0	\$0	\$356,337,610
L1 Tangible, Commercial	167,464	0	\$28,755,978,452	\$28,755,978,452	\$0	\$1,733,198,510	\$27,022,779,942
L2 Tangible, Industrial	15,357	0	\$42,330,553,557	\$42,330,553,557	\$0	\$4,787,015,747	\$37,543,537,810
M1 Tangible, Nonbusiness Watercraft	0	0	\$0	\$0	\$0	\$0	\$0
M2 Tangible, Nonbusiness Aircraft	0	0	\$0	\$0	\$0	\$0	\$0
M3 Tangible, Mobile Homes	26,534	0	\$369,879,500	\$368,882,354	\$0	\$49,232,928	\$319,649,426
M4 Tangible, Miscellaneous	0	0	\$0	\$0	\$0	\$0	\$0
N1 Intangibles	0	0	\$0	\$0	\$0	\$0	\$0
O1 Inventory	10,313	344	\$337,203,661	\$337,203,661	\$0	\$1,207,493	\$335,996,168
O2 Inventory	3,921	22	\$617,117,511	\$616,947,913	\$0	\$14,066,509	\$602,881,404
S1 Dealer Inventory	2,941	0	\$1,488,705,439	\$1,488,705,439	\$0	\$5,856	\$1,488,699,583
U0 Unknown	0	0	\$0	\$0	\$0	\$0	\$0
XA Public Property for Housing Indigent Persons	0	0	\$0	\$0	\$0	\$0	\$0
XB Income Producing Personal Property (<\$500)	0	0	\$0	\$0	\$0	\$0	\$0
XC Mineral Interest (<\$500)	0	0	\$0	\$0	\$0	\$0	\$0
XD Improving Property for Housing w/ Volunteer Labor	27	4	\$826,584	\$826,584	\$0	\$826,584	\$0

**040 HARRIS COUNTY
2015 APPRAISAL ROLL**

**HARRIS COUNTY APPRAISAL DISTRICT
CERTIFIED ROLL (TO DATE)
PROPERTY USE CATEGORY RECAP**

**LAST UPDATED : 3/3/2017
ALL PROPERTY**

<u>PROPERTY USE CATEGORY</u>	<u>UNITS</u>	<u>ACREAGE</u>	<u>MARKET</u>	<u>APPRAISED</u>	<u>PRODUCTIVITY</u>	<u>EXEMPTIONS</u>	<u>TAXABLE VALUE</u>
XE Community Housing Development Organizations	40	210	\$196,242,250	\$196,242,250	\$0	\$196,242,250	\$0
XF Assisting Ambulatory Health Care Centers	0	0	\$0	\$0	\$0	\$0	\$0
XG Primarily Performing Charitable Functions	58	96	\$41,248,399	\$41,248,399	\$0	\$41,248,399	\$0
XH Developing Model Colonia Subdivisions	0	0	\$0	\$0	\$0	\$0	\$0
XI Youth Spiritual, Mental and Physical Development	48	326	\$144,488,146	\$144,488,146	\$0	\$144,488,146	\$0
XJ Private Schools	658	2,063.00	\$1,668,356,337	\$1,668,356,337	\$0	\$1,665,058,497	\$3,297,840
XL Economic Development Services to Local Commu	8	22	\$49,568,559	\$49,568,559	\$0	\$49,568,559	\$0
XM Marine Cargo Containers	0	0	\$0	\$0	\$0	\$0	\$0
XN Motor Vehicles Leased for Personal Use	0	0	\$0	\$0	\$0	\$0	\$0
XO Motor Vehicles (Income Production & Personal Us	0	0	\$0	\$0	\$0	\$0	\$0
XP Offshore Drilling Equipment Not In Use	0	0	\$0	\$0	\$0	\$0	\$0
XQ Intracoastal Waterway Dredge Disposal Site	0	0	\$0	\$0	\$0	\$0	\$0
XR Nonprofit Water or Wastewater Corporations	1	0	\$54,190	\$54,190	\$0	\$54,190	\$0
XS Raw Cocoa and Green Coffee Held in Harris Coun	0	0	\$0	\$0	\$0	\$0	\$0
XT Limitation on Taxes in Certain Municipalities	0	0	\$0	\$0	\$0	\$0	\$0
XU Miscellaneous Exemptions	93	211	\$581,587,818	\$581,587,818	\$0	\$581,587,818	\$0
XV Other Exempt (Incl Public, Religious, Charitable)	73746	222792	\$41,381,889,050	\$41,381,468,226	\$0	\$41,373,971,286	\$7,496,940
HARRIS COUNTY Totals :	1,605,379	984,619.00	\$518,859,406,794	\$498,005,872,005	\$77,715,999	\$110,818,160,100	\$387,265,427,90

040 HARRIS COUNTY
2014 APPRAISAL ROLL

HARRIS COUNTY APPRAISAL DISTRICT
CERTIFIED ROLL (TO DATE)
PROPERTY USE CATEGORY RECAP

LAST UPDATED : 3/3/2017
ALL PROPERTY

<u>PROPERTY USE CATEGORY</u>	<u>UNITS</u>	<u>ACREAGE</u>	<u>MARKET</u>	<u>APPRAISED</u>	<u>PRODUCTIVITY</u>	<u>EXEMPTIONS</u>	<u>TAXABLE VALUE</u>
A1 Real, Residential, Single-Family	1,050,613	217,247.00	\$198,140,980,153	\$188,453,493,827	\$0	\$51,604,942,783	\$136,848,551,044
A2 Real, Residential, Mobile Homes	10,839	7,637.00	\$443,355,729	\$433,417,073	\$0	\$90,201,666	\$343,215,407
B1 Real, Residential, Multi-Family	5,912	19,065.00	\$24,353,353,010	\$24,352,595,514	\$0	\$20,698,380	\$24,331,897,134
B2 Real, Residential, Two-Family	7,159	1,155.00	\$1,160,751,156	\$1,140,488,358	\$0	\$109,724,067	\$1,030,764,291
B3 Real, Residential, Three-Family	499	82	\$99,521,089	\$97,790,632	\$0	\$9,110,159	\$88,680,473
B4 Real, Residential, Four- or More-Family	127	26	\$21,757,763	\$21,607,465	\$0	\$525,293	\$21,082,172
C1 Real, Vacant Lots/Tracts	52,730	12,345.00	\$1,958,995,951	\$1,913,912,850	\$0	\$38,746,048	\$1,875,166,802
C2 Real, Vacant Commercial	30,239	60,536.00	\$5,754,022,036	\$5,738,940,219	\$0	\$32,367,177	\$5,706,573,042
C3 Real, Vacant	48,621	22,413.00	\$1,092,073,512	\$1,047,878,808	\$0	\$16,595,178	\$1,031,283,630
D1 Real, Qualified Agricultural Land	6,079	198,535.00	\$2,896,230,504	\$0	\$79,978,887	\$1,043,709	\$78,935,178
D2 Real, Unqualified Agricultural Land	4,839	64,108.00	\$1,614,240,480	\$1,585,520,481	\$0	\$7,563,688	\$1,577,956,793
E1 Real, Farm & Ranch Improved	383	5486	\$162,495,802	\$114,332,553	\$0	\$25,667,730	\$88,664,823
F1 Real, Commercial	59,699	110,157.00	\$86,228,012,118	\$86,097,696,133	\$0	\$491,447,173	\$85,606,248,960
F2 Real, Industrial	2,092	35,649.00	\$21,156,533,020	\$21,156,533,020	\$0	\$1,900,521,748	\$19,256,011,272
G1 Oil and Mineral Gas Reserves	6,664	0	\$243,341,528	\$243,341,528	\$0	\$5,814,280	\$237,527,248
G2 Real Property Other Mineral Reserves	1	0	\$1,552,500	\$1,552,500	\$0	\$0	\$1,552,500
H1 Tangible, Vehicles	0	0	\$0	\$0	\$0	\$0	\$0
H2 Tangible, Goods In Transit	0	0	\$0	\$0	\$0	\$0	\$0
I1 Real, Banks	0	0	\$0	\$0	\$0	\$0	\$0
J1 Real & Tangible Personal, Utility Water	165	56	\$13,939,510	\$13,939,510	\$0	\$0	\$13,939,510
J2 Gas Companies	51	144	\$290,642,775	\$290,642,775	\$0	\$0	\$290,642,775
J3 Electric Companies	1,833	6,666.00	\$2,109,295,555	\$2,109,295,555	\$0	\$1,152,902	\$2,108,142,653
J4 Telephone Companies	174	245	\$696,404,838	\$696,404,838	\$0	\$0	\$696,404,838
J5 Railroads	1,194	6,701.00	\$332,808,430	\$332,808,430	\$0	\$0	\$332,808,430
J6 Pipelines	4,412	209	\$696,677,253	\$696,677,253	\$0	\$4,962,997	\$691,714,256
J7 Major Cable Television Systems	15	0	\$341,309,450	\$341,309,450	\$0	\$0	\$341,309,450
L1 Tangible, Commercial	172,124	0	\$26,442,218,977	\$26,442,218,977	\$0	\$1,326,027,290	\$25,116,191,687
L2 Tangible, Industrial	14,733	0	\$41,024,125,056	\$41,024,125,056	\$0	\$6,095,581,185	\$34,928,543,871
M1 Tangible, Nonbusiness Watercraft	0	0	\$0	\$0	\$0	\$0	\$0
M2 Tangible, Nonbusiness Aircraft	0	0	\$0	\$0	\$0	\$0	\$0
M3 Tangible, Mobile Homes	26,115	1	\$349,642,393	\$347,967,198	\$0	\$48,435,656	\$299,531,542
M4 Tangible, Miscellaneous	0	0	\$0	\$0	\$0	\$0	\$0
N1 Intangibles	0	0	\$0	\$0	\$0	\$0	\$0
O1 Inventory	8,390	552	\$214,351,037	\$214,351,037	\$0	\$768,932	\$213,582,105
O2 Inventory	1,856	23	\$340,092,580	\$340,086,759	\$0	\$10,749,624	\$329,337,135
S1 Dealer Inventory	2,800	0	\$1,326,245,895	\$1,326,245,895	\$0	\$14,024	\$1,326,231,871
U0 Unknown	0	0	\$0	\$0	\$0	\$0	\$0
XA Public Property for Housing Indigent Persons	0	0	\$0	\$0	\$0	\$0	\$0
XB Income Producing Personal Property (<\$500)	0	0	\$0	\$0	\$0	\$0	\$0
XC Mineral Interest (<\$500)	0	0	\$0	\$0	\$0	\$0	\$0
XD Improving Property for Housing w/ Volunteer Labor	89	5	\$1,801,266	\$1,801,266	\$0	\$1,801,266	\$0

**040 HARRIS COUNTY
2014 APPRAISAL ROLL**

**HARRIS COUNTY APPRAISAL DISTRICT
CERTIFIED ROLL (TO DATE)
PROPERTY USE CATEGORY RECAP**

**LAST UPDATED : 3/3/2017
ALL PROPERTY**

<u>PROPERTY USE CATEGORY</u>	<u>UNITS</u>	<u>ACREAGE</u>	<u>MARKET</u>	<u>APPRAISED</u>	<u>PRODUCTIVITY</u>	<u>EXEMPTIONS</u>	<u>TAXABLE VALUE</u>
XE Community Housing Development Organizations	42	220	\$199,945,131	\$199,945,131	\$0	\$199,945,131	\$0
XF Assisting Ambulatory Health Care Centers	0	0	\$0	\$0	\$0	\$0	\$0
XG Primarily Performing Charitable Functions	59	98	\$41,329,936	\$41,329,936	\$0	\$41,329,936	\$0
XH Developing Model Colonia Subdivisions	0	0	\$0	\$0	\$0	\$0	\$0
XI Youth Spiritual, Mental and Physical Development	51	358	\$128,236,333	\$128,236,333	\$0	\$128,236,333	\$0
XJ Private Schools	523	1,938.00	\$1,586,605,272	\$1,586,605,272	\$0	\$1,581,750,197	\$4,855,075
XL Economic Development Services to Local Commu	7	23	\$51,129,168	\$51,129,168	\$0	\$51,129,168	\$0
XM Marine Cargo Containers	0	0	\$0	\$0	\$0	\$0	\$0
XN Motor Vehicles Leased for Personal Use	0	0	\$0	\$0	\$0	\$0	\$0
XO Motor Vehicles (Income Production & Personal Us	0	0	\$0	\$0	\$0	\$0	\$0
XP Offshore Drilling Equipment Not In Use	0	0	\$0	\$0	\$0	\$0	\$0
XQ Intracoastal Waterway Dredge Disposal Site	0	0	\$0	\$0	\$0	\$0	\$0
XR Nonprofit Water or Wastewater Corporations	1	0	\$54,190	\$54,190	\$0	\$54,190	\$0
XS Raw Cocoa and Green Coffee Held in Harris Coun	0	0	\$0	\$0	\$0	\$0	\$0
XT Limitation on Taxes in Certain Municipalities	0	0	\$0	\$0	\$0	\$0	\$0
XU Miscellaneous Exemptions	94	214	\$513,910,824	\$513,910,824	\$0	\$513,910,824	\$0
XV Other Exempt (Incl Public, Religious, Charitable)	72626	220539	\$39,032,184,145	\$39,032,082,798	\$0	\$38,996,929,266	\$35,153,532
HARRIS COUNTY Totals :	1,593,850	992,433.00	\$461,060,166,365	\$448,130,268,612	\$79,978,887	\$103,357,748,000	\$344,852,499,499

040 HARRIS COUNTY
2013 APPRAISAL ROLL

HARRIS COUNTY APPRAISAL DISTRICT
CERTIFIED ROLL (TO DATE)
PROPERTY USE CATEGORY RECAP

LAST UPDATED : 3/3/2017
ALL PROPERTY

<u>PROPERTY USE CATEGORY</u>	<u>UNITS</u>	<u>ACREAGE</u>	<u>MARKET</u>	<u>APPRAISED</u>	<u>PRODUCTIVITY</u>	<u>EXEMPTIONS</u>	<u>TAXABLE VALUE</u>
A1 Real, Residential, Single-Family	1,038,146	216,921.00	\$170,151,481,814	\$168,719,537,246	\$0	\$47,115,237,712	\$121,604,299,534
A2 Real, Residential, Mobile Homes	10,727	7,549.00	\$425,919,634	\$417,880,625	\$0	\$91,103,120	\$326,777,505
B1 Real, Residential, Multi-Family	5,924	18,692.00	\$20,715,648,197	\$20,715,312,228	\$0	\$14,210,042	\$20,701,102,186
B2 Real, Residential, Two-Family	7,214	1,168.00	\$1,045,595,677	\$1,038,872,634	\$0	\$108,829,109	\$930,043,525
B3 Real, Residential, Three-Family	499	83	\$88,638,484	\$88,008,813	\$0	\$9,434,493	\$78,574,320
B4 Real, Residential, Four- or More-Family	119	24	\$18,532,155	\$18,526,378	\$0	\$535,203	\$17,991,175
C1 Real, Vacant Lots/Tracts	51,308	12,852.00	\$1,663,116,421	\$1,626,924,207	\$0	\$29,156,552	\$1,597,767,655
C2 Real, Vacant Commercial	29,914	56,397.00	\$5,090,739,712	\$5,076,812,551	\$0	\$29,655,582	\$5,047,156,969
C3 Real, Vacant	37,114	20,279.00	\$821,008,237	\$789,437,535	\$0	\$12,614,702	\$776,822,833
D1 Real, Qualified Agricultural Land	5,849	197,580.00	\$2,446,342,656	\$0	\$77,115,482	\$115,746	\$76,999,736
D2 Real, Unqualified Agricultural Land	5,165	69,527.00	\$1,761,128,094	\$1,732,887,730	\$0	\$17,135,525	\$1,715,752,205
E1 Real, Farm & Ranch Improved	353	9835	\$201,902,937	\$100,909,923	\$0	\$21,252,506	\$79,657,417
F1 Real, Commercial	59,053	110,419.00	\$76,924,142,773	\$76,804,376,482	\$0	\$350,496,547	\$76,453,879,935
F2 Real, Industrial	2,038	34,740.00	\$19,402,866,549	\$19,402,866,549	\$0	\$1,910,131,630	\$17,492,734,919
G1 Oil and Mineral Gas Reserves	7,080	0	\$226,428,576	\$226,428,576	\$0	\$6,070,506	\$220,358,070
G2 Real Property Other Mineral Reserves	1	0	\$1,267,880	\$1,267,880	\$0	\$0	\$1,267,880
H1 Tangible, Vehicles	0	0	\$0	\$0	\$0	\$0	\$0
H2 Tangible, Goods In Transit	0	0	\$0	\$0	\$0	\$0	\$0
I1 Real, Banks	0	0	\$0	\$0	\$0	\$0	\$0
J1 Real & Tangible Personal, Utility Water	168	56	\$13,886,719	\$13,886,719	\$0	\$0	\$13,886,719
J2 Gas Companies	51	144	\$268,857,402	\$268,857,402	\$0	\$0	\$268,857,402
J3 Electric Companies	1,840	6,694.00	\$2,320,881,646	\$2,320,881,646	\$0	\$1,118,372	\$2,319,763,274
J4 Telephone Companies	173	245	\$717,315,887	\$717,315,887	\$0	\$0	\$717,315,887
J5 Railroads	1,205	6,979.00	\$303,884,054	\$303,884,054	\$0	\$0	\$303,884,054
J6 Pipelines	4,375	221	\$623,755,968	\$623,755,968	\$0	\$324,900	\$623,431,068
J7 Major Cable Television Systems	16	0	\$323,584,230	\$323,584,230	\$0	\$0	\$323,584,230
L1 Tangible, Commercial	171,743	0	\$25,108,567,444	\$25,108,567,444	\$0	\$1,137,355,281	\$23,971,212,163
L2 Tangible, Industrial	14,238	0	\$40,203,892,874	\$40,203,892,874	\$0	\$6,400,507,922	\$33,803,384,952
M1 Tangible, Nonbusiness Watercraft	0	0	\$0	\$0	\$0	\$0	\$0
M2 Tangible, Nonbusiness Aircraft	0	0	\$0	\$0	\$0	\$0	\$0
M3 Tangible, Mobile Homes	25,479	1	\$345,211,396	\$343,120,948	\$0	\$50,007,587	\$293,113,361
M4 Tangible, Miscellaneous	0	0	\$0	\$0	\$0	\$0	\$0
N1 Intangibles	0	0	\$0	\$0	\$0	\$0	\$0
O1 Inventory	22,893	3263	\$370,351,946	\$361,494,467	\$0	\$2,154,493	\$359,339,974
O2 Inventory	745	4	\$134,363,997	\$134,363,997	\$0	\$3,384,821	\$130,979,176
S1 Dealer Inventory	2,631	0	\$1,178,643,413	\$1,178,643,413	\$0	\$7,103	\$1,178,636,310
U0 Unknown	0	0	\$0	\$0	\$0	\$0	\$0
XA Public Property for Housing Indigent Persons	0	0	\$0	\$0	\$0	\$0	\$0
XB Income Producing Personal Property (<\$500)	0	0	\$0	\$0	\$0	\$0	\$0
XC Mineral Interest (<\$500)	0	0	\$0	\$0	\$0	\$0	\$0
XD Improving Property for Housing w/ Volunteer Labor	93	3	\$1,239,255	\$1,239,255	\$0	\$1,239,255	\$0

**040 HARRIS COUNTY
2013 APPRAISAL ROLL**

**HARRIS COUNTY APPRAISAL DISTRICT
CERTIFIED ROLL (TO DATE)
PROPERTY USE CATEGORY RECAP**

**LAST UPDATED : 3/3/2017
ALL PROPERTY**

<u>PROPERTY USE CATEGORY</u>	<u>UNITS</u>	<u>ACREAGE</u>	<u>MARKET</u>	<u>APPRAISED</u>	<u>PRODUCTIVITY</u>	<u>EXEMPTIONS</u>	<u>TAXABLE VALUE</u>
XE Community Housing Development Organizations	45	252	\$213,751,720	\$213,751,720	\$0	\$213,751,720	\$0
XF Assisting Ambulatory Health Care Centers	0	0	\$0	\$0	\$0	\$0	\$0
XG Primarily Performing Charitable Functions	59	95	\$36,908,078	\$36,908,078	\$0	\$36,894,031	\$14,047
XH Developing Model Colonia Subdivisions	0	0	\$0	\$0	\$0	\$0	\$0
XI Youth Spiritual, Mental and Physical Development	52	354	\$123,641,318	\$123,641,318	\$0	\$123,641,318	\$0
XJ Private Schools	503	1,932.00	\$1,514,654,262	\$1,514,654,262	\$0	\$1,513,723,843	\$930,419
XL Economic Development Services to Local Commu	60	163	\$464,002,738	\$464,002,738	\$0	\$464,002,738	\$0
XM Marine Cargo Containers	0	0	\$0	\$0	\$0	\$0	\$0
XN Motor Vehicles Leased for Personal Use	0	0	\$0	\$0	\$0	\$0	\$0
XO Motor Vehicles (Income Production & Personal Us	0	0	\$0	\$0	\$0	\$0	\$0
XP Offshore Drilling Equipment Not In Use	0	0	\$0	\$0	\$0	\$0	\$0
XQ Intracoastal Waterway Dredge Disposal Site	0	0	\$0	\$0	\$0	\$0	\$0
XR Nonprofit Water or Wastewater Corporations	1	0	\$54,190	\$54,190	\$0	\$54,190	\$0
XS Raw Cocoa and Green Coffee Held in Harris Coun	0	0	\$0	\$0	\$0	\$0	\$0
XT Limitation on Taxes in Certain Municipalities	0	0	\$0	\$0	\$0	\$0	\$0
XU Miscellaneous Exemptions	44	74	\$94,964,596	\$94,964,596	\$0	\$94,964,596	\$0
XV Other Exempt (Incl Public, Religious, Charitable)	72469	217401	\$37,422,530,639	\$37,422,419,292	\$0	\$37,321,119,074	\$101,300,218
HARRIS COUNTY Totals :	1,579,387	993,947.00	\$412,769,703,568	\$408,533,933,855	\$77,115,482	\$97,080,230,219	\$311,530,819,118

040 HARRIS COUNTY
2012 APPRAISAL ROLL

HARRIS COUNTY APPRAISAL DISTRICT
CERTIFIED ROLL (TO DATE)
PROPERTY USE CATEGORY RECAP

LAST UPDATED : 3/3/2017
ALL PROPERTY

<u>PROPERTY USE CATEGORY</u>	<u>UNITS</u>	<u>ACREAGE</u>	<u>MARKET</u>	<u>APPRAISED</u>	<u>PRODUCTIVITY</u>	<u>EXEMPTIONS</u>	<u>TAXABLE VALUE</u>
A1 Real, Residential, Single-Family	1,026,178	214,141.00	\$162,314,387,055	\$161,691,222,275	\$0	\$45,263,958,501	\$116,427,263,774
A2 Real, Residential, Mobile Homes	10,696	7,614.00	\$422,696,630	\$414,894,833	\$0	\$91,033,810	\$323,861,023
B1 Real, Residential, Multi-Family	5,969	18,517.00	\$18,156,337,728	\$18,156,201,674	\$0	\$17,840,174	\$18,138,361,500
B2 Real, Residential, Two-Family	7,262	1,186.00	\$1,035,045,535	\$1,028,542,563	\$0	\$107,675,164	\$920,867,399
B3 Real, Residential, Three-Family	504	84	\$87,216,127	\$86,874,525	\$0	\$8,564,223	\$78,310,302
B4 Real, Residential, Four- or More-Family	85	21	\$14,773,637	\$14,739,052	\$0	\$821,112	\$13,917,940
C1 Real, Vacant Lots/Tracts	51,848	15,694.00	\$1,592,327,763	\$1,557,435,113	\$0	\$27,823,846	\$1,529,611,267
C2 Real, Vacant Commercial	30,070	55,600.00	\$4,840,382,888	\$4,827,902,056	\$0	\$22,004,827	\$4,805,897,229
C3 Real, Vacant	38,174	20,994.00	\$786,947,694	\$755,645,049	\$0	\$10,525,558	\$745,119,491
D1 Real, Qualified Agricultural Land	5,931	200,705.00	\$2,347,913,980	\$0	\$74,380,002	\$28,593	\$74,351,409
D2 Real, Unqualified Agricultural Land	5,440	72,860.00	\$1,790,146,024	\$1,764,561,024	\$0	\$17,661,852	\$1,746,899,172
E1 Real, Farm & Ranch Improved	357	9902	\$194,494,462	\$97,007,102	\$0	\$20,554,431	\$76,452,671
F1 Real, Commercial	58,054	107,063.00	\$67,656,296,878	\$67,544,797,672	\$0	\$356,597,426	\$67,188,200,246
F2 Real, Industrial	2,015	34,147.00	\$17,957,737,052	\$17,957,737,052	\$0	\$1,927,901,382	\$16,029,835,670
G1 Oil and Mineral Gas Reserves	7,458	0	\$267,877,659	\$267,877,659	\$0	\$7,778,428	\$260,099,231
G2 Real Property Other Mineral Reserves	1	0	\$1,293,750	\$1,293,750	\$0	\$0	\$1,293,750
H1 Tangible, Vehicles	0	0	\$0	\$0	\$0	\$0	\$0
H2 Tangible, Goods In Transit	0	0	\$0	\$0	\$0	\$0	\$0
I1 Real, Banks	0	0	\$0	\$0	\$0	\$0	\$0
J1 Real & Tangible Personal, Utility Water	171	58	\$13,958,699	\$13,958,699	\$0	\$1,093	\$13,957,606
J2 Gas Companies	52	168	\$227,472,099	\$227,472,099	\$0	\$0	\$227,472,099
J3 Electric Companies	1,831	6,743.00	\$2,013,813,489	\$2,013,813,489	\$0	\$1,363,057	\$2,012,450,432
J4 Telephone Companies	173	245	\$767,572,141	\$767,572,141	\$0	\$0	\$767,572,141
J5 Railroads	1,208	7,004.00	\$277,563,324	\$277,563,324	\$0	\$0	\$277,563,324
J6 Pipelines	4,248	227	\$555,936,045	\$555,936,045	\$0	\$293,180	\$555,642,865
J7 Major Cable Television Systems	15	0	\$311,223,200	\$311,223,200	\$0	\$0	\$311,223,200
L1 Tangible, Commercial	166,972	0	\$24,643,116,710	\$24,643,116,710	\$0	\$961,683,321	\$23,681,433,389
L2 Tangible, Industrial	10,570	0	\$34,963,065,630	\$34,963,065,630	\$0	\$6,015,719,967	\$28,947,345,663
M1 Tangible, Nonbusiness Watercraft	0	0	\$0	\$0	\$0	\$0	\$0
M2 Tangible, Nonbusiness Aircraft	0	0	\$0	\$0	\$0	\$0	\$0
M3 Tangible, Mobile Homes	25,248	0	\$348,784,931	\$346,084,171	\$0	\$51,707,145	\$294,377,026
M4 Tangible, Miscellaneous	0	0	\$0	\$0	\$0	\$0	\$0
N1 Intangibles	0	0	\$0	\$0	\$0	\$0	\$0
O1 Inventory	27,781	3231	\$428,570,785	\$419,915,021	\$0	\$1,815,232	\$418,099,789
O2 Inventory	1,613	743	\$244,868,954	\$244,868,954	\$0	\$5,269,488	\$239,599,466
S1 Dealer Inventory	2,516	0	\$1,020,996,132	\$1,020,996,132	\$0	\$11,393	\$1,020,984,739
U0 Unknown	0	0	\$0	\$0	\$0	\$0	\$0
X0 Primarily Charitable Organization	59	95	\$31,795,885	\$31,795,885	\$0	\$31,783,101	\$12,784
X1 Governmental Exempt	61879	198973	\$25,274,384,239	\$25,274,356,018	\$0	\$25,249,533,013	\$24,823,005
X2 Charitable Exempt	1366	2861	\$5,325,171,542	\$5,325,171,542	\$0	\$5,309,400,073	\$15,771,469
X3 Religious Exempt	8225	11947	\$5,013,914,591	\$5,013,914,591	\$0	\$4,983,733,299	\$30,181,292

**040 HARRIS COUNTY
2012 APPRAISAL ROLL**

**HARRIS COUNTY APPRAISAL DISTRICT
CERTIFIED ROLL (TO DATE)
PROPERTY USE CATEGORY RECAP**

**LAST UPDATED : 3/3/2017
ALL PROPERTY**

<u>PROPERTY USE CATEGORY</u>	<u>UNITS</u>	<u>ACREAGE</u>	<u>MARKET</u>	<u>APPRAISED</u>	<u>PRODUCTIVITY</u>	<u>EXEMPTIONS</u>	<u>TAXABLE VALUE</u>
X4 Cemetery Exempt	247	1882	\$448,677,196	\$448,677,196	\$0	\$448,677,196	\$0
X5 Private School Exempt	505	1941	\$1,451,920,404	\$1,451,920,404	\$0	\$1,444,639,114	\$7,281,290
X6 Youth Development Exempt	49	354	\$119,607,620	\$119,607,620	\$0	\$119,607,620	\$0
X7 Historical Exempt	0	0	\$0	\$0	\$0	\$0	\$0
X8 Miscellaneous Exempt	105	238	\$553,945,598	\$553,945,598	\$0	\$553,945,598	\$0
X9 Low-Moderate Income Housing	150	375.00	\$217,304,539	\$217,304,539	\$0	\$217,292,821	\$11,718
HARRIS COUNTY Totals :	1,565,025	995,613.00	\$383,719,538,615	\$380,409,010,407	\$74,380,002	\$93,277,245,038	\$287,206,145,371

JurCode	ISRate	MORate	TotalRate	JurName
001	0.18	1.0267	1.2067	Houston ISD
002	0.32	1.2367	1.5567	DEER PARK ISD
003	0.4	1.04	1.44	WALLER ISD
004	0.4	1.04	1.44	CYPRESS-FAIRBANKS ISD
006	0.356	1.04	1.396	CHANNELVIEW ISD
007	0.5	1.17	1.67	NEW CANEY ISD
008	0.18	1.125	1.305	ALIEF ISD
009	0.19	1.133388	1.323388	ALDINE ISD
017	0.39	1.04	1.43	KLEIN ISD
018	0.35	1.17	1.52	HUMBLE ISD
019	0.39	1.1266	1.5166	KATY ISD
021	0.28	1.07	1.35	PASADENA ISD
023	0.24	1.17	1.41	SHELDON ISD
024	0.42996	1.04	1.46996	SPRING ISD
025	0.3045	1.09	1.3945	SPRING BRANCH ISD
026	0.3	1.04	1.34	TOMBALL ISD
027	0.36	1.04	1.4	CLEAR CREEK ISD
028	0.3817	1.04	1.4217	DAYTON ISD
029	0.3756	1.04	1.4156	PEARLAND ISD
031	0.19	1.04005	1.23005	STAFFORD MSD
040	0.07156	0.345	0.41656	HARRIS COUNTY
041	0.00084	0.02745	0.02829	HARRIS COUNTY FLOOD CONTROL DISTRICT
042	0.01334	0	0.01334	HARRIS COUNTY PORT OF HOUSTON AUTHORITY
043	0.00179	0.17	0.17179	HARRIS COUNTY HOSPITAL DISTRICT
044	0	0.0052	0.0052	HARRIS COUNTY DEPARTMENT OF EDUCATION
045	0.0278	0.08	0.1078	LONE STAR COLLEGE SYSTEM DISTRICT
047	0.053185	0.129194	0.182379	SAN JACINTO JR COLLEGE DISTRICT
048	0.024986	0.075277	0.100263	HOUSTON COMMUNITY COLLEGE
052	0.1323	0.2551	0.3874	BELLAIRE, CITY OF
053	0.080886	0.196114	0.277	BUNKER HILL VILLAGE
054	0.200057	0.519943	0.72	DEER PARK, CITY OF
055	0.039546	0.182954	0.2225	HEDWIG VILLAGE
056	0.06766	0.50823	0.57589	EL LAGO, CITY OF
058	0.084	0.462	0.546	CITY OF FRIENDSWOOD
059	0.44	0.2412	0.6812	CITY OF PEARLAND
060	0.066933	0.415369	0.482302	HILSHIRE VILLAGE, CITY OF
061	0.131962	0.454458	0.58642	HOUSTON, CITY OF
062	0	0.21	0.21	HUMBLE, CITY OF
063	0.097958	0.408762	0.50672	CITY OF KATY
064	0.13844	0.42166	0.5601	MISSOURI CITY
066	0.128554	0.655	0.783554	JACINTO CITY, CITY OF
067	0.159503	0.410497	0.57	LEAGUE CITY
070	0.211021	0.531479	0.7425	JERSEY VILLAGE, CITY OF
073	0.04482	0.6973	0.74212	NASSAU BAY, CITY OF
074	0.127026	0.448362	0.575388	PASADENA, CITY OF
075	0.042644	0.212496	0.25514	PINEY POINT VILLAGE, CITY OF
076	0.170603	0.394574	0.565177	SEABROOK, CITY OF
077	0	0.765505	0.765505	SHOREACRES, CITY OF
078	0.060589	0.571622	0.632211	SOUTH HOUSTON, CITY OF
079	0.096522	0.227478	0.324	SOUTHSIDE PLACE, CITY OF
080	0.082789	0.350711	0.4335	SPRING VALLEY, CITY OF

Harris-2016 tax rates

082	0	0.284	0.284	TAYLOR LAKE VILLAGE, CITY OF
083	0.23	0.111455	0.341455	TOMBALL, CITY OF
084	0.09825	0.18625	0.2845	WEBSTER, CITY OF
085	0.13123	0.18557	0.3168	W UNIVERSITY PLACE, CITY OF
086	0.1413	0.3798	0.5211	CITY OF WALLER
100	0	1.25	1.25	HC MUD 421
101	0.43	0.225	0.655	ADDICKS UD
105	0.115	0.235	0.35	HC MUD 264
108	0	0.27	0.27	HC MUD 255
110	0.15	0.15	0.3	BAKER ROAD MUD
111	0	0.37	0.37	BAMMEL UD
112	0.55	0.29	0.84	BARKER-CYPRESS MUD
115	0	0.913	0.913	HC MUD 499
117	0.38	0.15	0.53	BILMA PUD
118	0.37	0.2	0.57	BISSONNET MUD
120	0.36	0.19	0.55	WEST RANCH MANAGEMENT DISTRICT
121	0.36	0.19	0.55	BRIDGESTONE MUD
124	0.72	0.39	1.11	BAYBROOK MUD 1
125	0.0175	0.2125	0.23	THE WOODLANDS TOWNSHIP
128	0.53	0.65	1.18	HC MUD 250
129	0.5	0.13	0.63	HC MUD 276
131	0.28	0	0.28	CNP UD
134	0.25	0.2	0.45	CASTLEWOOD MUD
135	0	0.08822	0.08822	CEDAR BAYOU PARK UD
136	0.27	0.15	0.42	CHARTERWOOD MUD
137	0.215	0.185	0.4	CHELFORD CITY MUD
138	0.265	0.25	0.515	CHELFORD ONE MUD
139	0.43	0.36	0.79	CHIMNEY HILL MUD
140	0.295	0.09	0.385	CIMARRON MUD
141	0.48	0.23	0.71	CLAY ROAD MUD
142	0.22	0.05	0.27	CLEAR LAKE CITY WA
145	0.125	0.175	0.3	CORNERSTONES MUD
147	0.27	0.1	0.37	CY-CHAMP PUD
148	0.095	0.11	0.205	CYPRESS CREEK UD
149	0.03	0.25	0.28	CYPRESS FOREST PUD
150	0.4	0.37	0.77	CYPRESS HILL MUD 1
151	0.15	0	0.15	CYPRESS KLEIN UD
152	0.11	0.25	0.36	CYPRESSWOOD UD
153	0	0.5	0.5	CAMFIELD MUD
154	0.6	0.1	0.7	LOWER KIRBY PEARLAND MGMT DISTRICT
156	0.73	0.3	1.03	HC MUD 278
159	0.68	0.15	0.83	HC MUD 290
161	0.62	0.17	0.79	MEADOWHILL REGIONAL MUD
162	0.74	0.11	0.85	DOWDELL PUD
163	0.29	0.2	0.49	EL DORADO UD
164	0.41	0.25	0.66	EMERALD FOREST UD
165	0.73	0.2575	0.9875	ENCANTO REAL UD
171	0.21	0.1	0.31	FALLBROOK UD
172	0.21	0.17	0.38	FAULKEY-GULLY MUD
174	0.7	0.4	1.1	FOREST HILLS MUD
175	0.29	0.315	0.605	FOUNTAINHEAD MUD
176	0.075	0.38	0.455	FRY ROAD MUD

Harris-2016 tax rates

179	0.53	0.28	0.81	HC MUD 304
180	0	0.9	0.9	HC MUD 275
182	0.34	0.245	0.585	GRANT ROAD PUD
183	0.75	0	0.75	GREENWOOD UD
187	0.8	0.47	1.27	HC MUD 287
189	0	1	1	HC MUD 489
190	0.68	0.21	0.89	HC MUD 284
193	0.5	0.24	0.74	HC MUD 285
197	0.75	0.3	1.05	HC MUD 401
205	0.5038	0.5462	1.05	HC MUD 321
207	0.63	0.25	0.88	HC MUD 282
208	0.17	0.34	0.51	HC MUD 316
213	0.37	0.17	0.54	HC MUD 322
220	0.5	0.28	0.78	HC MUD 342
222	0.52	0.38	0.9	HC MUD 344
224	0	0.28	0.28	HC MUD 345
225	0	0.1	0.1	HC MUD 346
229	0.6	0.34	0.94	HC MUD 412
230	0.44	0.08	0.52	HC MUD 407
231	0.76	0.54	1.3	HC MUD 405
232	0.404	0.796	1.2	HC MUD 433
234	0.665	0.24858	0.91358	HC MUD 451
236	0.405	0.245	0.65	HC MUD 416
237	0.53	0.6975	1.2275	HC MUD 434
238	0	0.8	0.8	HC MUD 439
242	0.64	0.17358	0.81358	HC MUD 450
243	0.42	1.02	1.44	HC MUD 480
246	0.66	0.74	1.4	HC MUD 432
248	0.4061	0.7839	1.19	HC MUD 481
251	0.257	0	0.257	HC FWSD 051
252				Champions MUD
253	0.32	0.03	0.35	BRAZORIA COUNTY MUD 018
254	0.51	0.2	0.71	KINGS MANOR MUD
256	0.49	0.36	0.85	HARRIS-BRAZORIA COUNTIES MUD 509
264	0.0472	0.09625	0.14345	HC ID 001
276	0.43	0.36	0.79	HC MUD 396
301	0.57	0.23	0.8	HC MUD 001
305	0.92	0.25	1.17	HC MUD 005
308	0.295	0.2875	0.5825	HC MUD 008
311	0.57	0.24	0.81	HC MUD 011
313	0.58	0.09	0.67	CLEARBROOK CITY MUD
316	0.57	0.1	0.67	HC MUD 016
318	0	0.36	0.36	HC MUD 018
319	0.62	0.88	1.5	HC MUD 494
321	0.2	0.42	0.62	HC MUD 461
323	0	0.47	0.47	HC MUD 023
324	0.3	0.21	0.51	HC MUD 024
325	0.2	0.5	0.7	HC MUD 025
326	0.48	0.25	0.73	HC MUD 026
327	0.6	0.35	0.95	HARRIS-WALLER COUNTIES MUD 2
331	0.31	0.44	0.75	HC MUD 529
332	0.9	0.54	1.44	HC MUD 449

Harris-2016 tax rates

333	0.42	0.41	0.83	HC MUD 033
336	0	0.245	0.245	HC MUD 036
337	0.69	0.7	1.39	HC MUD 504
339	0.31	0.94	1.25	HC MUD 530
340	0.31	1.04	1.35	HC MUD 531
341	0	0.1	0.1	Pearland Municipal Mgmt Dist 2
342	0	1.5	1.5	HC MUD 422
343	0.25	0.25	0.5	HC MUD 043
344	0.19	0.22	0.41	HC MUD 044
346	0.35	0.15	0.5	HC MUD 046
347	0.42	0.22	0.64	NORTHAMPTON MUD (DA)
348	0	0.482	0.482	HC MUD 048
351	0	0.85	0.85	HC WCID 161
353	0.46	0.2	0.66	HC MUD 053
354	0.35	0.58	0.93	HARRIS-WALLER COUNTIES MUD 3
355	0.4	0	0.4	HC MUD 055
356	0	1.5	1.5	HC MUD 495
357	0	1.25	1.25	INTERCONTINENTAL MUD
358	0.5	0.27	0.77	HC MUD 058
359	0.35	0.15	0.5	HC MUD 537
360	0	1.5	1.5	HC MUD 319
361	0.34	0.15	0.49	HC MUD 061
362	0.34	0.235	0.575	HC MUD 062
364	0.46	0.17	0.63	HC MUD 064
365	0.55	0.18	0.73	HC MUD 065
369	0	0.39	0.39	HC MUD 069
370	0.45	0.25	0.7	HC MUD 070
371	0.64	0.25	0.89	HC MUD 071
379	0.4	0.23	0.63	HC MUD 381
381	0.14	0.19	0.33	HC MUD 081
382	0.45	0.235	0.685	HC MUD 082
383	0.6	0.17	0.77	HC MUD 383
384	0.52	0.2	0.72	HC MUD 397
385	0.55	0.52	1.07	HC MUD 399
387	0.73	0.38	1.11	HC MUD 391
388	0.25	0.5	0.75	HC MUD 393
389	0.72	0.23	0.95	HC MUD 400
392	0.44	0.31	0.75	HC MUD 411
394	0.5	0.09	0.59	HC MUD 410
395	0.41	0.055	0.465	HARRIS-MONTGOMERY CO MUD 386
396	0.85	0.25	1.1	HC MUD 096
399	0.5	0.75	1.25	HC MUD 420
400	0.25	0.05	0.3	HC RID 001
402	0.35	0.29	0.64	HC MUD 102
404	0.285	0.15	0.435	HC MUD 104
405	0.53	0.3	0.83	HC MUD 105
406	0.63	0.24	0.87	HC MUD 106
408	0	0.77	0.77	BAUER LANDING WCID
409	0.41	0.11	0.52	HC MUD 109
412				DOWDELL PUD (DA)
413				HC MUD 525
414				HC MUD 542

Harris-2016 tax rates

416				HC MUD 503
417				INTERCONTINENTAL CROSSING MUD
418	0.53	0.04	0.57	HC MUD 118
420	0.32	0.2	0.52	HC MUD 120
421	0.25	0.01	0.26	THE WOODLANDS ROAD UD 1
422	0.16	0.52	0.68	HC MUD 122
427	0.45	0.26	0.71	HC MUD 127
430	0.19	0.34	0.53	HC MUD 130
436	0	0.164	0.164	HC MUD 136
444	0.27	0.33	0.6	HC MUD 144
447	0.31	0.53	0.84	HC MUD 147
448	0.68	0.3	0.98	HC MUD 148
449	0.115	0.25	0.365	HC MUD 149
450	0.51	0.25	0.76	HC MUD 150
451	0.31	0.05	0.36	HC MUD 151
452	0.26	0.05	0.31	HC MUD 152
453	0.3515	0.0995	0.451	HC MUD 153
454	0.44	0.32	0.76	HC MUD 154
455	0.37	0.56	0.93	HC MUD 155
456	0.37	0.4	0.77	HC MUD 156
457	0.61	0.1	0.71	HC MUD 157
458	0.41	0.13	0.54	HC MUD 158
462	0.1	0.395	0.495	HC MUD 162
463	0	0	0	HC MUD 163
465	0.9	0.25	1.15	HC MUD 165
466	0.49	0.33	0.82	HC MUD 166
467	0.82	0.27	1.09	HC MUD 167
468	0.32	0.2	0.52	HC MUD 168
472	0.53	0.21	0.74	HC MUD 172
480	0.362	0.393	0.755	HC MUD 180
482	0.05	0.35	0.4	HC MUD 182
483	0.15	0.34	0.49	HC MUD 183
484	0.49	0.09	0.58	HC MUD 382
485	0.3075	0.25	0.5575	HC MUD 185
486	0	0.23	0.23	HC MUD 186
488	0.27	0.13	0.4	HC MUD 188
489	0.17	0.25	0.42	HC MUD 189
490	0.63	0.07	0.7	HC MUD 390
491	0	0.24	0.24	HC MUD 191
493	0.75	0.3	1.05	HC MUD 389
500	0.31	0.3	0.61	HC MUD 200
501	0.554	0.366	0.92	HC MUD 374
502	0.5	0.75	1.25	HC MUD 202
504	0.44	0.435	0.875	HC MUD 371
506	0.8	0.14	0.94	HC MUD 419
507	0.465	0.2	0.665	HC MUD 468
508	0.09	0.33	0.42	HC MUD 208
509	0.135	0.025	0.16	HC MUD 372
510	0.245	0.08	0.325	HC MUD 373
511	0.42	0.14	0.56	HC MUD 211
514	0.4	0.55	0.95	HC MUD 220
515	0	0.5	0.5	HC MUD 215

Harris-2016 tax rates

516	0.22	0.34	0.56	HC MUD 216
517	0.71	0.6	1.31	HC MUD 217
519	0.27	0.07	0.34	HC MUD 341
520	0.29	0.035	0.325	HC MUD 370
521	0.24	0.2	0.44	HC MUD 221
522	0.115	0.25	0.365	HC MUD 222
524	0.375	0.085	0.46	HC MUD 354
525	0.05	0.04	0.09	HC MUD 355
526	0.43	0.19	0.62	HC MUD 367
527	0.1075	0.0825	0.19	HC MUD 359
528	0.47	0.23	0.7	HC MUD 358
530	0.37	0.14	0.51	HC MUD 230
531	0	1	1	HC MUD 231
532	0.46	0.44	0.9	HC MUD 361
533	0.5	0.2	0.7	HC MUD 233
534	0.275	0.18	0.455	HC MUD 364
535	0.285	0.195	0.48	HC MUD 365
538	0.4	0.14	0.54	HC MUD 238
539	0.49	0.18	0.67	HC MUD 239
541	0.05	0.5	0.55	HC MUD 257
542	0.23	0.27	0.5	HC MUD 261
544	0.425	0.16	0.585	HC MUD 280
545	0.485	0.105	0.59	HC MUD 281
548	0.49	0.03	0.52	HC MUD 248
549	0.32	0.5	0.82	HC MUD 249
550	0	0.1	0.1	HC EMERG SRV DIST 007
555	0	0.18	0.18	HC MUD 366
556	0.075	0.145	0.22	HC UD 006
564	0.095	0.375	0.47	HC UD 014
565	0.175	0.585	0.76	HC UD 015
566	0.69	0.3	0.99	HC UD 016
600	0.44	0.14	0.58	HC WCID FONDREN ROAD
603	0.35	0	0.35	HC WCID 036
604	0.117	0.208	0.325	HC WCID 050
605	0.205	0.4	0.605	HC WCID 070
609	0.24	0.41	0.65	HC WCID 084
610	0.93	0.25	1.18	HC WCID 089
611	0.13	0.2	0.33	HC WCID 091
612	0	0.15	0.15	HC WCID 092
613	0.5	0.34	0.84	HC WCID 096
614	0.085	0.065	0.15	HC WCID 155
616	0.255	0.09	0.345	HC WCID 156
617	0.35	0.115	0.465	HC WCID 157
622	0.12	0.13	0.25	HC WCID 109
623	0.28	0.15	0.43	HC WCID 110
624	0	0.76	0.76	HC WCID 113
625	0	0.25	0.25	HC WCID 114
626	0.122	0.093	0.215	HC WCID 116
627	0.44	0.04	0.48	HC WCID 119
628	0.185	0.255	0.44	HC WCID 132
629	0.25	0.55	0.8	HC WCID 133
630	0.29	0.5	0.79	HC WCID 136

Harris-2016 tax rates

631	0	0.08	0.08	HC EMERG SRV DIST 046
632	0	0.05739	0.05739	HC WCID 145
633	0	0.05331	0.05331	HC EMERG SRV DIST 009
634	0	0.09173	0.09173	HC EMERG SRV DIST 013
635	0	0.05	0.05	HC EMERG SRV DIST 016
636	0	0.1	0.1	HC EMERG SRV DIST 020
637	0	0.1	0.1	HC EMERG SRV DIST 028
638	0	0.095786	0.095786	HC EMERG SRV DIST 047
639	0	0.1	0.1	HC EMERG SRV DIST 024
640	0	0.05	0.05	HC EMERG SRV DIST 014
641	0	0.1	0.1	HC EMERG SRV DIST 010
642	0	0.1	0.1	HC EMERG SRV DIST 025
643	0	0.1	0.1	HC EMERG SRV DIST 048
645	0	0.08923	0.08923	HC EMERG SRV DIST 029
647	0	0.1	0.1	HC EMERG SRV DIST 017
648	0	0.1	0.1	HC EMERG SRV DIST 021
649	0	0.03	0.03	HC EMERG SRV DIST 019
650	0.37	0.24	0.61	HARRIS-FT BEND CO MUD 001
651	0.14	0.25	0.39	HEATHERLOCH MUD
652	0.3	0.25	0.55	HORSEPEN BAYOU MUD
654	0.5405	0.1795	0.72	HUNTERS GLEN MUD
656	0.2	0.195	0.395	INTERSTATE MUD
657	0.24	0.22	0.46	INVERNESS FOREST ID
658	0	0.3	0.3	JACKRABBIT ROAD PUD
664	0	0.1	0.1	HC EMERG SRV DIST 075
665	0	0.04663	0.04663	HC EMERG SRV DIST 015
666	0	0.03987	0.03987	HC EMERG SRV DIST 011
667	0	0.0497	0.0497	HC EMERG SRV DIST 050
668	0	0.05	0.05	HC EMERG SRV DIST 012
669	0	0.05	0.05	HC EMERG SRV DIST 080
670	0	0.05	0.05	HC EMERG SRV DIST 060
671	0	0.1	0.1	HC EMERG SRV DIST 001
672	0	0.03	0.03	HC EMERG SRV DIST 002
673	0	0.06	0.06	HC EMERG SRV DIST 003
674	0	0.1	0.1	HC EMERG SRV DIST 004
675	0	0.02	0.02	HC EMERG SRV DIST 005
676	0	0.008	0.008	HC EMERG SRV DIST 006
677	0	0.07321	0.07321	HARRIS-FT BEND ESD 100
678	0	0.0995	0.0995	WALLER-HARRIS ESD 200
679	0	0.09547	0.09547	HC EMERG SRV DIST 008
681	0.41	0.25	0.66	KINGSBRIDGE MUD
682	0.18	0.34	0.52	KIRKMONT MUD
683	0	0.43	0.43	KLEIN PUD
684	0.3	0.105	0.405	KLEINWOOD MUD
692	0	0.25	0.25	LAKE FOREST UD
694	0.27	0.19	0.46	LONGHORN TOWN UD
695	0.18	0.08	0.26	LOUETTA NORTH PUD
696	0.19	0.2425	0.4325	LOUETTA ROAD UD
701	0.31	0.13	0.44	MALCOMSON ROAD UD
702	0.031	0.292	0.323	MASON CREEK UD
703	0.7	0.12	0.82	BRAZORIA COUNTY MUD 028
704	0.47	0.46	0.93	MAYDE CREEK MUD

Harris-2016 tax rates

705	0.395	0.395	0.79	MEMORIAL HILLS UD
706	0.23	0.21	0.44	MEMORIAL MUD
709	0.48	0.28	0.76	MILLS ROAD MUD
710	0.0525	0.2075	0.26	MISSION BEND MUD 001
711	0.3525	0.3975	0.75	MISSION BEND MUD 002
712	0.38	0.28	0.66	MORTON ROAD MUD
718	0.3	0.329	0.629	NEWPORT MUD
721	0.33	0.25	0.58	NORTHAMPTON MUD
722	0.25	0.23	0.48	NORTHBELT UD
724	0.65	0.83	1.48	NE H C MUD 001
725	0.718	0	0.718	NORTH FOREST MUD
726	0	0	0	NORTH GREEN MUD
727	0.46	0.06	0.52	NORTH MISSION GLEN MUD
728	0.205	0.15	0.355	NORTH PARK PUD
730	0.47	0.25	0.72	NORTHWEST FRWY MUD
745	0.71	0.07	0.78	NW HC MUD 005
746	0.233	0.15	0.383	NW HC MUD 006
749	0.285	0.2	0.485	NW HC MUD 009
750	0.51	0.2	0.71	NW HC MUD 010
755	0.35	0.28	0.63	NW HC MUD 015
756	0.55	0.57	1.12	NW HC MUD 016
759	0.67	0.15	0.82	NW HC MUD 019
760	0	0.25	0.25	NW HC MUD 020
761	0	0.24	0.24	NW HC MUD 021
762	0.28	0.555	0.835	NW HC MUD 022
763	0.37	0.43	0.8	NW HC MUD 023
764	0.1	0.5	0.6	NW HC MUD 024
768	0.4225	0.2375	0.66	NW HC MUD 028
769	0.14	0.16	0.3	NW HC MUD 029
770	0.58	0.1	0.68	NW HC MUD 030
771	0.56	0.14	0.7	NW HC MUD 032
776	0.545	0.25	0.795	NW HC MUD 036
778	0.09	0.25	0.34	NOTTINGHAM CNTRY MUD
779	1	0.25	1.25	NORTHWOOD MUD 001
781	0.54	0.36	0.9	OAKMONT PUD
783	0.64	0.15	0.79	PARK WAY UD
786	0.66	0.38	1.04	RANKIN ROAD WEST MUD
787	0.45	1.09	1.54	PINE VILLAGE PUD
788	0	0.1	0.1	PONDEROSA FOREST UD
789	0.15	0.25	0.4	POST WOOD MUD
790	0	0.35	0.35	PRESTONWOOD FOREST UD
801	0.2625	0.2385	0.501	REID ROAD MUD 001
802	0.15	0.2	0.35	REID ROAD MUD 002
803	0.47	0.25	0.72	RENN ROAD MUD
804	0.26	0.16	0.42	RICEWOOD MUD
806	0.53	0.25	0.78	ROLLING CREEK UD
807	0.095	0.295	0.39	ROLLING FORK PUD
809	0	0.5	0.5	ROYALWOOD MUD
810	0.175	0.055	0.23	RICHEY ROAD MUD
811	0.41	0.07	0.48	REMINGTON MUD 001
822	0.17	0.29	0.46	SAGEMEADOW UD
823	0.13	0.33	0.46	SEQUOIA ID

Harris-2016 tax rates

824	0.53	0.425	0.955	SHASLA PUD
825	0.39	0.25	0.64	SOUTHWEST HC MUD 001
826	0	0.7	0.7	SPANISH COVE PUD
827	0.1	0.27	0.37	SPENCER ROAD PUD
829	0.29	0.18	0.47	SPRING CRK FOREST PUD
832	0.63	0.19	0.82	SPRING WEST MUD
841	0.37	0.23	0.6	TATTOR ROAD MD
842	0.22	0.42	0.64	TERRANOVA WEST MUD
844	0.58	0.14	0.72	HC MUD 368
846	0.42	0	0.42	TIMBERLAKE ID
847	0.58	0.335	0.915	TIMBER LANE UD
850	0.0052	0.1348	0.14	HC ID 003
851	0.17	0	0.17	WESTADOR MUD
861	0.08	0.18	0.26	WEST HC MUD 001
862	0.29	0.19	0.48	WEST HC MUD 002
864	0.51	0.49	1	WEST HC MUD 004
866	0	0.3	0.3	WEST HC MUD 006
869	0.375	0.095	0.47	WEST HC MUD 009
870	0.45	0.25	0.7	WEST HC MUD 010
871	0.35	0.12	0.47	WEST HC MUD 011
874	0.4	0.16	0.56	WEST HC MUD 014
875	0.085	0.165	0.25	WEST HC MUD 015
876	0	0.5	0.5	WEST HC MUD 016
877	0.73	0.34	1.07	WEST HC MUD 017
879	0.4	0.36	0.76	WEST HC MUD 021
894	0.3	0.24	0.54	WESTLAKE MUD 001
895	0.2	0.19	0.39	WEST MEMORIAL MUD
896	0.28	0.18	0.46	WESTON MUD
897	0.58	0	0.58	WEST PARK MUD
899	0.12	0.73	0.85	WHITE OAK BEND MUD
901	0.24	0.25	0.49	WINDFERN FOREST UD
902	0.44	0.12	0.56	WOODCREEK MUD
907	0.21	0.08	0.29	NORTHPOINTE WCID
914	0	0.405	0.405	CINCO MUD 009
915	0.42	0.12	0.54	HARRIS-FT BEND CO MUD 005
916	0.2125	0	0.2125	FT BEND WCID 002
917	0.095	0.09	0.185	WILLOW FORK DRNG DIST

Part C

040 HARRIS COUNTY
TAX YEAR: 2014

HARRIS COUNTY APPRAISAL DISTRICT
PROPERTY USE CATEGORY RECAP
CERTIFIED TO DATE ROLL 09

LAST UPDATED: 05/08/2015
DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
A1 Real, Residential, Single-Family	1,049,994	217,103.8338	198,093,893,502	188,373,778,611	0	51,173,400,034	137,200,378,577
A2 Real, Residential, Mobile Homes	10,825	7,631.2720	443,781,779	433,818,799	0	89,550,618	344,268,181
B1 Real, Residential, Multi-Family	5,913	19,063.1598	25,232,234,151	25,231,480,752	0	15,526,467	25,215,954,285
B2 Real, Residential, Two-Family	7,145	1,155.4908	1,158,919,514	1,138,748,864	0	108,266,699	1,030,482,165
B3 Real, Residential, Three-Family	498	82.8556	99,212,536	97,498,023	0	9,147,225	88,350,798
B4 Real, Residential, Four- or More-Family	126	26.3967	21,635,763	21,485,465	0	525,293	20,960,172
C1 Real, Vacant Lots/Tracts	52,175	12,314.2631	1,939,754,370	1,894,620,159	0	36,883,212	1,857,736,947
C2 Real, Vacant Commercial	29,963	59,147.1367	5,804,417,750	5,789,350,670	0	25,718,612	5,763,632,058
C3 Real, Vacant	48,258	22,145.8397	1,086,087,066	1,042,105,095	0	14,360,180	1,027,744,915
D1 Real, Qualified Agricultural Land	5,818	185,575.9455	2,734,168,857	0	71,270,683	710,583	70,560,100
D2 Real, Unqualified Agricultural Land	4,655	62,399.1201	1,603,540,443	1,574,871,587	0	4,714,788	1,570,156,799
E1 Real, Farm & Ranch Improved	315	4,687.8055	137,068,669	100,392,330	0	23,059,632	77,332,698
F1 Real, Commercial	59,569	109,908.0318	89,630,104,106	89,501,722,902	0	390,250,795	89,111,472,107
F2 Real, Industrial	2,074	35,533.9323	21,263,468,220	21,263,468,220	0	1,899,472,450	19,363,995,770
G1 Oil and Mineral Gas Reserves	6,652	0.0000	247,161,208	247,161,208	0	5,814,280	241,346,928
G2 Real Property Other Mineral Reserves	1	0.0000	1,552,500	1,552,500	0	0	1,552,500
H1 Tangible, Vehicles	0	0.0000	0	0	0	0	0
H2 Tangible, Goods In Transit	0	0.0000	0	0	0	0	0
I1 Real, Banks	0	0.0000	0	0	0	0	0
J1 Real & Tangible Personal, Utility Water	163	56.8738	13,920,922	13,920,922	0	0	13,920,922

040 HARRIS COUNTY
TAX YEAR: 2014

HARRIS COUNTY APPRAISAL DISTRICT
PROPERTY USE CATEGORY RECAP
CERTIFIED TO DATE ROLL 09

LAST UPDATED: 05/08/2015
DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
J2 Gas Companies	50	144.3068	290,637,514	290,637,514	0	0	290,637,514
J3 Electric Companies	1,825	6,644.9815	2,108,532,778	2,108,532,778	0	1,152,902	2,107,379,876
J4 Telephone Companies	174	245.1018	696,966,804	696,966,804	0	0	696,966,804
J5 Railroads	1,192	6,700.0025	332,808,330	332,808,330	0	0	332,808,330
J6 Pipelines	4,411	201.7026	696,537,882	696,537,882	0	4,962,997	691,574,885
J7 Major Cable Television Systems	15	0.0000	341,309,450	341,309,450	0	0	341,309,450
L1 Tangible, Commercial	168,757	0.0000	25,730,234,347	25,730,234,347	0	447,822,151	25,282,412,196
L2 Tangible, Industrial	14,653	0.0000	41,384,080,999	41,384,080,999	0	6,057,508,357	35,326,572,642
M1 Tangible, Nonbusiness Watercraft	0	0.0000	0	0	0	0	0
M2 Tangible, Nonbusiness Aircraft	0	0.0000	0	0	0	0	0
M3 Tangible, Mobile Homes	25,885	1.3259	349,978,962	348,261,574	0	48,209,262	300,052,312
M4 Tangible, Miscellaneous	0	0.0000	0	0	0	0	0
N1 Intangibles	0	0.0000	0	0	0	0	0
O1 Inventory	8,348	552.2604	214,157,287	214,157,287	0	617,112	213,540,175
O2 Inventory	1,855	23.7502	339,864,345	339,858,524	0	9,749,861	330,108,663
S1 Dealer Inventory	2,799	0.0000	1,335,522,494	1,335,522,494	0	14,024	1,335,508,470
U0 Unknown	0	0.0000	0	0	0	0	0
XA Public Property for Housing Indigent Persons	0	0.0000	0	0	0	0	0
XB Income Producing Tangible Personal Property Valued Under \$500	0	0.0000	0	0	0	0	0
XC Mineral Interest Property Valued Under \$500	0	0.0000	0	0	0	0	0

040 HARRIS COUNTY
 TAX YEAR: 2014

HARRIS COUNTY APPRAISAL DISTRICT
 PROPERTY USE CATEGORY RECAP
 CERTIFIED TO DATE ROLL 09

LAST UPDATED: 05/08/2015
 DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
XD Improving Property for Housing w/ Volunteer Labor	90	5.3363	1,811,266	1,811,266	0	1,811,266	0
XE Community Housing Development Organizations	40	195.1801	170,454,588	170,454,588	0	170,454,588	0
XF Assisting Ambulatory Health Care Centers	0	0.0000	0	0	0	0	0
XG Primarily Performing Charitable Functions	59	98.5798	41,329,936	41,329,936	0	41,329,936	0
XH Developing Model Colonia subdivisions	0	0.0000	0	0	0	0	0
XI Youth Spiritual, Mental and Physical Development	51	359.1942	128,486,749	128,486,749	0	128,486,749	0
XJ Private Schools	472	1,629.8081	1,329,351,568	1,329,351,568	0	1,325,858,986	3,492,582
XL Economic Development Services to Local Community	6	23.1338	51,028,658	51,028,658	0	51,028,658	0
XM Marine Cargo Containers	0	0.0000	0	0	0	0	0
XN Motor Vehicles Leased for Personal Use	0	0.0000	0	0	0	0	0
XO Motor Vehicles for Income Production and Personal Use	0	0.0000	0	0	0	0	0
XP Offshore Drilling Equipment Not In Use	0	0.0000	0	0	0	0	0
XQ Intracoastal Waterway Dredge Disposal Site	0	0.0000	0	0	0	0	0
XR Nonprofit Water or Wastewater Corporations	1	0.0000	54,190	54,190	0	54,190	0
XS Raw Cocoa and Green Coffee held in Harris County	0	0.0000	0	0	0	0	0
XT Limitation on Taxes in Certain Municipalities	0	0.0000	0	0	0	0	0
XU Miscellaneous Exemptions	86	169.9035	352,710,581	352,710,581	0	352,710,581	0
XV Other Exempt (Incl Public, Religious, Charitable)	72,594	219,588.5989	37,524,733,338	37,524,631,958	0	37,516,225,229	8,406,729
JURISDICTION TOTALS:	1,587,507	973,415.1236	\$462,931,513,422	\$450,144,743,584	\$71,270,683	\$99,955,397,717	\$350,260,616,550

040 HARRIS COUNTY
TAX YEAR: 2013

HARRIS COUNTY APPRAISAL DISTRICT
PROPERTY USE CATEGORY RECAP
CERTIFIED TO DATE ROLL 20

LAST UPDATED: 05/08/2015
DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
A1 Real, Residential, Single-Family	1,038,005	216,918.1569	170,168,040,108	168,728,945,739	0	47,144,541,813	121,584,403,926
A2 Real, Residential, Mobile Homes	10,745	7,579.2267	427,396,279	419,353,853	0	91,310,986	328,042,867
B1 Real, Residential, Multi-Family	5,931	18,718.6972	20,846,770,017	20,846,421,730	0	14,251,582	20,832,170,148
B2 Real, Residential, Two-Family	7,211	1,168.6089	1,045,499,632	1,038,756,812	0	108,883,903	929,872,909
B3 Real, Residential, Three-Family	498	83.3404	88,317,377	87,700,024	0	9,403,614	78,296,410
B4 Real, Residential, Four- or More-Family	118	24.8151	18,432,155	18,426,378	0	535,203	17,891,175
C1 Real, Vacant Lots/Tracts	51,235	12,835.7436	1,659,760,194	1,623,607,104	0	28,980,181	1,594,626,923
C2 Real, Vacant Commercial	29,851	56,116.6949	5,125,799,943	5,111,885,329	0	29,126,475	5,082,758,854
C3 Real, Vacant	37,075	20,255.4811	819,169,739	787,633,627	0	12,451,238	775,182,389
D1 Real, Qualified Agricultural Land	5,786	196,023.8592	2,443,920,174	0	76,835,098	114,700	76,720,398
D2 Real, Unqualified Agricultural Land	5,156	69,538.6481	1,765,475,075	1,737,263,784	0	16,894,538	1,720,369,246
E1 Real, Farm & Ranch Improved	352	9,811.9229	198,990,238	98,922,475	0	20,793,960	78,128,515
F1 Real, Commercial	59,019	110,392.2174	78,048,627,631	77,928,903,893	0	222,397,231	77,706,506,662
F2 Real, Industrial	2,038	34,740.3136	19,490,661,705	19,490,661,705	0	1,910,131,630	17,580,530,075
G1 Oil and Mineral Gas Reserves	7,080	0.0000	226,428,576	226,428,576	0	6,070,506	220,358,070
G2 Real Property Other Mineral Reserves	1	0.0000	1,267,880	1,267,880	0	0	1,267,880
H1 Tangible, Vehicles	0	0.0000	0	0	0	0	0
H2 Tangible, Goods In Transit	0	0.0000	0	0	0	0	0
I1 Real, Banks	0	0.0000	0	0	0	0	0
J1 Real & Tangible Personal, Utility water	168	56.7578	13,904,455	13,904,455	0	0	13,904,455

040 HARRIS COUNTY
TAX YEAR: 2013

HARRIS COUNTY APPRAISAL DISTRICT
PROPERTY USE CATEGORY RECAP
CERTIFIED TO DATE ROLL 20

LAST UPDATED: 05/08/2015
DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
J2 Gas Companies	51	144.3758	268,857,402	268,857,402	0	0	268,857,402
J3 Electric Companies	1,839	6,692.1031	2,320,785,640	2,320,785,640	0	1,118,372	2,319,667,268
J4 Telephone Companies	173	245.1018	717,315,887	717,315,887	0	0	717,315,887
J5 Railroads	1,201	6,966.2409	303,883,954	303,883,954	0	0	303,883,954
J6 Pipelines	4,375	221.8949	623,755,968	623,755,968	0	324,900	623,431,068
J7 Major Cable Television Systems	16	0.0000	323,584,230	323,584,230	0	0	323,584,230
L1 Tangible, Commercial	170,939	0.0000	25,157,086,067	25,157,086,067	0	1,137,000,081	24,020,085,986
L2 Tangible, Industrial	14,216	0.0000	40,344,564,955	40,344,564,955	0	6,381,064,973	33,963,499,982
M1 Tangible, Nonbusiness Watercraft	0	0.0000	0	0	0	0	0
M2 Tangible, Nonbusiness Aircraft	0	0.0000	0	0	0	0	0
M3 Tangible, Mobile Homes	25,371	1.0000	345,736,557	343,620,421	0	50,251,668	293,368,753
M4 Tangible, Miscellaneous	0	0.0000	0	0	0	0	0
N1 Intangibles	0	0.0000	0	0	0	0	0
O1 Inventory	22,891	3,260.2043	371,400,459	362,574,067	0	2,192,631	360,381,436
O2 Inventory	745	4.6376	134,363,997	134,363,997	0	3,384,821	130,979,176
S1 Dealer Inventory	2,631	0.0000	1,178,793,651	1,178,793,651	0	7,103	1,178,786,548
U0 Unknown	0	0.0000	0	0	0	0	0
XA Public Property for Housing Indigent Persons	0	0.0000	0	0	0	0	0
XB Income Producing Tangible Personal Property Valued Under \$500	0	0.0000	0	0	0	0	0
XC Mineral Interest Property Valued Under \$500	0	0.0000	0	0	0	0	0

040 HARRIS COUNTY
 TAX YEAR: 2013

HARRIS COUNTY APPRAISAL DISTRICT
 PROPERTY USE CATEGORY RECAP
 CERTIFIED TO DATE ROLL 20

LAST UPDATED: 05/08/2015
 DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
XD Improving Property for Housing w/ Volunteer Labor	93	3.3432	1,239,255	1,239,255	0	1,239,255	0
XE Community Housing Development Organizations	45	229.3611	202,294,312	202,294,312	0	202,294,312	0
XF Assisting Ambulatory Health Care Centers	0	0.0000	0	0	0	0	0
XG Primarily Performing Charitable Functions	59	95.2189	36,908,078	36,908,078	0	36,894,031	14,047
XH Developing Model Colonia subdivisions	0	0.0000	0	0	0	0	0
XI Youth Spiritual, Mental and Physical Development	52	354.5385	123,641,318	123,641,318	0	123,641,318	0
XJ Private Schools	499	1,956.0944	1,499,539,789	1,499,539,789	0	1,498,609,370	930,419
XL Economic Development Services to Local Community	60	163.6542	464,002,738	464,002,738	0	464,002,738	0
XM Marine Cargo Containers	0	0.0000	0	0	0	0	0
XN Motor Vehicles Leased for Personal Use	0	0.0000	0	0	0	0	0
XO Motor Vehicles for Income Production and Personal Use	0	0.0000	0	0	0	0	0
XP Offshore Drilling Equipment Not In Use	0	0.0000	0	0	0	0	0
XQ Intracoastal Waterway Dredge Disposal Site	0	0.0000	0	0	0	0	0
XR Nonprofit Water or Wastewater Corporations	1	0.0000	54,190	54,190	0	54,190	0
XS Raw Cocoa and Green Coffee held in Harris County	0	0.0000	0	0	0	0	0
XT Limitation on Taxes in Certain Municipalities	0	0.0000	0	0	0	0	0
XU Miscellaneous Exemptions	41	45.6342	21,424,598	21,424,598	0	21,424,598	0
XV Other Exempt (Incl Public, Religious, Charitable)	72,416	216,341.0507	35,819,010,148	35,818,898,801	0	35,739,695,163	79,203,638
JURISDICTION TOTALS:	1,577,983	990,988.9374	\$412,646,704,371	\$408,407,272,682	\$76,835,098	\$95,279,087,084	\$313,205,020,696

PART C39

040 HARRIS COUNTY
 TAX YEAR: 2012

HARRIS COUNTY APPRAISAL DISTRICT
 PROPERTY USE CATEGORY RECAP
 CERTIFIED TO DATE ROLL 31

LAST UPDATED: 05/08/2015
 DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
A1 Real, Residential, Single-Family	1,026,058	214,124.5981	162,310,874,280	161,685,181,821	0	45,294,483,927	116,390,697,894
A2 Real, Residential, Mobile Homes	10,714	7,644.6672	423,982,495	416,168,766	0	91,327,773	324,840,993
B1 Real, Residential, Multi-Family	5,974	18,545.5691	18,178,880,705	18,178,744,651	0	17,867,126	18,160,877,525
B2 Real, Residential, Two-Family	7,259	1,186.6827	1,034,772,563	1,028,269,591	0	107,675,164	920,594,427
B3 Real, Residential, Three-Family	503	83.9667	86,946,606	86,605,004	0	8,537,271	78,067,733
B4 Real, Residential, Four- or More-Family	84	21.7104	14,675,637	14,641,052	0	821,112	13,819,940
C1 Real, Vacant Lots/Tracts	51,674	15,686.1487	1,592,492,906	1,557,642,341	0	27,943,948	1,529,698,393
C2 Real, Vacant Commercial	30,032	55,544.3919	4,839,554,351	4,827,075,935	0	21,985,287	4,805,090,648
C3 Real, Vacant	38,148	20,992.6978	786,577,271	755,278,107	0	10,545,138	744,732,969
D1 Real, Qualified Agricultural Land	5,923	200,689.6458	2,351,302,863	0	74,411,195	27,739	74,383,456
D2 Real, Unqualified Agricultural Land	5,437	72,901.5055	1,790,614,117	1,765,058,190	0	17,657,962	1,747,400,228
E1 Real, Farm & Ranch Improved	357	9,902.2153	194,713,092	97,017,774	0	20,515,075	76,502,699
F1 Real, Commercial	58,026	107,028.9446	67,564,774,593	67,453,305,966	0	230,505,780	67,222,800,186
F2 Real, Industrial	2,015	34,147.5964	17,990,037,052	17,990,037,052	0	1,927,901,382	16,062,135,670
G1 Oil and Mineral Gas Reserves	7,455	0.0000	267,670,849	267,670,849	0	7,778,428	259,892,421
G2 Real Property Other Mineral Reserves	1	0.0000	1,293,750	1,293,750	0	0	1,293,750
H1 Tangible, Vehicles	0	0.0000	0	0	0	0	0
H2 Tangible, Goods In Transit	0	0.0000	0	0	0	0	0
I1 Real, Banks	0	0.0000	0	0	0	0	0
J1 Real & Tangible Personal, Utility water	171	58.3781	13,976,435	13,976,435	0	1,093	13,975,342
J2 Gas Companies	52	168.6944	227,472,099	227,472,099	0	0	227,472,099
J3 Electric Companies	1,831	6,743.1671	2,013,813,489	2,013,813,489	0	1,363,057	2,012,450,432
J4 Telephone Companies	173	245.0932	767,572,141	767,572,141	0	0	767,572,141
J5 Railroads	1,205	6,990.8457	277,563,224	277,563,224	0	0	277,563,224
J6 Pipelines	4,247	227.5149	555,929,615	555,929,615	0	293,180	555,636,435
J7 Major Cable Television Systems	15	0.0000	311,223,200	311,223,200	0	0	311,223,200
L1 Tangible, Commercial	166,873	0.0000	24,696,379,723	24,696,379,723	0	959,957,977	23,736,421,746
L2 Tangible, Industrial	10,568	0.0000	34,960,428,439	34,960,428,439	0	6,010,348,788	28,950,079,651
M1 Tangible, Nonbusiness Watercraft	0	0.0000	0	0	0	0	0

040 HARRIS COUNTY
 TAX YEAR: 2012

HARRIS COUNTY APPRAISAL DISTRICT
 PROPERTY USE CATEGORY RECAP
 CERTIFIED TO DATE ROLL 31

LAST UPDATED: 05/08/2015
 DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
M2 Tangible, Nonbusiness Aircraft	0	0.0000	0	0	0	0	0
M3 Tangible, Mobile Homes	25,224	0.0000	349,801,144	347,093,010	0	51,989,757	295,103,253
M4 Tangible, Miscellaneous	0	0.0000	0	0	0	0	0
N1 Intangibles	0	0.0000	0	0	0	0	0
O1 Inventory	27,782	3,233.8285	428,569,908	419,945,231	0	1,731,569	418,213,662
O2 Inventory	1,613	743.6547	244,868,954	244,868,954	0	5,269,488	239,599,466
S1 Dealer Inventory	2,516	0.0000	1,021,710,756	1,021,710,756	0	11,393	1,021,699,363
U0 Unknown	0	0.0000	0	0	0	0	0
X0 Primarily Charitable Organization	59	95.2189	31,795,885	31,795,885	0	31,783,101	12,784
X1 Governmental Exempt	61,984	199,003.3609	25,410,062,925	25,410,034,704	0	25,385,211,699	24,823,005
X2 Charitable Exempt	1,371	2,870.1417	5,323,134,215	5,323,134,215	0	5,307,362,746	15,771,469
X3 Religious Exempt	8,265	11,952.8752	5,010,907,209	5,010,907,209	0	4,981,129,137	29,778,072
X4 Cemetery Exempt	247	1,882.4762	448,681,254	448,681,254	0	448,681,254	0
X5 Private School Exempt	507	1,946.1283	1,453,601,190	1,453,601,190	0	1,446,319,900	7,281,290
X6 Youth Development Exempt	49	354.0395	119,607,620	119,607,620	0	119,607,620	0
X7 Historical Exempt	0	0.0000	0	0	0	0	0
X8 Miscellaneous Exempt	104	238.1417	553,783,708	553,783,708	0	553,783,708	0
X9 Low-Moderate Income Housing	172	353.2374	207,579,761	207,579,761	0	207,568,043	11,718
JURISDICTION TOTALS:	1,564,688	995,607.1366	\$383,857,626,024	\$380,541,092,711	\$74,411,195	\$93,297,986,622	\$287,317,517,284

PART C39

040 HARRIS COUNTY
 TAX YEAR: 2011

HARRIS COUNTY APPRAISAL DISTRICT
 PROPERTY USE CATEGORY RECAP
 CERTIFIED TO DATE ROLL 42

LAST UPDATED: 05/08/2015
 DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
A1 Real, Residential, Single-Family	1,016,849	211,367.1720	162,049,234,525	161,366,533,069	0	45,033,098,636	116,333,434,433
A2 Real, Residential, Mobile Homes	10,746	7,632.9817	422,323,854	413,298,220	0	92,514,249	320,783,971
B1 Real, Residential, Multi-Family	5,978	18,372.2039	16,962,733,894	16,962,492,500	0	44,318,909	16,918,173,591
B2 Real, Residential, Two-Family	7,417	1,195.5928	1,066,593,775	1,058,135,745	0	106,574,267	951,561,478
B3 Real, Residential, Three-Family	507	86.0152	87,431,241	86,936,828	0	8,870,559	78,066,269
B4 Real, Residential, Four- or More-Family	81	20.9944	13,382,114	13,375,960	0	736,760	12,639,200
C1 Real, Vacant Lots/Tracts	50,901	24,502.6110	1,618,196,097	1,606,509,834	0	27,560,603	1,578,949,231
C2 Real, Vacant Commercial	30,073	53,131.3155	4,450,546,947	4,449,160,106	0	26,732,776	4,422,427,330
C3 Real, Vacant	37,644	21,084.1038	765,894,976	758,772,465	0	10,770,568	748,001,897
D1 Real, Qualified Agricultural Land	6,018	203,523.2734	2,358,097,125	0	72,783,950	152,920	72,631,030
D2 Real, Unqualified Agricultural Land	5,775	77,009.7864	2,089,904,061	2,083,983,288	0	4,454,303	2,079,528,985
E1 Real, Farm & Ranch Improved	335	9,681.8475	190,130,941	95,269,720	0	18,983,179	76,286,541
F1 Real, Commercial	57,185	104,947.8231	62,332,544,196	62,308,273,954	0	302,001,143	62,006,272,811
F2 Real, Industrial	2,038	33,946.8831	17,123,565,143	17,123,565,143	0	1,828,482,729	15,295,082,414
G1 Oil and Mineral Gas Reserves	7,299	0.0000	233,781,783	233,781,783	0	6,196,971	227,584,812
G2 Real Property Other Mineral Reserves	1	0.0000	1,032,500	1,032,500	0	0	1,032,500
H1 Tangible, Vehicles	0	0.0000	0	0	0	0	0
I1 Real, Banks	0	0.0000	0	0	0	0	0
J1 Real & Tangible Personal, Utility Water	173	60.5792	14,350,370	14,350,370	0	37,334	14,313,036
J2 Gas Companies	50	67.0644	222,505,641	222,505,641	0	0	222,505,641
J3 Electric Companies	1,832	6,738.8309	1,967,704,885	1,967,704,885	0	1,373,372	1,966,331,513
J4 Telephone Companies	176	248.4358	873,004,087	873,004,087	0	217,606	872,786,481
J5 Railroads	1,213	6,982.8136	258,801,321	258,801,321	0	0	258,801,321
J6 Pipelines	4,073	231.0109	540,725,917	540,725,917	0	359,125	540,366,792
J7 Major Cable Television Systems	17	0.0000	339,618,731	339,618,731	0	0	339,618,731
L1 Tangible, Commercial	164,849	0.0000	23,495,888,875	23,495,888,875	0	847,933,962	22,647,954,913
L2 Tangible, Industrial	10,220	0.0000	29,006,877,673	29,006,877,673	0	4,952,594,107	24,054,283,566
M1 Tangible, Nonbusiness Watercraft	0	0.0000	0	0	0	0	0
M2 Tangible, Nonbusiness Aircraft	0	0.0000	0	0	0	0	0

040 HARRIS COUNTY
 TAX YEAR: 2011

HARRIS COUNTY APPRAISAL DISTRICT
 PROPERTY USE CATEGORY RECAP
 CERTIFIED TO DATE ROLL 42

LAST UPDATED: 05/08/2015
 DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
M3 Tangible, Mobile Homes	25,296	0.0000	356,576,672	356,107,881	0	56,255,337	299,852,544
M4 Tangible, Miscellaneous	0	0.0000	0	0	0	0	0
N1 Intangibles	0	0.0000	0	0	0	0	0
O1 Inventory	34,667	3,514.0823	560,819,104	559,940,388	0	4,490,315	555,450,073
O2 Inventory	2,199	10.8998	323,600,497	323,600,497	0	8,053,175	315,547,322
S1 Dealer Inventory	2,475	0.0000	895,879,696	895,879,696	0	15,763	895,863,933
U0 Unknown	0	0.0000	0	0	0	0	0
X0 Primarily Charitable Organization	53	89.6639	27,401,109	27,401,109	0	27,388,349	12,760
X1 Governmental Exempt	60,760	199,350.6277	24,166,580,103	24,166,579,211	0	24,152,521,924	14,057,287
X2 Charitable Exempt	1,418	2,824.5514	3,927,130,939	3,927,130,939	0	3,914,189,357	12,941,582
X3 Religious Exempt	8,189	11,864.6406	4,838,804,141	4,838,804,141	0	4,815,794,069	23,010,072
X4 Cemetery Exempt	248	1,879.9249	363,311,163	363,311,163	0	363,311,163	0
X5 Private School Exempt	489	1,927.0383	1,356,995,416	1,356,995,416	0	1,352,129,689	4,865,727
X6 Youth Development Exempt	52	432.5464	124,984,446	124,984,446	0	124,984,446	0
X7 Historical Exempt	0	0.0000	0	0	0	0	0
X8 Miscellaneous Exempt	103	232.8486	505,953,959	505,953,959	0	505,953,959	0
X9 Low-Moderate Income Housing	410	424.3011	249,406,992	249,406,992	0	249,391,281	15,711
JURISDICTION TOTALS:	1,557,809	1,003,382.4636	\$366,182,314,909	\$362,976,694,453	\$72,783,950	\$88,888,442,905	\$274,161,035,498

040 HARRIS COUNTY
TAX YEAR: 2010

HARRIS COUNTY APPRAISAL DISTRICT
PROPERTY USE CATEGORY RECAP
CERTIFIED TO DATE ROLL 53

LAST UPDATED: 05/08/2015
DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
A1 Real, Residential, Single-Family	1,008,330	208,130.4574	161,590,981,483	160,658,451,253	0	44,575,159,813	116,083,291,440
A2 Real, Residential, Mobile Homes	10,703	7,607.3326	420,350,950	409,407,296	0	92,431,062	316,976,234
B1 Real, Residential, Multi-Family	5,993	18,051.6825	16,584,771,032	16,584,542,246	0	25,644,139	16,558,898,107
B2 Real, Residential, Two-Family	7,445	1,212.4248	1,098,038,478	1,083,691,393	0	108,497,869	975,193,524
B3 Real, Residential, Three-Family	513	87.4539	90,450,763	89,482,289	0	9,105,376	80,376,913
B4 Real, Residential, Four- or More-Family	74	14.4881	11,836,715	11,786,670	0	673,785	11,112,885
C1 Real, Vacant Lots/Tracts	52,610	14,515.5459	1,718,681,809	1,678,343,468	0	25,960,320	1,652,383,148
C2 Real, Vacant Commercial	29,816	53,906.7816	4,544,192,604	4,533,125,911	0	14,178,720	4,518,947,191
C3 Real, Vacant	42,272	21,193.9344	901,537,568	872,056,103	0	10,508,300	861,547,803
D1 Real, Qualified Agricultural Land	6,049	207,396.0914	2,325,928,586	0	76,801,223	91,865	76,709,358
D2 Real, Unqualified Agricultural Land	5,878	78,091.7733	2,125,154,408	2,099,061,983	0	13,323,331	2,085,738,652
E1 Real, Farm & Ranch Improved	306	7,064.4764	151,547,297	78,250,171	0	15,364,737	62,885,434
F1 Real, Commercial	56,840	104,071.9725	59,926,265,621	59,811,815,585	0	188,616,161	59,623,199,424
F2 Real, Industrial	2,048	34,056.1855	16,294,723,448	16,294,723,448	0	1,813,650,224	14,481,073,224
G1 Oil and Mineral Gas Reserves	9,232	0.0000	365,722,775	365,722,775	0	7,628,570	358,094,205
G2 Real Property Other Mineral Reserves	1	0.0000	1,032,500	1,032,500	0	0	1,032,500
H1 Tangible, Vehicles	0	0.0000	0	0	0	0	0
I1 Real, Banks	0	0.0000	0	0	0	0	0
J1 Real & Tangible Personal, Utility Water	175	61.6683	13,791,061	13,791,061	0	0	13,791,061
J2 Gas Companies	49	66.8001	225,239,740	225,239,740	0	0	225,239,740
J3 Electric Companies	1,833	6,948.5684	1,988,893,723	1,988,893,723	0	965,220	1,987,928,503
J4 Telephone Companies	176	248.5384	969,308,008	969,308,008	0	11,043	969,296,965
J5 Railroads	1,217	6,983.1922	226,785,941	226,785,941	0	0	226,785,941
J6 Pipelines	3,904	193.8115	511,116,882	511,116,882	0	287,880	510,829,002
J7 Major Cable Television Systems	16	0.0000	359,546,756	359,546,756	0	0	359,546,756
L1 Tangible, Commercial	163,028	0.0000	23,897,315,886	23,897,315,886	0	1,015,643,762	22,881,672,124
L2 Tangible, Industrial	10,333	0.0000	27,685,739,258	27,685,739,258	0	4,134,557,543	23,551,181,715
M1 Tangible, Nonbusiness Watercraft	0	0.0000	0	0	0	0	0
M2 Tangible, Nonbusiness Aircraft	0	0.0000	0	0	0	0	0

040 HARRIS COUNTY
TAX YEAR: 2010

HARRIS COUNTY APPRAISAL DISTRICT
PROPERTY USE CATEGORY RECAP
CERTIFIED TO DATE ROLL 53

LAST UPDATED: 05/08/2015
DELV DATE: 05/22/2015

PROPERTY USE CATEGORY	UNITS	ACREAGE	MARKET	APPRAISED	PRODUCTIVITY	EXEMPTIONS	TAXABLE VALUE
M3 Tangible, Mobile Homes	24,901	0.0000	344,357,460	343,773,385	0	56,629,696	287,143,689
M4 Tangible, Miscellaneous	0	0.0000	0	0	0	0	0
N1 Intangibles	0	0.0000	0	0	0	0	0
O1 Inventory	33,781	3,984.2078	577,585,539	569,235,897	0	1,638,109	567,597,788
O2 Inventory	1,619	25.1586	270,738,864	270,738,864	0	3,837,912	266,900,952
S1 Dealer Inventory	2,396	0.0000	832,502,584	832,502,584	0	14,597	832,487,987
U0 Unknown	0	0.0000	0	0	0	0	0
X0 Primarily Charitable Organization	43	69.6678	20,597,197	20,597,197	0	20,039,930	557,267
X1 Governmental Exempt	59,349	197,223.9911	23,690,593,711	23,689,205,988	0	23,662,811,343	26,394,645
X2 Charitable Exempt	1,426	2,849.5972	3,458,394,632	3,458,394,632	0	3,446,116,560	12,278,072
X3 Religious Exempt	8,188	11,860.2231	4,686,979,315	4,686,606,174	0	4,662,508,641	24,097,533
X4 Cemetery Exempt	246	1,810.7231	358,911,809	358,911,809	0	358,911,809	0
X5 Private School Exempt	465	1,846.6150	1,308,442,011	1,308,442,011	0	1,293,468,068	14,973,943
X6 Youth Development Exempt	54	447.5464	120,024,015	120,024,015	0	120,024,015	0
X7 Historical Exempt	0	0.0000	0	0	0	0	0
X8 Miscellaneous Exempt	102	232.7702	513,700,349	513,632,857	0	513,586,545	46,312
X9 Low-Moderate Income Housing	462	574.3190	334,618,823	334,618,823	0	334,527,626	91,197
JURISDICTION TOTALS:	1,551,873	990,827.9985	\$360,546,399,601	\$356,955,914,582	\$76,801,223	\$86,526,414,571	\$270,506,301,234

Copy of 2014 Tax Rates.xlsx

JurCode	StateID	ISRate	MORate	TotalRate	JurName	LastName	Phone
001	10191202				Houston ISD	SULLIVAN	(713) 274-8000
002	10190802	0.319999993	1.2367001	1.55669999	DEER PARK ISD	SULLIVAN	(713) 274-8000
003	23790402	0.400000006	1.04	1.43999994	WALLER ISD	MARCUS	(936) 931-3695
004	10190702	0.400000006	1.04	1.43999994	CYPRESS-FAIRBANKS ISD	PIWONKA	(281) 664-6300
005	10190602	0.5	1.17	1.66999996	CROSBY ISD	PIGGOTT	(281) 420-4845
006	10190502	0.407000005	1.04	1.44700003	CHANNELVIEW ISD	ROSS	(281) 457-7323
007	17090802	0.5	1.17	1.66999996	NEW CANEY ISD	MCRAE	(936) 539-7897
008	10190302	0.155000001	1.125	1.27999997	ALIEF ISD	PRAESEL	(281) 498-3660
009	10190202	0.152500004	1.133388	1.28588808	ALDINE ISD	GLENN	(281) 449-1011
015	10191002	0.270099998	1.2433	1.51339996	GALENA PARK ISD	VALDEZ	(832) 386-1290
016	10191102	0.391889989	1.04	1.43189001	GOOSE CREEK CISD	PIGGOTT	(281) 420-4845
017	10191502	0.349999994	1.04	1.38999999	KLEIN ISD	WEHNER	(832) 249-4740
018	10191302	0.349999994	1.17	1.51999998	HUMBLE ISD	HIMPELE	(281) 641-8190
019	10191402	0.400000006	1.1266	1.5266	KATY ISD	SULLIVAN	(713) 274-8000
020	10191602	0.409999996	1.04	1.44999993	LA PORTE ISD	POWELL	(281) 471-5020
021	10191702	0.280000001	1.0700001	1.35000002	PASADENA ISD	HENRY	(713) 740-0259
023	10192402	0.25999999	1.17	1.42999995	SHELDON ISD	HOWARD	(281) 727-2036
024	10191902	0.469999999	1.04	1.50999999	SPRING ISD	SMITH	(832) 891-6160
025	10192002	0.304500014	1.09	1.39450002	SPRING BRANCH ISD	PAYTON	(713) 251-7960
026	10192102	0.340000004	1.02	1.36000001	TOMBALL ISD	LUDWIG	(281) 357-3100
027	08491002	0.360000014	1.04	1.39999998	CLEAR CREEK ISD	CAPPEL	(281) 284-0218
028	14690202	0.158000007	1.04	1.19799995	DAYTON ISD	LAFOUR	(936) 258-7022
029	02090802	0.375699997	1.04	1.41569996	PEARLAND ISD	GARRETT	(281) 756-1320
030	10192502	0.360000014	1.04	1.39999998	HUFFMAN ISD	PIGGOTT	(281) 420-4845
031	07991002	0.200000003	1.04005	1.24005008	STAFFORD MSD	SCHULTZ	(281) 341-3710
040	10100000	0.071840003	0.34547	0.41731	HARRIS COUNTY + RELATED ENTITIES	SULLIVAN	(713) 274-8000
041	10120112	0.00116	0.0262	0.02736	HARRIS COUNTY FLOOD CONTROL DIST	SULLIVAN	(713) 274-8000
042	10120418	0.01531	0	0.01531	HARRIS COUNTY PORT OF HOUSTON AL	SULLIVAN	(713) 274-8000
043	10120211	0	0.17	0.17	HARRIS COUNTY HOSPITAL DISTRICT	SULLIVAN	(713) 274-8000
044	10120133	0	0.005999	0.005999	HARRIS COUNTY DEPARTMENT OF EDUC	SULLIVAN	(713) 274-8000
045	10120115	0.031599998	0.0765	0.1081	LONE STAR COLLEGE SYSTEM DISTRICT	SULLIVAN	(713) 274-8000
046	10120215	0.039999999	0.2207	0.26069999	LEE JR COLLEGE DISTRICT	PIGGOTT	(281) 420-4845
047	10120315	0.058557	0.127045	0.18560201	SAN JACINTO JR COLLEGE DISTRICT	SULLIVAN	(713) 274-8000
048	10120415	0.029835001	0.077055	0.10689	HOUSTON COMMUNITY COLLEGE	SULLIVAN	(713) 274-8000
051	10112003	0.376410007	0.44562	0.82203001	BAYTOWN, CITY OF	PIGGOTT	(281) 420-4845
052	10112103	0.140400007	0.2532	0.39359999	BELLAIRE, CITY OF	SULLIVAN	(713) 274-8000
053	10110103	0.097747996	0.185107	0.28285497	BUNKER HILL VILLAGE	PAYTON	(713) 251-7960
054	10112203	0.202000007	0.518	0.72000003	DEER PARK, CITY OF	JOHNSON	(281) 478-7231
055	10110203	0.051766999	0.144667	0.19643399	HEDWIG VILLAGE	PAYTON	(713) 251-7960
056	10112803	0.086029999	0.52817	0.6142	EL LAGO, CITY OF	SULLIVAN	(713) 274-8000
057	10112303	0.049369998	0.99808	1.04745007	GALENA PARK, CITY OF	HILTON	(713) 672-2556
058	08410103	0.061099999	0.5303	0.59140003	CITY OF FRIENDSWOOD	JOHNSON	(409) 766-2481
059	02010503	0.49000001	0.2221	0.71210003	CITY OF PEARLAND	GARRETT	(281) 756-1320
060	10112903	0.083613001	0.449828	0.53344101	HILSHIRE VILLAGE, CITY OF	PAYTON	(713) 251-7960
061	10112403	0.156444997	0.474635	0.63108003	HOUSTON, CITY OF	SULLIVAN	(713) 274-8000
062	10110303	0	0.2	0.2	HUMBLE, CITY OF	SULLIVAN	(713) 274-8000
063	10110703	0.139809996	0.40691	0.54672003	CITY OF KATY	SHAFFER	(281) 391-4800
064	07910203	0.177907005	0.387093	0.565	MISSOURI CITY	SCHULTZ	(281) 341-3710
065	10110403	0	0.184082	0.184082	HUNTERS CREEK VILLAGE	PAYTON	(713) 251-7960
066	10110503	0.150588006	0.649319	0.79990697	JACINTO CITY, CITY OF	SULLIVAN	(713) 274-8000
067	08410703	0.196794003	0.400206	0.597	LEAGUE CITY	JOHNSON	(409) 766-2481
070	10110603	0.159978002	0.582522	0.74249995	JERSEY VILLAGE, CITY OF	SULLIVAN	(713) 274-8000
071	10112503	0.104999997	0.605	0.71000004	LA PORTE, CITY OF	POWELL	(281) 471-5020
072	10110903	0.079476997	0.739644	0.819121	MORGAN'S POINT, CITY OF	POWELL	(281) 471-5020
073	10111003	0.068947002	0.673173	0.74212003	NASSAU BAY, CITY OF	SULLIVAN	(713) 274-8000
074	10112603	0.151575997	0.425328	0.576904	PASADENA, CITY OF	SULLIVAN	(713) 274-8000
075	10111103	0.030423	0.224717	0.25514001	PINEY POINT VILLAGE, CITY OF	PAYTON	(713) 251-7960
076	10111203	0.180522993	0.459507	0.64002997	SEABROOK, CITY OF	SULLIVAN	(713) 274-8000
077	10111303	0	0.844381	0.84438097	SHOREACRES, CITY OF	POWELL	(281) 471-5020
078	10111403	0.123563997	0.520961	0.64452499	SOUTH HOUSTON, CITY OF	SULLIVAN	(713) 274-8000
079	10111503	0.106565997	0.230593	0.33715898	SOUTHSIDE PLACE, CITY OF	MOSS	(713) 668-2341
080	10111603	0	0.487843	0.48784301	SPRING VALLEY, CITY OF	PAYTON	(713) 251-7960
082	10111703	0	0.3306	0.33059999	TAYLOR LAKE VILLAGE, CITY OF	SULLIVAN	(713) 274-8000
083	10111803	0.230000004	0.111455	0.34145501	TOMBALL, CITY OF	SULLIVAN	(713) 274-8000
084	10111903	0.091949999	0.15679	0.24874	WEBSTER, CITY OF	SULLIVAN	(713) 274-8000
085	10112703	0.168229997	0.19356	0.36179	W UNIVERSITY PLACE, CITY OF	SULLIVAN	(713) 274-8000
086	23710403	0.180000007	0.3569	0.53690004	CITY OF WALLER	MARCUS	(936) 931-3695
100	10166304	0	1.25	1.25	HC MUD 421	LEE	(281) 482-0216
101	10120905	0.449999988	0.205	0.65499997	ADDICKS UD	LEE	(281) 482-0216
105	10150704	0	0.25	0.25	HC MUD 264	WHEELER	(713) 462-8906
106	10167104	0	1.5	1.5	HC MUD 502	LEARED	(713) 932-9011

108	10157004	0	0.28	0.28	HC MUD 255	BUENTELLO FLO	(281) 499-1223
110	10159504	0.204999998	0.17	0.375	BAKER ROAD MUD	WHEELER	(713) 462-8906
111	10121305	0	0.43	0.43000001	BAMMEL UD	BYRD	(281) 444-3946
112	10131004	0.649999976	0.25	0.89999998	BARKER-CYPRESS MUD	WHEELER	(713) 462-8906
115	10167004	0	0.86892	0.86892003	HC MUD 499	LEE	(281) 482-0216
116	10149504	0.610000014	0.2	0.81	BEECHNUT MUD	ARTERBURN	(713) 688-3855
117	10121714	0.449999988	0.12	0.56999999	BILMA PUD	WHEELER	(713) 462-8906
118	10123304	0.400000006	0.19	0.59000003	BISSONNET MUD	BUENTELLO FLO	(281) 499-1223
120	10120548	0.340000004	0.31	0.64999998	WEST RANCH MANAGEMENT DISTRICT	LEE	(281) 482-0216
121	10124604	0.472900003	0.2371	0.71000004	BRIDGESTONE MUD	BYRD	(281) 444-3946
124	10153604	0.774999976	0.335	1.11000001	BAYBROOK MUD 1	LEE	(281) 482-0216
125	10120748	0.021	0.229	0.25	THE WOODLANDS TOWNSHIP	MCRAE	(936) 539-7897
128	10150404	0.629999995	0.63	1.25999999	HC MUD 250	LEE	(281) 482-0216
129	10161504	0.610000014	0.1	0.71000004	HC MUD 276	BONNERJEE	(713) 900-2680
131	10121605	0.319999993	0	0.31999999	CNP UD	BONNERJEE	(713) 900-2680
134	10131404	0.5	0.2	0.69999999	CASTLEWOOD MUD	WHEELER	(713) 462-8906
135	10124305	0	0.096	0.096	CEDAR BAYOU PARK UD	LEARED	(713) 932-9011
136	10121804	0.389999986	0.15	0.53999996	CHARTERWOOD MUD	LEARED	(713) 932-9011
137	10123404	0.230000004	0.195	0.42500001	CHELFORD CITY MUD	LEARED	(713) 932-9011
138	10131504	0.314999998	0.25	0.565	CHELFORD ONE MUD	LEARED	(713) 932-9011
139	10123704	0.540000021	0.31	0.85000002	CHIMNEY HILL MUD	LEE	(281) 482-0216
140	10123604	0.540000021	0.03	0.56999999	CIMARRON MUD	LEARED	(713) 932-9011
141	10131604	0.620000005	0.25	0.87	CLAY ROAD MUD	LEE	(281) 482-0216
142	10120221	0.230000004	0.05	0.28	CLEAR LAKE CITY WA	CUMMING	(281) 488-1164
145	10126104	0.150000006	0.19	0.34	CORNERSTONES MUD	LEARED	(713) 932-9011
146	10161604	0.550000012	0	0.55000001	CROSBY MUD	MUTH	(281) 426-8156
147	10121814	0.368000001	0.1	0.46799999	CY-CHAMP PUD	LEARED	(713) 932-9011
148	10121705	0.085000001	0.095	0.18000001	CYPRESS CREEK UD	LEARED	(713) 932-9011
149	10120114	0.152999997	0.1689	0.32190001	CYPRESS FOREST PUD	BUENTELLO FLO	(281) 499-1223
150	10131804	0.550000012	0.32	0.87	CYPRESS HILL MUD 1	LEE	(281) 482-0216
151	10120305	0.200000003	0	0.2	CYPRESS KLEIN UD	WHEELER	(713) 462-8906
152	10121805	0.119999997	0.24	0.35999998	CYPRESSWOOD UD	BYRD	(281) 444-3946
153	10153704	0	0.5	0.5	CAMFIELD MUD	WHEELER	(713) 462-8906
154	10120648	0	0.1	0.1	LOWER KIRBY PEARLAND MGMT DISTRICT	BYRD	(281) 444-3946
155	10167504	0	0	0	HC MUD 403	ARTERBURN	(713) 688-3855
156	10157104	0.910000026	0.18	1.09000003	HC MUD 278	LEE	(281) 482-0216
159	10162404	0.850000024	0.14	0.99000001	HC MUD 290	BUENTELLO FLO	(281) 499-1223
161	10128704	0.5	0.29	0.78999996	MEADOWHILL REGIONAL MUD	LEARED	(713) 932-9011
162	10121914	0.920000017	0	0.92000002	DOWDELL PUD	BYRD	(281) 444-3946
163	10121905	0.360000014	0.22	0.58000004	EL DORADO UD	WHEELER	(713) 462-8906
164	10120405	0.430000007	0.25	0.68000001	EMERALD FOREST UD	LEARED	(713) 932-9011
165	10120205	0.622500002	0.365	0.98750001	ENCANTO REAL UD	WHEELER	(713) 462-8906
170	10155304	0	0.16	0.16	HC MUD 286	ARTERBURN	(713) 688-3855
171	10122005	0.25	0.1	0.34999999	FALLBROOK UD	LEE	(281) 482-0216
172	10124404	0.344999999	0.145	0.49000001	FAULKY-GULLY MUD	LEE	(281) 482-0216
174	10124104	0.800000012	0.45	1.25	FOREST HILLS MUD	WHEELER	(713) 462-8906
175	10120804	0.300000012	0.35	0.64999998	FOUNTAINHEAD MUD	WHEELER	(713) 462-8906
176	10128104	0.100000001	0.385	0.48499998	FRY ROAD MUD	LEARED	(713) 932-9011
177	10167604	0	0.8	0.80000001	HC MUD 415	ARTERBURN	(713) 688-3855
178	10121309	0.769999981	0.73	1.5	HC ID 018	LEE	(281) 482-0216
179	10157904	0.75	0.1	0.85000002	HC MUD 304	WHEELER	(713) 462-8906
180	10155004	0.4375	0.4625	0.89999998	HC MUD 275	BYRD	(281) 444-3946
182	10122214	0.449999988	0.175	0.625	GRANT ROAD PUD	BYRD	(281) 444-3946
183	10122205	0.99000001	0	0.99000001	GREENWOOD UD	LEE	(281) 482-0216
185	10146304	0.081500001	0.1185	0.2	GREEN TRAILS MUD	WHEELER	(713) 462-8906
186	10149404	0.310000002	0.2	0.50999999	GREENS PARKWAY MUD	ARTERBURN	(713) 688-3855
187	10165904	0.569999993	0.78	1.34999999	HC MUD 287	BUENTELLO FLO	(281) 499-1223
189	10167704	0	1	1	HC MUD 489	BONNERJEE	(713) 900-2680
190	10160604	0.790000021	0.24	1.02999997	HC MUD 284	WHEELER	(713) 462-8906
193	10155204	0.550000012	0.35	0.89999998	HC MUD 285	WHEELER	(713) 462-8906
197	10163504	0.800000012	0.385	1.18499994	HC MUD 401	LEARED	(713) 932-9011
200	10121313	0.550000012	0	0.55000001	HC FWSD 1A	MUTH	(281) 426-8156
205	10156404	0.490000001	0.56	1.04999995	HC MUD 321	LEARED	(713) 932-9011
206	10120313	0	0.23	0.23	HC FWSD 006	MUTH	(281) 426-8156
207	10163604	0.800000012	0.31	1.11000001	HC MUD 282	WHEELER	(713) 462-8906
208	10157204	0.219999999	0.38	0.60000002	HC MUD 316	WHEELER	(713) 462-8906
213	10155404	0.469999999	0.13	0.60000002	HC MUD 322	LEARED	(713) 932-9011
220	10158704	0.639999986	0.21	0.84999996	HC MUD 342	WHEELER	(713) 462-8906
222	10161404	0.660000026	0.34	1	HC MUD 344	LEE	(281) 482-0216
224	10156504	0.230000004	0.1175	0.3475	HC MUD 345	WHEELER	(713) 462-8906
225	10157304	0	0.1	0.1	HC MUD 346	WHEELER	(713) 462-8906
227	10120413	0.204999998	0.5	0.70499998	HC FWSD 027	MUTH	(281) 426-8156

228	10164004	0.474999994	0.38625	0.86124998	HC MUD 404	ARTERBURN	(713) 688-3855
229	10164404	0.800000012	0.28	1.08000004	HC MUD 412	LEE	(281) 482-0216
230	10164504	0.5	0.15	0.64999998	HC MUD 407	BUENTELLO FLO	(281) 499-1223
231	10164604	0.519999981	0.78	1.29999995	HC MUD 405	BUENTELLO FLO	(281) 499-1223
232	10164704	0.240999997	0.959	1.20000005	HC MUD 433	BUENTELLO FLO	(281) 499-1223
234	10167304	0	0.88	0.88	HC MUD 451	LEE	(281) 482-0216
235	10164904	0.5	0.3	0.80000001	HC MUD 459	ARTERBURN	(713) 688-3855
236	10165004	0	0	0	HC MUD 416	LEARED	(713) 932-9011
237	10165104	0	1.25	1.25	HC MUD 434	BONNERJEE	(713) 900-2680
238	10165204	0	0.8	0.80000001	HC MUD 439	LEARED	(713) 932-9011
240	10165504	0	0	0	HC MUD 454	BONNERJEE	(713) 900-2680
241	10166004	0.620000005	0.12	0.74000001	HC MUD 460	ARTERBURN	(713) 688-3855
242	10165604	0.430000007	0.33892	0.76892	HC MUD 450	LEE	(281) 482-0216
243	10166104	0	1.48	1.48000002	HC MUD 480	LEE	(281) 482-0216
244	10120448	0	0	0	PEARLAND MUNICIPAL MGMT DIST 1	LEE	(281) 482-0216
246	10166204	0.769999981	0.73	1.5	HC MUD 432	LEARED	(713) 932-9011
247	10120613	0.610000014	0.35	0.96000004	HC FWSD 047	KILPATRICK	(281) 452-2872
248	10166404	0	1.2	1.20000005	HC MUD 481	LEE	(281) 482-0216
249	10166504	0.75	0.3	1.04999995	HC MUD 406	ARTERBURN	(713) 688-3855
250	10166604	0	1.25	1.25	HC MUD 402	ARTERBURN	(713) 688-3855
251	10120813	0.300000012	0	0.30000001	HC FWSD 051	LEARED	(713) 932-9011
253	02021104	0.430000007	0.04	0.47	BRAZORIA COUNTY MUD 018	LEE	(281) 482-0216
254	17025004	0.589999974	0.2	0.78999996	KINGS MANOR MUD	LEE	(281) 482-0216
255	10166704	0.310000002	1.19000001	1.5	HC MUD 501	LEARED	(713) 932-9011
256	10166804	0	0.85	0.85000002	HC MUD 509	LEE	(281) 482-0216
257	10166904	0	1.25	1.25	HC MUD 500	LEARED	(713) 932-9011
258	10121013	0.200000003	0.43	0.63	HC FWSD 058	LEARED	(713) 932-9011
261	10121213	0.340000004	0	0.34	HC FWSD 061	SCHYMA	(281) 469-9405
264	10121009	0.01976	0.12369	0.14345001	HC ID 001	SULLIVAN	(713) 274-8000
276	10162704	0.600000024	0.46	1.06000006	HC MUD 396	LEARED	(713) 932-9011
301	10122504	0.790000021	0.18	0.97000003	HC MUD 001	SULLIVAN	(713) 274-8000
305	10129104	1.019999981	0.25	1.26999998	HC MUD 005	BONNERJEE	(713) 900-2680
306	10120604	0	0.61	0.61000001	HC MUD 006	LEE	(281) 482-0216
308	10132304	0.310000002	0.33	0.63999999	HC MUD 008	BYRD	(281) 444-3946
311	10120304	0.699999988	0.24	0.94	HC MUD 011	LEARED	(713) 932-9011
313	10156104	0.579999983	0.09	0.66999996	CLEARBROOK CITY MUD	LEARED	(713) 932-9011
316	10132804	0.560000002	0.11	0.67000002	HC MUD 016	LEARED	(713) 932-9011
318	10120404	0	0.42	0.41999999	HC MUD 018	WHEELER	(713) 462-8906
319	10167404	0	1.5	1.5	HC MUD 494	LEE	(281) 482-0216
321	10167804	0.330000013	0.47	0.80000001	HC MUD 461	LEE	(281) 482-0216
323	10133304	0	0.48	0.47999999	HC MUD 023	BYRD	(281) 444-3946
324	10133404	0.349999994	0.22	0.56999999	HC MUD 024	BYRD	(281) 444-3946
325	10133504	0.284999996	0.5	0.78499997	HC MUD 025	BYRD	(281) 444-3946
326	10120104	0.610000014	0.19	0.80000001	HC MUD 026	BYRD	(281) 444-3946
327	10167904	0	0.95	0.94999999	HARRIS-WALLER COUNTIES MUD 2	BONNERJEE	(713) 900-2680
331	10168104	0	0.75	0.75	HC MUD 529	BUENTELLO FLO	(281) 499-1223
332	10168204	0	1.5	1.5	HC MUD 449	BUENTELLO FLO	(281) 499-1223
333	10126004	0.529999971	0.39	0.91999996	HC MUD 033	BUENTELLO FLO	(281) 499-1223
334	10125119	0	0.5	0.5	HC WCID 159	BONNERJEE	(713) 900-2680
336	10134204	0	0.25	0.25	HC MUD 036	SPENCER	(281) 479-7798
337	10168004	0	1.39	1.38999999	HC MUD 504	LEE	(281) 482-0216
338	10121409	0	0.55	0.55000001	HC ID 012	ARTERBURN	(713) 688-3855
339	10168304				HC MUD 530	LEE	(281) 482-0216
340	10168404				HC MUD 531	LEE	(281) 482-0216
341	02020148	0	0.1	0.1	Pearland Municipal Mgmt Dist 2	GARRETT	(281) 756-1320
342	10168504	0	1.5	1.5	HC MUD 422	LEE	(281) 482-0216
343	10120904	0.280000001	0.25	0.52999997	HC MUD 043	BONNERJEE	(713) 900-2680
344	10122804	0.230000004	0.2	0.43000001	HC MUD 044	BYRD	(281) 444-3946
345	10121509				HC ID 018 (DA 1)	LEE	(281) 482-0216
346	10123204	0.449999988	0.09	0.53999996	HC MUD 046	BYRD	(281) 444-3946
347	10168604				NORTHAMPTON MUD (DA)	BUENTELLO FLO	(281) 499-1223
348	10134904	0	0.5	0.5	HC MUD 048	BYRD	(281) 444-3946
349	10125504	0.850000024	0.12	0.97000003	HC MUD 049	LEARED	(713) 932-9011
350	10125204	0	1.12	1.12	HC MUD 050	MUTH	(281) 426-8156
351	10125219				HC WCID 161	LEE	(281) 482-0216
353	10123004	0.610000014	0.2	0.81	HC MUD 053	LEARED	(713) 932-9011
354	10168704				HARRIS-WALLER COUNTIES MUD 3	LEE	(281) 482-0216
355	10121404	0.400000006	0	0.40000001	HC MUD 055	BYRD	(281) 444-3946
356	10168804				HC MUD 495	LEE	(281) 482-0216
357	10168904				INTERCONTINENTAL MUD	LEE	(281) 482-0216
358	10135404	0.490000001	0.46	0.95000005	HC MUD 058	BYRD	(281) 444-3946
359	101-690-				H C MUD 537	LEARED	(713) 932-9011

228	10164004	0.474999994	0.38625	0.86124998	HC MUD 404	ARTERBURN	(713) 688-3855
229	10164404	0.800000012	0.28	1.08000004	HC MUD 412	LEE	(281) 482-0216
230	10164504	0.5	0.15	0.64999998	HC MUD 407	BUENTELLO FLO	(281) 499-1223
231	10164604	0.519999981	0.78	1.29999995	HC MUD 405	BUENTELLO FLO	(281) 499-1223
232	10164704	0.240999997	0.959	1.20000005	HC MUD 433	BUENTELLO FLO	(281) 499-1223
234	10167304	0	0.88	0.88	HC MUD 451	LEE	(281) 482-0216
235	10164904	0.5	0.3	0.80000001	HC MUD 459	ARTERBURN	(713) 688-3855
236	10165004	0	0	0	HC MUD 416	LEARED	(713) 932-9011
237	10165104	0	1.25	1.25	HC MUD 434	BONNERJEE	(713) 900-2680
238	10165204	0	0.8	0.80000001	HC MUD 439	LEARED	(713) 932-9011
240	10165504	0	0	0	HC MUD 454	BONNERJEE	(713) 900-2680
241	10166004	0.620000005	0.12	0.74000001	HC MUD 460	ARTERBURN	(713) 688-3855
242	10165604	0.430000007	0.33892	0.76892	HC MUD 450	LEE	(281) 482-0216
243	10166104	0	1.48	1.48000002	HC MUD 480	LEE	(281) 482-0216
244	10120448	0	0	0	PEARLAND MUNICIPAL MGMT DIST 1	LEE	(281) 482-0216
246	10166204	0.769999981	0.73	1.5	HC MUD 432	LEARED	(713) 932-9011
247	10120613	0.610000014	0.35	0.96000004	HC FWSD 047	KILPATRICK	(281) 452-2872
248	10166404	0	1.2	1.20000005	HC MUD 481	LEE	(281) 482-0216
249	10166504	0.75	0.3	1.04999995	HC MUD 406	ARTERBURN	(713) 688-3855
250	10166604	0	1.25	1.25	HC MUD 402	ARTERBURN	(713) 688-3855
251	10120813	0.300000012	0	0.30000001	HC FWSD 051	LEARED	(713) 932-9011
253	02021104	0.430000007	0.04	0.47	BRAZORIA COUNTY MUD 018	LEE	(281) 482-0216
254	17025004	0.589999974	0.2	0.78999996	KINGS MANOR MUD	LEE	(281) 482-0216
255	10166704	0.310000002	1.19000001	1.5	HC MUD 501	LEARED	(713) 932-9011
256	10166804	0	0.85	0.85000002	HC MUD 509	LEE	(281) 482-0216
257	10166904	0	1.25	1.25	HC MUD 500	LEARED	(713) 932-9011
258	10121013	0.200000003	0.43	0.63	HC FWSD 058	LEARED	(713) 932-9011
261	10121213	0.340000004	0	0.34	HC FWSD 061	SCHYMA	(281) 469-9405
264	10121009	0.01976	0.12369	0.14345001	HC ID 001	SULLIVAN	(713) 274-8000
276	10162704	0.600000024	0.46	1.06000006	HC MUD 396	LEARED	(713) 932-9011
301	10122504	0.790000021	0.18	0.97000003	HC MUD 001	SULLIVAN	(713) 274-8000
305	10129104	1.019999981	0.25	1.26999998	HC MUD 005	BONNERJEE	(713) 900-2680
306	10120604	0	0.61	0.61000001	HC MUD 006	LEE	(281) 482-0216
308	10132304	0.310000002	0.33	0.63999999	HC MUD 008	BYRD	(281) 444-3946
311	10120304	0.699999988	0.24	0.94	HC MUD 011	LEARED	(713) 932-9011
313	10156104	0.579999983	0.09	0.66999996	CLEARBROOK CITY MUD	LEARED	(713) 932-9011
316	10132804	0.560000002	0.11	0.67000002	HC MUD 016	LEARED	(713) 932-9011
318	10120404	0	0.42	0.41999999	HC MUD 018	WHEELER	(713) 462-8906
319	10167404	0	1.5	1.5	HC MUD 494	LEE	(281) 482-0216
321	10167804	0.330000013	0.47	0.80000001	HC MUD 461	LEE	(281) 482-0216
323	10133304	0	0.48	0.47999999	HC MUD 023	BYRD	(281) 444-3946
324	10133404	0.349999994	0.22	0.56999999	HC MUD 024	BYRD	(281) 444-3946
325	10133504	0.284999996	0.5	0.78499997	HC MUD 025	BYRD	(281) 444-3946
326	10120104	0.610000014	0.19	0.80000001	HC MUD 026	BYRD	(281) 444-3946
327	10167904	0	0.95	0.94999999	HARRIS-WALLER COUNTIES MUD 2	BONNERJEE	(713) 900-2680
331	10168104	0	0.75	0.75	HC MUD 529	BUENTELLO FLO	(281) 499-1223
332	10168204	0	1.5	1.5	HC MUD 449	BUENTELLO FLO	(281) 499-1223
333	10126004	0.529999971	0.39	0.91999996	HC MUD 033	BUENTELLO FLO	(281) 499-1223
334	10125119	0	0.5	0.5	HC WCID 159	BONNERJEE	(713) 900-2680
336	10134204	0	0.25	0.25	HC MUD 036	SPENCER	(281) 479-7798
337	10168004	0	1.39	1.38999999	HC MUD 504	LEE	(281) 482-0216
338	10121409	0	0.55	0.55000001	HC ID 012	ARTERBURN	(713) 688-3855
339	10168304				HC MUD 530	LEE	(281) 482-0216
340	10168404				HC MUD 531	LEE	(281) 482-0216
341	02020148	0	0.1	0.1	Pearland Municipal Mgmt Dist 2	GARRETT	(281) 756-1320
342	10168504	0	1.5	1.5	HC MUD 422	LEE	(281) 482-0216
343	10120904	0.280000001	0.25	0.52999997	HC MUD 043	BONNERJEE	(713) 900-2680
344	10122804	0.230000004	0.2	0.43000001	HC MUD 044	BYRD	(281) 444-3946
345	10121509				HC ID 018 (DA 1)	LEE	(281) 482-0216
346	10123204	0.449999988	0.09	0.53999996	HC MUD 046	BYRD	(281) 444-3946
347	10168604				NORTHAMPTON MUD (DA)	BUENTELLO FLO	(281) 499-1223
348	10134904	0	0.5	0.5	HC MUD 048	BYRD	(281) 444-3946
349	10125504	0.850000024	0.12	0.97000003	HC MUD 049	LEARED	(713) 932-9011
350	10125204	0	1.12	1.12	HC MUD 050	MUTH	(281) 426-8156
351	10125219				HC WCID 161	LEE	(281) 482-0216
353	10123004	0.610000014	0.2	0.81	HC MUD 053	LEARED	(713) 932-9011
354	10168704				HARRIS-WALLER COUNTIES MUD 3	LEE	(281) 482-0216
355	10121404	0.400000006	0	0.40000001	HC MUD 055	BYRD	(281) 444-3946
356	10168804				HC MUD 495	LEE	(281) 482-0216
357	10168904				INTERCONTINENTAL MUD	LEE	(281) 482-0216
358	10135404	0.490000001	0.46	0.95000005	HC MUD 058	BYRD	(281) 444-3946
359	101-690-				H C MUD 537	LEARED	(713) 932-9011

361	10135704	0.419999987	0.15	0.56999999	HC MUD 061	WHEELER	(713) 462-8906
362	10135804	0.370000005	0.25	0.62	HC MUD 062	WHEELER	(713) 462-8906
363	10167204	0.360000014	0.16	0.51999998	HC MUD 063	ARTERBURN	(713) 688-3855
364	10123904	0.50999999	0.18	0.69	HC MUD 064	WHEELER	(713) 462-8906
365	10124704	0.769999981	0.16	0.92999995	HC MUD 065	WHEELER	(713) 462-8906
366	10120848				GENERATION PARK MGMT DISTRICT	ARTERBURN	(713) 688-3855
369	10121004	0	0.4	0.40000001	HC MUD 069	LEE	(281) 482-0216
370	10133604	0.540000021	0.25	0.79000002	HC MUD 070	LEARED	(713) 932-9011
371	10133804	0.829999983	0.23	1.05999994	HC MUD 071	BUENTELLO FLO	(281) 499-1223
379	10163304	0.579999983	0.16	0.74000001	HC MUD 381	LEE	(281) 482-0216
381	10130704	0.170000002	0.2	0.37	HC MUD 081	WHEELER	(713) 462-8906
382	10130804	0.579999983	0.22	0.79999995	HC MUD 082	BYRD	(281) 444-3946
383	10161904	0.675000012	0.215	0.88999999	HC MUD 383	BUENTELLO FLO	(281) 499-1223
384	10162304	0.639999986	0.24	0.88	HC MUD 397	LEARED	(713) 932-9011
385	10162904	0.550000012	0.66	1.21000004	HC MUD 399	LEE	(281) 482-0216
386	10134504	0.560000002	0.2373	0.79729998	HC MUD 086	ARTERBURN	(713) 688-3855
387	10162604	0.939999998	0.32	1.25999999	HC MUD 391	LEARED	(713) 932-9011
388	10163004	0.649999976	0.26	0.90999997	HC MUD 393	LEE	(281) 482-0216
389	10163404	0.5	0.57	1.06999993	HC MUD 400	WHEELER	(713) 462-8906
392	10163104	0.550000012	0.35	0.89999998	HC MUD 411	LEE	(281) 482-0216
394	10163804	0.569999993	0.12	0.69	HC MUD 410	BUENTELLO FLO	(281) 499-1223
395	10164104	0.439999998	0.06	0.5	HARRIS-MONTGOMERY CO MUD 386	SPENCER	(281) 479-7798
396	10162804	1.00999999	0.26	1.26999998	HC MUD 096	WHEELER	(713) 462-8906
399	10165304	0.75	0.65	1.39999998	HC MUD 420	LEE	(281) 482-0216
400	10120110	0.25	0.05	0.30000001	HC RID 001	LEARED	(713) 932-9011
402	10122904	0.400000006	0.3	0.70000005	HC MUD 102	LEE	(281) 482-0216
404	10125904	0.349999994	0.15	0.5	HC MUD 104	WHEELER	(713) 462-8906
405	10125004	0.600000024	0.3	0.90000004	HC MUD 105	LEARED	(713) 932-9011
406	10161104	0.730000019	0.18	0.91000003	HC MUD 106	BUENTELLO FLO	(281) 499-1223
409	10122004	0.389999986	0.13	0.51999998	HC MUD 109	SPENCER	(281) 479-7798
418	10124004	0.600000024	0.12	0.72000003	HC MUD 118	WHEELER	(713) 462-8906
419	10136404	0.214000002	0.271	0.48500001	HC MUD 119	ARTERBURN	(713) 688-3855
420	10123804	0.439999998	0.2	0.63999999	HC MUD 120	BUENTELLO FLO	(281) 499-1223
422	10136504	0.550000012	0.2	0.75	HC MUD 122	LEARED	(713) 932-9011
427	10136704	0.610000014	0.26	0.87	HC MUD 127	BYRD	(281) 444-3946
430	10136804	0.239999995	0.38	0.62	HC MUD 130	LEARED	(713) 932-9011
432	10121604	0.0275	0.0865	0.11399999	HC MUD 132	LEARED	(713) 932-9011
436	10121904	0	0.196	0.19599999	HC MUD 136	LEARED	(713) 932-9011
444	10124504	0.310000002	0.32	0.63	HC MUD 144	WHEELER	(713) 462-8906
447	10127704	0.379999995	0.53	0.90999997	HC MUD 147	LEARED	(713) 932-9011
448	10126804	0.870999992	0.309	1.17999995	HC MUD 148	LEARED	(713) 932-9011
449	10125604	0.270000011	0.25	0.51999998	HC MUD 149	LEARED	(713) 932-9011
450	10124804	0.689999998	0.25	0.94	HC MUD 150	WHEELER	(713) 462-8906
451	10125704	0.370000005	0.05	0.42000002	HC MUD 151	WHEELER	(713) 462-8906
452	10126404	0.310000002	0.05	0.36000001	HC MUD 152	WHEELER	(713) 462-8906
453	10137004	0.430999994	0.029	0.45999998	HC MUD 153	LEARED	(713) 932-9011
454	10137104	0.560000002	0.28	0.84000003	HC MUD 154	LEARED	(713) 932-9011
455	10137204	0.610000014	0.31	0.92000002	HC MUD 155	LEARED	(713) 932-9011
456	10162004	0.50999999	0.39	0.89999998	HC MUD 156	LEE	(281) 482-0216
457	10137404	0.699999988	0.1	0.80000001	HC MUD 157	LEARED	(713) 932-9011
458	10137504	0.419999987	0.08	0.5	HC MUD 158	LEARED	(713) 932-9011
462	10128204	0.140000001	0.41	0.55000001	HC MUD 162	LEARED	(713) 932-9011
463	10137704	0	0.1	0.1	HC MUD 163	BUENTELLO FLO	(281) 499-1223
465	10137904	1.070000052	0.25	1.32000005	HC MUD 165	LEARED	(713) 932-9011
466	10156304	0.600000024	0.33	0.93000007	HC MUD 166	LEARED	(713) 932-9011
467	10152904	0.819999993	0.38	1.20000005	HC MUD 167	LEE	(281) 482-0216
468	10138204	0.460000008	0.12	0.57999998	HC MUD 168	LEARED	(713) 932-9011
470	10147504	0.109999999	0.18	0.29000002	HC MUD 170	WHEELER	(713) 462-8906
472	10157404	0.649999976	0.22	0.87	HC MUD 172	LEARED	(713) 932-9011
473	10157504	0.400000006	0.23	0.63	HC MUD 173	ARTERBURN	(713) 688-3855
479	10138804	0	0.29	0.28999999	HC MUD 179	WHEELER	(713) 462-8906
480	10138904	0.48300001	0.347	0.83000004	HC MUD 180	LEARED	(713) 932-9011
482	10139104	0.200000003	0.5	0.69999999	HC MUD 182	CARBY	(281) 873-7313
483	10139204	0.280000001	0.25	0.52999997	HC MUD 183	LEARED	(713) 932-9011
484	10162104	0.479999989	0.19	0.66999996	HC MUD 382	LEE	(281) 482-0216
485	10139404	0.36500001	0.25	0.61500001	HC MUD 185	WHEELER	(713) 462-8906
486	10139504	0.015	0.265	0.27999997	HC MUD 186	LEARED	(713) 932-9011
488	10139604	0.280000001	0.21	0.49000001	HC MUD 188	LEE	(281) 482-0216
489	10139704	0.200000003	0.35	0.55000001	HC MUD 189	WHEELER	(713) 462-8906
490	10162204	0.629999995	0.07	0.69999999	HC MUD 390	WHEELER	(713) 462-8906
491	10147604	0.059999999	0.2	0.25999999	HC MUD 191	LEARED	(713) 932-9011
493	10162504	0.959999979	0.35	1.30999994	HC MUD 389	BUENTELLO FLO	(281) 499-1223

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496	10159004	0.389999986	0.29	0.67999995	HC MUD 196	ARTERBURN	(713) 688-3855
498	10164204	0	0	0	HC MUD 418	WHEELER	(713) 462-8906
500	10148104	0.465000004	0.18	0.64499998	HC MUD 200	WHEELER	(713) 462-8906
501	10161804				HC MUD 374	BUENTELLO FLO	(281) 499-1223
502	10148204	0.5	0.75	1.25	HC MUD 202	BYRD	(281) 444-3946
504	10160904	0.360000014	0.53	0.88999999	HC MUD 371	LEARED	(713) 932-9011
505	10139804	0.620000005	0.25	0.87	HC MUD 205	WHEELER	(713) 462-8906
506	10163904	0.870000005	0.13	1	HC MUD 419	WHEELER	(713) 462-8906
507	10165704	0.720000029	0.07	0.79000002	HC MUD 468	BUENTELLO FLO	(281) 499-1223
508	10148404	0.104999997	0.385	0.48999998	HC MUD 208	LEARED	(713) 932-9011
509	10160504	0.155000001	0.02	0.175	HC MUD 372	LEE	(281) 482-0216
510	10161004	0.25	0.09	0.34	HC MUD 373	LEE	(281) 482-0216
511	10149604	0.469999999	0.1	0.56999999	HC MUD 211	LEE	(281) 482-0216
514	10163204	0.639999986	0.54	1.18000007	HC MUD 220	LEE	(281) 482-0216
515	10148704	0	0.5	0.5	HC MUD 215	WHEELER	(713) 462-8906
516	10149704	0.600000024	0.35	0.95000005	HC MUD 216	LEARED	(713) 932-9011
517	10148804	0.879999995	0.6	1.48000002	HC MUD 217	BYRD	(281) 444-3946
519	10158404	0.319999993	0.07	0.38999999	HC MUD 341	BONNERJEE	(713) 900-2680
520	10160804	0.340000004	0.04	0.38	HC MUD 370	BONNERJEE	(713) 900-2680
521	10149104	0.305000007	0.195	0.5	HC MUD 221	WHEELER	(713) 462-8906
522	10153204	0.170000002	0.25	0.42000002	HC MUD 222	BUENTELLO FLO	(281) 499-1223
524	10156604	0.519999981	0.08	0.59999996	HC MUD 354	LEARED	(713) 932-9011
525	10158504	0.079999998	0.04	0.12	HC MUD 355	LEARED	(713) 932-9011
526	10158604	0.474999994	0.21	0.685	HC MUD 367	BUENTELLO FLO	(281) 499-1223
527	10157804	0.100000001	0.17	0.27000001	HC MUD 359	WHEELER	(713) 462-8906
528	10157604	0.600000024	0.205	0.80500001	HC MUD 358	LEARED	(713) 932-9011
529	10159104	0.365000001	0.025	0.39000002	HC MUD 360	WHEELER	(713) 462-8906
530	10157704	0.300000012	0.23	0.53000003	HC MUD 230	LEE	(281) 482-0216
532	10160704	0.600000024	0.4	1	HC MUD 361	WHEELER	(713) 462-8906
533	10149804	0.540000021	0.25	0.79000002	HC MUD 233	LEE	(281) 482-0216
534	10160404	0.314999998	0.17	0.48500001	HC MUD 364	LEARED	(713) 932-9011
535	10159704	0.324999988	0.17	0.495	HC MUD 365	LEARED	(713) 932-9011
538	10150104	0.479999989	0.155	0.63499999	HC MUD 238	WHEELER	(713) 462-8906
539	10150204	0.649999976	0.12	0.76999998	HC MUD 239	LEE	(281) 482-0216
541	10159204	0.02	0.48	0.5	HC MUD 257	LEE	(281) 482-0216
542	10155604	0.319999993	0.24	0.56	HC MUD 261	BYRD	(281) 444-3946
544	10159904	0.490000001	0.175	0.66500002	HC MUD 280	BONNERJEE	(713) 900-2680
545	10161704	0.615000001	0.125	0.74000001	HC MUD 281	WHEELER	(713) 462-8906
548	10153504	0.449999988	0.1	0.55000001	HC MUD 248	BYRD	(281) 444-3946
549	10159604	0.610000014	0.27	0.88	HC MUD 249	LEARED	(713) 932-9011
550	10120840	0	0.072	0.072	HC EMERG SRV DIST 007	SULLIVAN	(713) 274-8000
555	10160204	0	0.2	0.2	HC MUD 366	BUENTELLO FLO	(281) 499-1223
556	10124505	0.094999999	0.14	0.235	HC UD 006	BUENTELLO FLO	(281) 499-1223
564	10124005	0.107500002	0.5925	0.69999999	HC UD 014	WHEELER	(713) 462-8906
565	10121205	0.284999996	0.6	0.88499999	HC UD 015	WHEELER	(713) 462-8906
566	10124805	0.879999995	0.31	1.19000006	HC UD 016	BONNERJEE	(713) 900-2680
600	10123919	0.430000007	0.17	0.60000002	HC WCID FONDREN ROAD	LEARED	(713) 932-9011
601	10124019	0.119999997	0.1	0.22	HC WCID 001	MUTH	(281) 426-8156
602	10120219	0.365999997	0	0.366	HC WCID 021	ARTERBURN	(713) 688-3855
603	10120319	0.349999994	0	0.34999999	HC WCID 036	LEARED	(713) 932-9011
604	10120419	0	0.2129	0.2129	HC WCID 050	SULLIVAN	(713) 274-8000
605	10120619	0.300000012	0.4	0.70000005	HC WCID 070	WHEELER	(713) 462-8906
606	10120919	0.469999999	0.53	1	HC WCID 074	COLEMAN	(281) 442-9072
607	10121019	0.405000001	0.05	0.45500001	HC WCID 075	CUMMING	(281) 488-1164
609	10121519	0.150000006	0.74	0.88999999	HC WCID 084	LEARED	(713) 932-9011
610	10124119	1.080000043	0.25	1.33000004	HC WCID 089	WHEELER	(713) 462-8906
611	10121619	0.159999996	0.2	0.36000001	HC WCID 091	BYRD	(281) 444-3946
612	10121719	0	0.14371	0.14371	HC WCID 092	SMITH	(281) 891-6160
613	10124919	0.560000002	0.33	0.88999999	HC WCID 096	LEARED	(713) 932-9011
614	10124619	0.109999999	0.06	0.17	HC WCID 155	LEARED	(713) 932-9011
616	10124819	0.280000001	0.1	0.38	HC WCID 156	LEARED	(713) 932-9011
617	10125019	0.379999995	0.12	0.5	HC WCID 157	WHEELER	(713) 462-8906
622	10122519	0.129999995	0.12	0.25	HC WCID 109	WHEELER	(713) 462-8906
623	10122619	0.310000002	0.15	0.46000001	HC WCID 110	BYRD	(281) 444-3946
624	10122919	0	0.79	0.79000002	HC WCID 113	LEARED	(713) 932-9011
625	10123019	0	0.3	0.30000001	HC WCID 114	BYRD	(281) 444-3946
626	10123119	0	0.1	0.1	HC WCID 116	BYRD	(281) 444-3946
627	10123219	0.509999999	0.03	0.53999996	HC WCID 119	WHEELER	(713) 462-8906
628	10123519	0	0.48	0.47999999	HC WCID 132	WHEELER	(713) 462-8906
629	10123619	0.300000012	0.67	0.97000003	HC WCID 133	LEARED	(713) 932-9011
630	10123719	0.280000001	0.5	0.77999997	HC WCID 136	LEE	(281) 482-0216
631	10122740	0	0.08	0.08	HC EMERG SRV DIST 046	SULLIVAN	(713) 274-8000

632	10124419	0	0.05886	0.05886	HC WCID 145	LEARED	(713) 932-9011
633	10120640	0	0.06	0.06	HC EMERG SRV DIST 009	SULLIVAN	(713) 274-8000
634	10121240	0	0.0872	0.0872	HC EMERG SRV DIST 013	SULLIVAN	(713) 274-8000
635	10121340	0	0.04917	0.04917	HC EMERG SRV DIST 016	SULLIVAN	(713) 274-8000
636	10121440	0	0.1	0.1	HC EMERG SRV DIST 020	SULLIVAN	(713) 274-8000
637	10120940	0	0.1	0.1	HC EMERG SRV DIST 028	SULLIVAN	(713) 274-8000
638	10121940	0	0.096639	0.096639	HC EMERG SRV DIST 047	SULLIVAN	(713) 274-8000
639	10121640	0	0.09722	0.09722	HC EMERG SRV DIST 024	SULLIVAN	(713) 274-8000
640	10122640	0	0.05	0.05	HC EMERG SRV DIST 014	SULLIVAN	(713) 274-8000
641	10121540	0	0.1	0.1	HC EMERG SRV DIST 010	SULLIVAN	(713) 274-8000
642	10121740	0	0.1	0.1	HC EMERG SRV DIST 025	SULLIVAN	(713) 274-8000
643	10122040	0	0.092	0.092	HC EMERG SRV DIST 048	SULLIVAN	(713) 274-8000
645	10121840	0	0.0963	0.0963	HC EMERG SRV DIST 029	SULLIVAN	(713) 274-8000
647	10122140	0	0.1	0.1	HC EMERG SRV DIST 017	SULLIVAN	(713) 274-8000
648	10122240	0	0.05	0.05	HC EMERG SRV DIST 021	SULLIVAN	(713) 274-8000
649	10122340	0	0.03	0.03	HC EMERG SRV DIST 019	SULLIVAN	(713) 274-8000
650	10156804	0.469999999	0.215	0.685	HARRIS-FT BEND CO MUD 001	BYRD	(281) 444-3946
651	10140004	0.144999996	0.25	0.39499998	HEATHERLOCH MUD	LEE	(281) 482-0216
652	10140104	0.449999988	0.25	0.69999999	HORSEPEN BAYOU MUD	LEE	(281) 482-0216
654	10140204	0.706900001	0.1931	0.89999998	HUNTERS GLEN MUD	BYRD	(281) 444-3946
656	10140304	0.230000004	0.175	0.405	INTERSTATE MUD	LEE	(281) 482-0216
657	10120309	0.330000013	0.22	0.55000001	INVERNESS FOREST ID	BYRD	(281) 444-3946
658	10120714	0	0.3	0.30000001	JACKRABBIT ROAD PUD	WHEELER	(713) 462-8906
660	07932004	0.870000005	0.2	1.07000005	HARRIS-FT BEND CO MUD 003	WHEELER	(713) 462-8906
662	07923104	0.720000029	0.25	0.97000003	FORT BEND COUNTY MUD 030	ARTERBURN	(713) 688-3855
664	10123240	0	0.09379	0.09379	HC EMERG SRV DIST 075	SULLIVAN	(713) 274-8000
665	10123140	0	0.04848	0.04848	HC EMERG SRV DIST 015	SULLIVAN	(713) 274-8000
666	10123040	0	0.043	0.043	HC EMERG SRV DIST 011	SULLIVAN	(713) 274-8000
667	10122940	0	0.049752	0.049752	HC EMERG SRV DIST 050	SULLIVAN	(713) 274-8000
668	10122840	0	0.0255	0.0255	HC EMERG SRV DIST 012	SULLIVAN	(713) 274-8000
669	10122540	0	0.0419	0.0419	HC EMERG SRV DIST 080	SULLIVAN	(713) 274-8000
670	10122440	0	0.05	0.05	HC EMERG SRV DIST 060	SULLIVAN	(713) 274-8000
671	10120140	0	0.1	0.1	HC EMERG SRV DIST 001	SULLIVAN	(713) 274-8000
672	10120240	0	0.03	0.03	HC EMERG SRV DIST 002	SULLIVAN	(713) 274-8000
673	10120340	0	0.05784	0.05784	HC EMERG SRV DIST 003	SULLIVAN	(713) 274-8000
674	10120440	0	0.1	0.1	HC EMERG SRV DIST 004	SULLIVAN	(713) 274-8000
675	10120540	0	0.02	0.02	HC EMERG SRV DIST 005	SULLIVAN	(713) 274-8000
676	10121040	0	0.0097	0.0097	HC EMERG SRV DIST 006	SULLIVAN	(713) 274-8000
677	10120740	0	0.0884	0.0884	HARRIS-FT BEND ESD 100	SULLIVAN	(713) 274-8000
678	23720140	0	0.0995	0.0995	WALLER-HARRIS ESD 200	SULLIVAN	(713) 274-8000
679	10121140	0	0.1	0.1	HC EMERG SRV DIST 008	SULLIVAN	(713) 274-8000
681	07926804	0.529999971	0.25	0.77999997	KINGSBRIDGE MUD	LEARED	(713) 932-9011
682	10120704	0.200000003	0.362	0.56199998	KIRK MONT MUD	WHEELER	(713) 462-8906
683	10120214	0	0.43	0.43000001	KLEIN PUD	BYRD	(281) 444-3946
684	10121704	0.354000002	0.116	0.47	KLEINWOOD MUD	WHEELER	(713) 462-8906
691	10140504	0.479999989	0.2	0.68000001	LAKE MUD	MUTH	(281) 426-8156
692	10122605	0	0.25	0.25	LAKE FOREST UD	LEE	(281) 482-0216
693	10125005	0.430000007	0.2335	0.66350001	LANGHAM CREEK UD	ARTERBURN	(713) 688-3855
694	10125105	0.310000002	0.24	0.55000001	LONGHORN TOWN UD	WHEELER	(713) 462-8906
695	10120314	0.219999999	0.06	0.28	LOUETTA NORTH PUD	WHEELER	(713) 462-8906
696	10122705	0.224999994	0.25	0.47499999	LOUETTA ROAD UD	WHEELER	(713) 462-8906
697	10120914	0.449999988	0.5	0.94999999	LUCE BAYOU PUD	ARTERBURN	(713) 688-3855
701	10120105	0.379999995	0.1	0.47999999	MALCOMSON ROAD UD	BONNERJEE	(713) 900-2680
702	10122805	0.033500001	0.301	0.33450001	MASON CREEK UD	LEARED	(713) 932-9011
703	02021904	0.699999988	0.12	0.81999999	BRAZORIA COUNTY MUD 028	LEE	(281) 482-0216
704	10127504	0.620000005	0.31	0.93000001	MAYDE CREEK MUD	LEARED	(713) 932-9011
705	10122905	0.485000014	0.425	0.91000003	MEMORIAL HILLS UD	BYRD	(281) 444-3946
706	10140604	0.270000011	0.24	0.50999999	MEMORIAL MUD	LEARED	(713) 932-9011
707	10120321	0	0.03457	0.03457	MEMORIAL VILLAGES WA	PAYTON	(713) 251-7960
709	10126304	0.610000014	0.31	0.92000002	MILLS ROAD MUD	LEE	(281) 482-0216
710	10145904	0.059999999	0.22	0.28	MISSION BEND MUD 001	LEE	(281) 482-0216
711	10140704	0.42050001	0.4195	0.84000003	MISSION BEND MUD 002	LEARED	(713) 932-9011
712	10140804	0.449999988	0.3	0.75	MORTON ROAD MUD	WHEELER	(713) 462-8906
714	10126204	0.875	0.425	1.29999995	MT HOUSTON ROAD MUD	LEARED	(713) 932-9011
718	10121204	0.425000012	0.215	0.63999999	NEWPORT MUD	LEE	(281) 482-0216
721	10140904	0.360000014	0.25	0.61000001	NORTHAMPTON MUD	BUENTELLO FLO	(281) 499-1223
722	10125305	0.25	0.25	0.5	NORTHBELT UD	SULLIVAN	(713) 274-8000
724	10165804	0.680000007	0.8	1.48000002	NE H C MUD 001	LEARED	(713) 932-9011
725	10129504	0.800000012	0	0.80000001	NORTH FOREST MUD	BYRD	(281) 444-3946
726	10141104	0	0	0	NORTH GREEN MUD	BYRD	(281) 444-3946
727	07925304	0.540000021	0.06	0.60000002	NORTH MISSION GLEN MUD	LEE	(281) 482-0216
728	10120514	0.230000004	0.15	0.38	NORTH PARK PUD	BYRD	(281) 444-3946

730	10125104	1.00999999	0.25	1.25999999	NORTHWEST FRWY MUD	WHEELER	(713) 462-8906
731	10154904	0.75999999	0.485	1.245	N GATE CROSSING MUD 001	LEARED	(713) 932-9011
732	10154704	0.579999983	0.335	0.91499996	N GATE CROSSING MUD 002	LEARED	(713) 932-9011
734	10125805	0.185000002	0.025	0.21000001	N GATE CROSSING RD UD	LEARED	(713) 932-9011
745	10123504	0.75999999	0.03	0.78999996	NW HC MUD 005	SULLIVAN	(713) 274-8000
746	10142504	0.239999995	0.15	0.38999999	NW HC MUD 006	LEARED	(713) 932-9011
749	10127804	0.335000008	0.2	0.53500003	NW HC MUD 009	LEARED	(713) 932-9011
750	10128304	0.632799983	0.2172	0.84999996	NW HC MUD 010	BYRD	(281) 444-3946
752	10142904	0.75999999	0.28	1.03999996	NW HC MUD 012	ARTERBURN	(713) 688-3855
755	10143104	0.49000001	0.26	0.75	NW HC MUD 015	LEARED	(713) 932-9011
756	10125304	0.550000012	0.64	1.19000006	NW HC MUD 016	LEARED	(713) 932-9011
759	10156704	0.75999999	0.23	0.99000001	NW HC MUD 019	BYRD	(281) 444-3946
760	10143404	0	0.25	0.25	NW HC MUD 020	BYRD	(281) 444-3946
761	10143504	0	0.25	0.25	NW HC MUD 021	LEARED	(713) 932-9011
762	10143604	0.560000002	0.3	0.86000001	NW HC MUD 022	LEARED	(713) 932-9011
763	10143704	0.50999999	0.43	0.94	NW HC MUD 023	LEARED	(713) 932-9011
764	10146704	0.300000012	0.5	0.80000001	NW HC MUD 024	WHEELER	(713) 462-8906
768	10159404	0.50999999	0.17	0.68000001	NW HC MUD 028	BYRD	(281) 444-3946
769	10151304	0.150000006	0.22	0.37	NW HC MUD 029	WHEELER	(713) 462-8906
770	10159804	0.649999976	0.1	0.75	NW HC MUD 030	WHEELER	(713) 462-8906
771	10161204	0.685000002	0.105	0.79000002	NW HC MUD 032	WHEELER	(713) 462-8906
776	10158004	0.600000024	0.25	0.85000002	NW HC MUD 036	LEARED	(713) 932-9011
777	10143904	0.330000013	0.15	0.48000002	NORTHWEST PARK MUD	ARTERBURN	(713) 688-3855
778	10146904	0.125	0.25	0.375	NOTTINGHAM CNTRY MUD	BUENTELLO FLO	(281) 499-1223
779	10154004	1	0.25	1.25	NORTHWOOD MUD 001	WHEELER	(713) 462-8906
781	10123214	0.689999998	0.41	1.10000002	OAKMONT PUD	BYRD	(281) 444-3946
783	10123105	0.920000017	0	0.92000002	PARK WAY UD	LEE	(281) 482-0216
786	10154104	0.769999981	0.44	1.21000004	RANKIN ROAD WEST MUD	LEARED	(713) 932-9011
787	10123114	0.699999988	1.3	2	PINE VILLAGE PUD	WHEELER	(713) 462-8906
788	10123205	0	0.1	0.1	PONDEROSA FOREST UD	BYRD	(281) 444-3946
789	10144104	0.239999995	0.24	0.47999999	POST WOOD MUD	BUENTELLO FLO	(281) 499-1223
790	10123505	0	0.35	0.34999999	PRESTONWOOD FOREST UD	BYRD	(281) 444-3946
801	10122204	0.379999995	0.185	0.565	REID ROAD MUD 001	LEARED	(713) 932-9011
802	10144204	0.209999993	0.19	0.39999998	REID ROAD MUD 002	BYRD	(281) 444-3946
803	10144304	0.5	0.25	0.75	RENN ROAD MUD	LEARED	(713) 932-9011
804	10144404	0.330000013	0.2	0.53000003	RICEWOOD MUD	BYRD	(281) 444-3946
806	10125405	0.629999995	0.25	0.88	ROLLING CREEK UD	LEARED	(713) 932-9011
807	10121114	0.159999996	0.24	0.39999998	ROLLING FORK PUD	BYRD	(281) 444-3946
809	10129804	0	0.5	0.5	ROYALWOOD MUD	LEARED	(713) 932-9011
810	10147004	0.079999998	0.17	0.25	RICHEY ROAD MUD	BYRD	(281) 444-3946
811	10160304	0.449999988	0.12	0.56999999	REMINGTON MUD 001	BONNERJEE	(713) 900-2680
822	10123305	0.180000007	0.34	0.51999998	SAGEMEADOW UD	LEARED	(713) 932-9011
823	10121209	0	0.35	0.34999999	SEQUOIA ID	WHEELER	(713) 462-8906
824	10121214	0.720000029	0.37	1.09000003	SHASLA PUD	LEARED	(713) 932-9011
825	10128004	0.540000021	0.25	0.79000002	SOUTHWEST HC MUD 001	LEARED	(713) 932-9011
826	10121314	0	0.7	0.69999999	SPANISH COVE PUD	LEARED	(713) 932-9011
827	10121414	0.109999999	0.3	0.41000003	SPENCER ROAD PUD	LEARED	(713) 932-9011
829	10121514	0.305000007	0.17	0.47500002	SPRING CRK FOREST PUD	BYRD	(281) 444-3946
831	10161304	0.649999976	0.48	1.13	SPRING MEADOWS MUD	MUTH	(281) 426-8156
832	10144804	0.629999995	0.27	0.89999998	SPRING WEST MUD	LEARED	(713) 932-9011
833	10145504	0	1.47811	1.47810996	SHELDON ROAD MUD	ARTERBURN	(713) 688-3855
841	10145804	0.449999988	0.19	0.63999999	TATTOR ROAD MD	BYRD	(281) 444-3946
842	10144904	0.25	0.43	0.68000001	TERRANOVA WEST MUD	BYRD	(281) 444-3946
844	10145004	0.720000029	0.15	0.87	HC MUD 368	LEARED	(713) 932-9011
846	10120709	0.540000021	0	0.54000002	TIMBERLAKE ID	WHEELER	(713) 462-8906
847	10123405	0.720000029	0.29	1.00999999	TIMBER LANE UD	CARBY	(281) 873-7313
848	10145104	0.699999988	0	0.69999999	TRAIL OF THE LAKES MUD	LEARED	(713) 932-9011
850	10121109	0.0068	0.1432	0.14999999	HC ID 003	SULLIVAN	(713) 274-8000
851	10130204	0.170000002	0	0.17	WESTADOR MUD	BYRD	(281) 444-3946
861	10124904	0.129999995	0.15	0.28	WEST HC MUD 001	BYRD	(281) 444-3946
862	10122604	0.270000011	0.23	0.5	WEST HC MUD 002	WHEELER	(713) 462-8906
864	10141304	0.730000019	0.36	1.09000003	WEST HC MUD 004	LEARED	(713) 932-9011
865	10164304	0.800000012	0.36	1.16000009	WEST HC MUD 005	ARTERBURN	(713) 688-3855
866	10126904	0	0.55	0.55000001	WEST HC MUD 006	LEARED	(713) 932-9011
867	10141504	0.660000026	0.19	0.85000002	WEST HC MUD 007	ARTERBURN	(713) 688-3855
869	10141704	0.444999993	0.075	0.51999998	WEST HC MUD 009	WHEELER	(713) 462-8906
870	10141804	0.569999993	0.14	0.70999998	WEST HC MUD 010	WHEELER	(713) 462-8906
871	10156904	0.430000007	0.12	0.55000001	WEST HC MUD 011	BONNERJEE	(713) 900-2680
874	10142004	0.449999988	0.18	0.63	WEST HC MUD 014	LEARED	(713) 932-9011
875	10142204	0.094999999	0.175	0.26999998	WEST HC MUD 015	LEARED	(713) 932-9011
876	10142304	0	0.5	0.5	WEST HC MUD 016	LEARED	(713) 932-9011
877	10142404	0.899999976	0.34	1.24000001	WEST HC MUD 017	LEARED	(713) 932-9011

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879	10158304	0.419999987	0.53	0.94999993	WEST HC MUD 021	WHEELER	(713) 462-8906
893	07920109	0	0.1	0.1	W KEEGANS BAYOU ID	LEARED	(713) 932-9011
894	10130504	0.370000005	0.2225	0.59249997	WESTLAKE MUD 001	WHEELER	(713) 462-8906
895	10145704	0.245000005	0.205	0.44999999	WEST MEMORIAL MUD	BUENTELLO FLO	(281) 499-1223
896	10121504	0.340000004	0.21	0.55000001	WESTON MUD	LEE	(281) 482-0216
897	10145304	0.649999976	0	0.64999998	WEST PARK MUD	BONNERJEE	(713) 900-2680
899	10126504	0.209999993	0.78	0.98999995	WHITE OAK BEND MUD	LEARED	(713) 932-9011
901	10120805	0.270000011	0.25	0.51999998	WINDFERN FOREST UD	WHEELER	(713) 462-8906
902	10126604	0.379999995	0.18	0.56	WOODCREEK MUD	WHEELER	(713) 462-8906
907	10124719	0.275000006	0.105	0.38	NORTHPOINTE WCID	WHEELER	(713) 462-8906
910	07931204	0.800000012	0.02	0.81999999	HARRIS-FT BEND CO MUD 004	BUENTELLO FLO	(281) 499-1223
911	07927704	0.140000001	0.28	0.42000002	CINCO MUD 003	WHEELER	(713) 462-8906
913	07928104	0.100000001	0.295	0.39499998	CINCO MUD 006	WHEELER	(713) 462-8906
914	07927904	0.119999997	0.41	0.52999997	CINCO MUD 009	SCHULTZ	(281) 341-3710
915	07930204	0.5	0.15	0.64999998	HARRIS-FT BEND CO MUD 005	BONNERJEE	(713) 900-2680
916	07920219	0.180000007	0	0.18000001	FT BEND WCID 002	SCHULTZ	(281) 341-3710
917	07920208	0.104999997	0.085	0.19	WILLOW FORK DRNG DIST	SCHULTZ	(281) 341-3710

West Harris County Regional Water Authority
 Capacity Analysis for Future Issuance
 Scenario: May 2017, \$50 Million Pro Forma

Coverage Results

Year Ended	Net Revenue		O&M Reserve	Prior Year		Net Total Debt After Projected New Money	Rate Covenant- Annual Debt Service Coverage from Net Revenue, O&M, & Coverage Acct	Debt Service Coverage from Net Revenue	SR Lien ABT - MADS Coverage Net Revenue, Imp. Fund O&M, & Coverage Acct
	Available for Debt Service	Coverage Acct Fund Balance		Improvement Fund Balance	Total Available for Debt Service				
2017	42,755,443	7,405,230	10,000,000	23,000,000	83,160,673	23,800,511	3.49	1.80	1.49
2018	43,735,286	7,405,230	10,000,000	18,906,632	80,047,148	24,842,559	3.22	1.76	5.51
2019	44,099,275	7,405,230	10,000,000	18,924,720	80,429,226	27,029,373	2.98	1.63	6.04
2020	44,837,758	7,405,230	10,000,000	17,138,695	79,381,683	26,642,868	2.98	1.68	6.49
2021	43,439,574	7,104,431	10,000,000	36,497,594	97,041,598	24,198,584	4.01	1.80	8.98
2022	43,475,480	7,052,619	10,000,000	57,198,002	117,726,100	23,247,886	5.06	1.87	11.87
2023	43,632,572	7,052,619	10,000,000	78,580,516	139,265,706	23,005,616	6.05	1.90	15.55
2024	43,923,805	6,061,947	10,000,000	100,205,131	160,190,883	22,784,637	7.03	1.93	
2025	37,415,703	5,340,131	10,000,000	123,419,234	176,175,068	14,264,726	12.35	2.62	
2026	37,366,848	5,340,131	10,000,000	148,206,670	200,913,649	8,816,400	22.79	4.24	
2027	37,265,516	5,340,131	10,000,000	176,770,009	229,375,655	10,339,607	22.18	3.60	
2028	37,106,424	5,340,131	10,000,000	203,708,808	256,155,363	9,028,377	28.37	4.11	
2029	37,639,409	5,340,131	10,000,000	231,799,746	284,779,286	11,654,525	24.44	3.23	
2030	37,359,727	5,340,131	10,000,000	253,419,422	306,119,280	11,428,529	26.79	3.27	
2031	37,165,339	5,340,131	10,000,000	279,385,511	331,890,981	11,827,819	28.06	3.14	
2032	35,662,180	5,340,131	10,000,000	304,757,922	355,760,234	9,440,552	37.68	3.78	
2033	35,288,382	5,340,131	10,000,000	331,014,441	381,642,954	8,989,446	42.45	3.93	
2034	35,315,046	5,340,131	10,000,000	357,348,268	408,003,445	9,065,659	45.01	3.90	
2035	35,315,046	5,340,131	10,000,000	383,632,546	434,287,723	9,133,521	47.55	3.87	
2036	35,418,510	5,340,131	10,000,000	409,848,962	460,607,603	6,446,246	71.45	5.49	
2037	35,418,510	5,340,131	10,000,000	438,856,117	489,614,758	6,444,371	75.98	5.50	
2038	35,418,510	5,340,131	10,000,000	467,865,147	518,623,788	6,446,509	80.45	5.49	
2039	35,418,510	5,340,131	10,000,000	496,872,039	547,630,680	6,444,559	84.98	5.50	
2040	35,418,510	5,340,131	10,000,000	525,880,881	576,639,522	6,443,534	89.49	5.50	
2041	35,518,698	5,340,131	10,000,000	554,890,749	605,749,577	6,444,734	93.99	5.51	
2042	35,518,698	5,340,131	10,000,000	583,999,604	634,858,433	6,446,134	98.49	5.51	
2043	35,518,698	5,340,131	10,000,000	613,107,059	663,965,888	6,442,534	103.06	5.51	
2044	35,518,698	5,340,131	10,000,000	642,218,114	693,076,943	6,448,934	107.47	5.51	
2045	35,518,698	5,340,131	10,000,000	671,322,770	722,181,598	6,444,734	112.06	5.51	
2046	35,518,698	5,340,131	10,000,000	700,431,625	751,290,454	4,670,134	160.87	7.61	
2047	39,258,698	5,340,131	10,000,000	731,315,080	785,913,909	2,605,734	301.61	15.07	
2048	39,258,698	5,340,131	10,000,000	768,002,935	822,601,764	0	#DIV/0!	#DIV/0!	
2049	39,258,698	5,340,131	10,000,000	807,296,524	861,895,353	0	#DIV/0!	#DIV/0!	
2050	39,258,698	5,340,131	10,000,000	846,590,113	901,188,942	0	#DIV/0!	#DIV/0!	
2051	39,258,698	5,340,131	10,000,000	885,883,702	940,482,531	0	#DIV/0!	#DIV/0!	
2052	39,258,698	5,340,131	10,000,000	925,177,291	979,776,119	0	#DIV/0!	#DIV/0!	
2053	39,258,698	5,340,131	10,000,000	964,470,880	1,019,069,708	0	#DIV/0!	#DIV/0!	
2054	39,258,698	5,340,131	10,000,000	1,003,764,468	1,058,363,297	0	#DIV/0!	#DIV/0!	
2055	39,258,698	5,340,131	10,000,000	1,043,058,057	1,097,656,886	0	#DIV/0!	#DIV/0!	

West Harris County Regional Water Authority
Capacity Analysis for Future Issuance
Scenario: May 2017, \$50 Million Pro Forma

Revenue Fund

Year Ended	Revenue							Expenses										Net Revenue
	Surface		Ground Water		Gross			Authority	System Operating	Luce Bayou				COH Capital	COH True Up	Total	Net Revenue Available for Debt Service	
	Water	Rate Per	Pumpage	Rate Per	Entity	NFBWA	Revenue and			Administration	Maintenance	Operating	Debt Service					Raw Water
MGD	1000G/D	MGD	1000G/D	Credits	Payments	Interest Earnings												
2016	18.82	2.65	43.91	2.25	-704,371	1,094,152	54,655,925	-4,007,150	-792,292		-484,000	-1,530,811	-4,227,955	-2,000,000	2,050,000	-10,992,209	43,663,717	
2017	19.46	2.65	45.40	2.25	-704,369	1,094,152	56,490,957	-4,287,651	-792,292		-583,000	-1,614,228	-4,458,344	-2,000,000		-13,735,514	42,755,443	
2018	20.09	2.65	46.88	2.25	-704,368	1,094,152	58,325,989	-4,587,786	-792,292		-814,000	-1,700,369	-4,696,256	-2,000,000		-14,590,703	43,735,286	
2019	20.73	2.65	48.37	2.25	-704,367	1,092,842	60,159,710	-4,908,931	-792,292		-1,628,000	-1,789,309	-4,941,902	-2,000,000		-16,060,435	44,099,275	
2020	21.37	2.65	49.85	2.25	-804,560	1,094,523	61,896,229	-5,252,556	-792,292		-1,937,000	-1,881,128	-5,195,496	-2,000,000		-17,058,472	44,837,758	
2021	21.72	2.65	50.68	2.25	-804,560	1,094,216	62,913,480	-5,620,235	-792,292	-1,566,000	-2,158,000	-1,950,443	-5,386,937	-2,000,000		-19,473,906	43,439,574	
2022	22.07	2.65	51.50	2.25	-804,560	1,094,335	63,931,158	-6,013,652	-792,292	-1,596,000	-2,448,000	-2,021,777	-5,583,957	-2,000,000		-20,455,678	43,475,480	
2023	22.42	2.65	52.32	2.25	-804,560	1,092,979	64,947,360	-6,434,607	-792,292	-1,632,000	-2,574,000	-2,095,186	-5,786,703	-2,000,000		-21,314,788	43,632,572	
2024	22.78	2.65	53.15	2.25	-804,560	1,094,234	65,966,174	-6,885,030	-792,292	-1,664,000	-2,535,000	-2,170,721	-5,995,326	-2,000,000		-22,042,369	43,923,805	
2025	46.26	2.65	30.84	2.25	-804,560	1,094,403	70,360,815	-7,366,982	-792,292	-1,700,000	-4,169,000	-4,496,881	-12,419,957	-2,000,000		-32,945,112	37,415,703	
2026	46.96	2.65	31.31	2.25	-804,560	1,093,757	71,429,249	-7,882,671	-792,292	-1,700,000	-4,169,000	-4,656,800	-12,861,639	-2,000,000		-34,062,402	37,366,848	
2027	47.67	2.65	31.78	2.25	-804,560	1,094,030	72,498,602	-8,434,458	-792,292	-1,700,000	-4,169,000	-4,821,317	-13,316,020	-2,000,000		-35,233,087	37,265,516	
2028	48.38	2.65	32.25	2.25	-804,560	1,092,916	73,566,569	-9,024,870	-792,292	-1,700,000	-4,169,000	-4,990,553	-13,783,431	-2,000,000		-36,460,145	37,106,424	
2029	49.08	2.65	32.72	2.25	-421,280	1,092,938	75,018,951	-9,656,610	-792,292	-1,700,000	-3,801,798	-5,164,629	-14,264,213	-2,000,000		-37,379,542	37,639,409	
2030	49.79	2.65	33.19	2.25	-421,280	1,093,680	76,088,774	-10,332,573	-792,292	-1,700,000	-3,801,798	-5,343,672	-14,758,712	-2,000,000		-38,729,047	37,359,727	
2031	49.79	2.65	33.19	2.25	-274,808	1,093,070	76,234,635	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,450,545	-15,053,886	-2,000,000		-39,069,296	37,165,339	
2032	49.79	2.65	33.19	2.25	-274,808		75,141,565	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,559,556	-15,354,964	-2,000,000		-39,479,385	35,662,180	
2033	49.79	2.65	33.19	2.25	-230,316		75,186,057	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,288,382	
2034	49.79	2.65	33.19	2.25	-203,652		75,212,721	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,315,046	
2035	49.79	2.65	33.19	2.25	-203,652		75,212,721	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,315,046	
2036	49.79	2.65	33.19	2.25	-100,188		75,316,185	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,418,510	
2037	49.79	2.65	33.19	2.25	-100,188		75,316,185	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,418,510	
2038	49.79	2.65	33.19	2.25	-100,188		75,316,185	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,418,510	
2039	49.79	2.65	33.19	2.25	-100,188		75,316,185	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,418,510	
2040	49.79	2.65	33.19	2.25	-100,188		75,316,185	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,418,510	
2041	49.79	2.65	33.19	2.25	0		75,416,373	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,518,698	
2042	49.79	2.65	33.19	2.25	0		75,416,373	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,518,698	
2043	49.79	2.65	33.19	2.25	0		75,416,373	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,518,698	
2044	49.79	2.65	33.19	2.25	0		75,416,373	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,518,698	
2045	49.79	2.65	33.19	2.25	0		75,416,373	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,518,698	
2046	49.79	2.65	33.19	2.25	0		75,416,373	-10,332,573	-792,292	-1,700,000	-3,740,000	-5,670,747	-15,662,063	-2,000,000		-39,897,675	35,518,698	
2047	49.79	2.65	33.19	2.25			75,416,373	-10,332,573	-792,292	-1,700,000		-5,670,747	-15,662,063	-2,000,000		-36,157,675	39,258,698	
2048	49.79	2.65	33.19	2.25			75,416,373	-10,332,573	-792,292	-1,700,000		-5,670,747	-15,662,063	-2,000,000		-36,157,675	39,258,698	
2049	49.79	2.65	33.19	2.25			75,416,373	-10,332,573	-792,292	-1,700,000		-5,670,747	-15,662,063	-2,000,000		-36,157,675	39,258,698	
2050	49.79	2.65	33.19	2.25			75,416,373	-10,332,573	-792,292	-1,700,000		-5,670,747	-15,662,063	-2,000,000		-36,157,675	39,258,698	
2051	49.79	2.65	33.19	2.25			75,416,373	-10,332,573	-792,292	-1,700,000		-5,670,747	-15,662,063	-2,000,000		-36,157,675	39,258,698	
2052	49.79	2.65	33.19	2.25			75,416,373	-10,332,573	-792,292	-1,700,000		-5,670,747	-15,662,063	-2,000,000		-36,157,675	39,258,698	
2053	49.79	2.65	33.19	2.25			75,416,373	-10,332,573	-792,292	-1,700,000		-5,670,747	-15,662,063	-2,000,000		-36,157,675	39,258,698	
2054	49.79	2.65	33.19	2.25			75,416,373	-10,332,573	-792,292	-1,700,000		-5,670,747	-15,662,063	-2,000,000		-36,157,675	39,258,698	
2055	49.79	2.65	33.19	2.25			75,416,373	-10,332,573	-792,292	-1,700,000		-5,670,747	-15,662,063	-2,000,000		-36,157,675	39,258,698	
					-13,997,992	19,688,686	2,964,974,357	-366,255,089	-33,276,264	-59,158,000	-99,522,596	-190,487,011	-526,106,982	-84,000,000		-1,356,755,942	1,608,218,415	

West Harris County Regional Water Authority
Capacity Analysis for Future Issuance
Scenario: May 2017, \$50 Million Pro Forma

Debt Service Fund

Year Ended	Call of Outstanding Bonds	Senior Lien Debt Service Payments ⁽¹⁾			Junior Lien Debt Service Payments ⁽¹⁾		Capitalized Interest	Net
		Outstanding Debt Service	Senior Lien DS Total	Outstanding Debt Service	Future Issues	After Projected		
								New Money
2016			0					
2017	0	25,871,100	25,871,100	2,070,590	0	-2,070,590	23,800,511	
2018	-972,338	25,814,896	24,842,559	3,006,477	1,500,000	-1,500,000	24,842,559	
2019	-1,972,338	26,395,977	24,423,640	3,005,008	2,605,734	0	27,029,373	
2020	-2,972,338	27,009,472	24,037,135	3,005,980	2,605,734	0	26,642,868	
2021	-5,422,338	27,015,188	21,592,850	3,004,723	2,605,734	0	24,198,584	
2022	-5,169,838	25,811,990	20,642,153	3,001,396	2,605,734	0	23,247,886	
2023	-2,998,338	23,398,220	20,399,883	3,005,769	2,605,734	0	23,005,616	
2024	-5,425,838	25,604,741	20,178,904	3,012,557	2,605,734	0	22,784,637	
2025	-9,983,063	21,642,055	11,658,992	3,006,977	2,605,734	0	14,264,726	
2026	-8,051,350	14,262,016	6,210,666	3,014,419	2,605,734	0	8,816,400	
2027	-11,003,500	18,737,373	7,733,873	3,008,905	2,605,734		10,339,607	
2028	-12,321,500	18,744,143	6,422,643	3,014,150	2,605,734		9,028,377	
2029	-9,706,000	18,754,791	9,048,791	3,015,899	2,605,734		11,654,525	
2030	-4,719,250	13,542,045	8,822,795	3,011,802	2,605,734		11,428,529	
2031	-1,325,000	10,547,085	9,222,085	3,013,860	2,605,734		11,827,819	
2032	-1,275,000	8,109,819	6,834,819	3,012,666	2,605,734		9,440,552	
2033	-1,725,000	8,108,713	6,383,713	3,014,414	2,605,734		8,989,446	
2034	-1,650,000	8,109,925	6,459,925	3,013,584	2,605,734		9,065,659	
2035	-1,575,000	8,102,788	6,527,788	3,014,534	2,605,734		9,133,521	
2036	0	3,840,513	3,840,513	1,859,051	2,605,734		6,446,246	
2037		3,838,638	3,838,638	1,859,380	2,605,734		6,444,371	
2038		3,840,775	3,840,775	1,861,440	2,605,734		6,446,509	
2039		3,838,825	3,838,825	1,862,416	2,605,734		6,444,559	
2040		3,837,800	3,837,800	1,862,308	2,605,734		6,443,534	
2041		3,839,000	3,839,000	1,866,116	2,605,734		6,444,734	
2042		3,840,400	3,840,400	1,863,704	2,605,734		6,446,134	
2043		3,836,800	3,836,800	1,864,912	2,605,734		6,442,534	
2044		3,843,200	3,843,200	1,859,600	2,605,734		6,448,934	
2045		3,839,000	3,839,000	1,857,920	2,605,734		6,444,734	
2046		2,064,400	2,064,400	1,854,720	2,605,734		4,670,134	
2047			0		2,605,734		2,605,734	
2048			0		0		0	
2049			0		0		0	
2050			0		0		0	
2051			0		0		0	
2052			0		0		0	
2053			0		0		0	
2054			0		0		0	
2055			0		0		0	
	-88,268,025	438,434,203	350,166,178	76,725,269	77,066,273	-3,570,590	423,661,862	

West Harris County Regional Water Authority
Capacity Analysis for Future Issuance
Scenario: May 2017, \$50 Million Pro Forma

Improvement Fund

Year Ended	Net Revenue		Withdrawals		Withdrawals	Call of	Improvement Fund Balance
	After Debt Service	Reserve Fund Earnings at .5%	to the Coverage Fund	to the Reserve Fund	to the Construction	Outstanding Bonds	
							23,000,000
2017	18,954,933	55,118	99,747	-3,043,166		-20,160,000	18,906,632
2018	18,892,727	49,740	0	1,075,621		-20,000,000	18,924,720
2019	17,069,902	44,241	0	1,099,832		-20,000,000	17,138,695
2020	18,194,889	38,614	0	1,125,395			36,497,594
2021	19,240,990	32,986	300,799	1,125,633			57,198,002
2022	20,227,593	27,608	51,812	1,075,500			78,580,516
2023	20,626,956	22,734	0	974,926			100,205,131
2024	21,139,167	17,400	990,672	1,066,864			123,419,234
2025	23,150,977	12,891	721,816	901,752			148,206,670
2026	28,550,448	12,891	0	0			176,770,009
2027	26,925,909	12,891	0	0			203,708,808
2028	28,078,047	12,891	0	0			231,799,746
2029	25,984,884	34,891	0	-4,400,100			253,419,422
2030	25,931,198	34,891	0	0			279,385,511
2031	25,337,520	34,891	0	0			304,757,922
2032	26,221,628	34,891	0	0			331,014,441
2033	26,298,936	34,891	0	0			357,348,268
2034	26,249,387	34,891					383,632,546
2035	26,181,525	34,891					409,848,962
2036	28,972,264	34,891					438,856,117
2037	28,974,139	34,891					467,865,147
2038	28,972,001	34,891					496,872,039
2039	28,973,951	34,891					525,880,881
2040	28,974,976	34,891					554,890,749
2041	29,073,964	34,891					583,999,604
2042	29,072,564	34,891					613,107,059
2043	29,076,164	34,891					642,218,114
2044	29,069,764	34,891					671,322,770
2045	29,073,964	34,891					700,431,625
2046	30,848,564	34,891					731,315,080
2047	36,652,964	34,891					768,002,935
2048	39,258,698	34,891					807,296,524
2049	39,258,698	34,891					846,590,113
2050	39,258,698	34,891					885,883,702
2051	39,258,698	34,891					925,177,291
2052	39,258,698	34,891					964,470,880
2053	39,258,698	34,891					1,003,764,468
2054	39,258,698	34,891					1,043,058,057
2055	39,258,698	34,891					1,082,351,646
Minimum Improvement Fund Balance After Capitalized Interest							17,138,695

West Harris County Regional Water Authority
 Water Supply System Revenue Bonds
 Scenario: May 2017, \$50 Million Pro Forma

Coverage Account - Senior and Junior Lien

Year Ended	Required Balance ⁽¹⁾	Beginning Balance	Deposit from Funds Available	Total	Coverage Fund Balance	Surplus of Required Balance
2016	7,504,978				7,504,978	0
2017	7,405,230	7,504,978	-99,747	-99,747	7,405,230	0
2018	7,405,230	7,405,230	0	0	7,405,230	0
2019	7,405,230	7,405,230	0	0	7,405,230	0
2020	7,405,230	7,405,230	0	0	7,405,230	0
2021	7,104,431	7,405,230	-300,799	-300,799	7,104,431	0
2022	7,052,619	7,104,431	-51,812	-51,812	7,052,619	0
2023	7,052,619	7,052,619	0	0	7,052,619	0
2024	6,061,947	7,052,619	-990,672	-990,672	6,061,947	0
2025	5,340,131	6,061,947	-721,816	-721,816	5,340,131	0
2026	5,340,131	5,340,131	0	0	5,340,131	0
2027	5,340,131	5,340,131	0	0	5,340,131	0
2028	5,340,131	5,340,131			5,340,131	0
2029	5,340,131	5,340,131			5,340,131	0
2030	5,340,131	5,340,131			5,340,131	0
2031	5,340,131	5,340,131			5,340,131	0
2032	5,340,131	5,340,131			5,340,131	0
2033	5,340,131	5,340,131			5,340,131	0
2034	5,340,131	5,340,131			5,340,131	0
2035	5,340,131	5,340,131			5,340,131	0
2036	5,340,131	5,340,131			5,340,131	0
2037	5,340,131	5,340,131			5,340,131	0
2038	5,340,131	5,340,131			5,340,131	0
2039	5,340,131	5,340,131			5,340,131	0
2040	5,340,131	5,340,131			5,340,131	0
2041	5,340,131	5,340,131			5,340,131	0
2042	5,340,131	5,340,131			5,340,131	0
2043	5,340,131	5,340,131			5,340,131	0
2044	5,340,131	5,340,131			5,340,131	0
2045	5,340,131	5,340,131			5,340,131	0
2046	5,340,131	5,340,131			5,340,131	0
2047	5,340,131	5,340,131			5,340,131	0
2048	5,340,131	5,340,131			5,340,131	0
2049	5,340,131	5,340,131			5,340,131	0
2050	5,340,131	5,340,131			5,340,131	0
2051	5,340,131	5,340,131			5,340,131	0
2052	5,340,131	5,340,131			5,340,131	0
2053	5,340,131	5,340,131			5,340,131	0
2054	5,340,131	5,340,131			5,340,131	0
2055	5,340,131	5,340,131			5,340,131	0

-8,918,643

West Harris County Regional Water Authority
Water Supply System Revenue Bonds
Scenario: May 2017, \$50 Million Pro Forma

Senior Lien Reserve Fund

Year Ended	Surety Policies					Cash					Surplus of Required Balance	
	Required Balance ⁽¹⁾	Current Balance	Early Redemption	Scheduled Maturities	Remaining Balance	Current Balance	Deposit from Refunding Bonds	Deposit from New Money Bonds	Deposit from (to) Improvement Fund	Total Balance		Total
2016	16,501,737	8,521,228			8,521,228	7,894,492		0	86,017	7,980,509	16,501,737	0
2017	15,423,775	8,521,228	-4,121,129		4,400,100	7,980,509		0	3,043,166	11,023,675	15,423,775	0
2018	14,348,154	4,400,100			4,400,100	11,023,675		0	-1,075,621	9,948,054	14,348,154	0
2019	13,248,321	4,400,100			4,400,100	9,948,054		0	-1,099,832	8,848,222	13,248,321	0
2020	12,122,927	4,400,100			4,400,100	8,848,222		0	-1,125,395	7,722,827	12,122,927	0
2021	10,997,294	4,400,100			4,400,100	7,722,827		0	-1,125,633	6,597,194	10,997,294	0
2022	9,921,794	4,400,100			4,400,100	6,597,194		0	-1,075,500	5,521,695	9,921,794	0
2023	8,946,869	4,400,100			4,400,100	5,521,695			-974,926	4,546,769	8,946,869	0
2024	7,880,004	4,400,100			4,400,100	4,546,769			-1,066,864	3,479,905	7,880,004	0
2025	6,978,252	4,400,100			4,400,100	3,479,905			-901,752	2,578,152	6,978,252	0
2026	6,978,252	4,400,100			4,400,100	2,578,152			0	2,578,152	6,978,252	0
2027	6,978,252	4,400,100			4,400,100	2,578,152			0	2,578,152	6,978,252	0
2028	6,978,252	4,400,100			4,400,100	2,578,152			0	2,578,152	6,978,252	0
2029	6,978,252	4,400,100		-4,400,100	0	2,578,152			4,400,100	6,978,252	6,978,252	0
2030	6,978,252	0	3,592,711	-3,592,711	0	6,978,252			0	6,978,252	6,978,252	0
2031	6,978,252	0	4,121,129	-4,121,129	0	6,978,252			0	6,978,252	6,978,252	0
2032	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2033	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2034	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2035	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2036	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2037	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2038	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2039	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2040	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2041	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2042	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2043	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2044	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2045	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2046	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2047	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2048	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2049	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2050	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2051	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2052	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2053	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2054	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0
2055	6,978,252	0			0	6,978,252				6,978,252	6,978,252	0

West Harris County Regional Water Authority
 Water Supply System Revenue Bonds
 Scenario: May 2017, \$50 Million Pro Forma

Junior Lien Reserve Fund

Year Ended	Required Balance ⁽¹⁾	Cash			Total	Surplus of Required Balance
		Current Balance	Deposit from Jr Lien New Money Bonds	Total Balance		
2016	2,508,664	0	2,508,664	2,508,664	2,508,664	0
2017	5,141,904	2,508,664	2,633,240	5,141,904	5,141,904	0
2018	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2019	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2020	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2021	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2022	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2023	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2024	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2025	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2026	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2027	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2028	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2029	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2030	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2031	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2032	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2033	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2034	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2035	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2036	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2037	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2038	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2039	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2040	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2041	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2042	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2043	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2044	5,141,904	5,141,904	0	5,141,904	5,141,904	0
2045	5,141,904	5,141,904	0	5,141,904	5,141,904	0

(1) Calculated using Average Annual Debt Service

Junior Lien Bonds

Construction From Bonds	44,616,760	44,616,760
Capitalized Interest	1,500,000	1,500,000
DSRF	2,633,240	2,633,240
Expenses	1,250,000	1,250,000
Rounding	0	0
	<u>50,000,000</u>	<u>50,000,000</u>

Average Annual 2,568,876

Size 50,000,000
 Rate 3.00
 Prin Maturity 30.00
 Interest Only 1.00

<u>Year</u> <u>Ended</u>	<u>Series 2017</u>	<u>Total</u>
2016		0
2017		0
2018	1,500,000	1,500,000
2019	2,605,734	2,605,734
2020	2,605,734	2,605,734
2021	2,605,734	2,605,734
2022	2,605,734	2,605,734
2023	2,605,734	2,605,734
2024	2,605,734	2,605,734
2025	2,605,734	2,605,734
2026	2,605,734	2,605,734
2027	2,605,734	2,605,734
2028	2,605,734	2,605,734
2029	2,605,734	2,605,734
2030	2,605,734	2,605,734
2031	2,605,734	2,605,734
2032	2,605,734	2,605,734
2033	2,605,734	2,605,734
2034	2,605,734	2,605,734
2035	2,605,734	2,605,734
2036	2,605,734	2,605,734
2037	2,605,734	2,605,734
2038	2,605,734	2,605,734
2039	2,605,734	2,605,734
2040	2,605,734	2,605,734
2041	2,605,734	2,605,734
2042	2,605,734	2,605,734
2043	2,605,734	2,605,734
2044	2,605,734	2,605,734
2045	2,605,734	2,605,734
2046	2,605,734	2,605,734
2047	2,605,734	2,605,734
2048		0
2049		0
2050		0
2051		0
2052		0
2053		0
2054		0
2055		0
	77,066,273	77,066,273

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
COMPARATIVE SCHEDULE OF REVENUES, EXPENSES AND CHANGES
IN NET POSITION – FIVE YEARS

	Amounts				
	2015	2014	2013	2012	2011
OPERATING REVENUES					
Pumpage Fees	\$ 28,036,997	\$ 25,227,627	\$ 28,098,868	\$ 26,674,006	\$ 29,584,392
Surface Water Sold	16,844,860	15,958,478	15,370,479	14,339,019	13,071,407
Joint Facilities Revenue	115,340	97,315	48,013	69,366	17,030
TOTAL OPERATING REVENUES	\$ 44,997,197	\$ 41,283,420	\$ 43,517,360	\$ 41,082,391	\$ 42,672,829
OPERATING EXPENSES					
Professional Fees	\$ 2,857,095	\$ 2,674,548	\$ 3,648,211	\$ 1,406,385	\$ 2,351,841
Contracted Services	652,781	7,625,159	616,728	583,099	540,608
Purchased Water Service	3,821,400	646,297	5,994,227	3,791,177	7,219,470
Utilities	498,221	533,122	445,740	462,669	476,342
Repairs and Maintenance	903,703	667,315	816,179	613,187	498,687
Depreciation/Amortization	5,226,934	6,747,093	6,472,044	6,115,065	5,767,254
Other	802,428	683,522	651,786	636,492	784,700
TOTAL OPERATING EXPENSES	\$ 14,762,562	\$ 19,577,056	\$ 18,644,915	\$ 13,608,074	\$ 17,638,902
OPERATING INCOME (LOSS)	\$ 30,234,635	\$ 21,706,364	\$ 24,872,445	\$ 27,474,317	\$ 25,033,927
NONOPERATING REVENUES (EXPENSES)					
Investment Revenues	\$ 106,123	\$ 115,146	\$ 155,668	\$ 506,885	\$ 209,517
Capital Contributions	37,151		(348,102)	899,144	2,182,967
Professional Fees	(733,021)				
Contracted Services	(31,925)				
Miscellaneous Revenues		18,356		100	2,655
Bond Issuance Costs	(1,528,514)	(825,875)	(684,865)	(369,500)	
Interest Expense	(10,319,405)	(12,005,555)	(12,044,063)	(12,686,700)	(12,731,353)
Chloramine Conversion/Waterline Connections		(267,875)	(788,221)	(64,374)	(782,378)
Joint Facilities WIF Contribution	1,095,839	1,095,843	1,095,877	473,343	
City of Houston Luce Bayou Debt Service	(24,159)				
Other	(3,566)	(20,747)	(48,525)		
TOTAL NONOPERATING REVENUES (EXPENSES)	\$ (11,401,477)	\$ (11,890,707)	\$ (12,662,231)	\$ (11,241,102)	\$ (11,118,592)
CHANGE IN NET POSITION	\$ 18,833,158	\$ 9,815,657	\$ 12,210,214	\$ 16,233,215	\$ 13,915,335
BEGINNING NET POSITION	73,985,725	64,170,068	51,959,854	35,726,639	21,811,304
ENDING IN NET POSITION	\$ 92,818,883	\$ 73,985,725	\$ 64,170,068	\$ 51,959,854	\$ 35,726,639

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
COMPARATIVE SCHEDULE OF REVENUES, EXPENSES AND CHANGES
IN NET POSITION – FIVE YEARS

	Amounts				
	2014	2013	2012	2011	2010
OPERATING REVENUES					
Pumpage Fee Revenue	\$ 25,227,627	\$ 28,098,868	\$ 26,674,006	\$ 29,584,392	\$ 17,879,333
Water Service Revenue	15,958,478	15,370,479	14,339,019	13,071,407	9,152,130
Joint Facilities Revenue	97,315	48,013	69,366	17,030	
TOTAL OPERATING REVENUES	\$ 41,283,420	\$ 43,517,360	\$ 41,082,391	\$ 42,672,829	\$ 27,031,463
OPERATING EXPENSES					
Professional Fees	\$ 2,674,548	\$ 3,648,211	\$ 1,406,385	\$ 2,351,841	\$ 1,870,987
Purchased Water Service	7,625,159	5,994,227	3,791,177	7,219,470	4,014,852
Contracted Services	646,297	616,728	583,099	540,608	500,904
Utilities	533,122	445,740	462,669	476,342	462,085
Repairs and Maintenance	667,315	816,179	613,187	498,687	326,064
Depreciation/Amortization	6,747,093	6,472,044	6,115,065	5,767,254	5,270,938
Other	683,522	651,786	636,492	784,700	522,265
TOTAL OPERATING EXPENSES	\$ 19,577,056	\$ 18,644,915	\$ 13,608,074	\$ 17,638,902	\$ 12,968,095
OPERATING INCOME (LOSS)	\$ 21,706,364	\$ 24,872,445	\$ 27,474,317	\$ 25,033,927	\$ 14,063,368
NONOPERATING REVENUES (EXPENSES)					
Investment Revenues	\$ 115,146	\$ 155,668	\$ 506,885	\$ 209,517	\$ 406,021
Capital Contributions		(348,102)	899,144	2,182,967	
Miscellaneous Revenues	18,356		100	2,655	162,603
Bond Issuance Costs	(825,875)	(684,865)	(369,500)		(6,757)
Interest Expense	(12,005,555)	(12,044,063)	(12,686,700)	(12,731,353)	(11,166,503)
Chloramine Conversion/Waterline Connections	(267,875)	(788,221)	(64,374)	(782,378)	(4,623,839)
Miscellaneous Expense					(111,945)
Joint Facilities WIF Contribution	1,095,843	1,095,877	473,343.00		
Joint Facilities WIF Contribution	(20,747)	(48,525.00)			
TOTAL NONOPERATING REVENUES (EXPENSES)	\$ (11,890,707)	\$ (12,662,231)	\$ (11,241,102)	\$ (11,118,592)	\$ (15,340,420)
CHANGE IN NET POSITION	\$ 9,815,657	\$ 12,210,214	\$ 16,233,215	\$ 13,915,335	\$ (1,277,052)
BEGINNING NET POSITION	64,170,068	51,959,854	35,726,639	21,811,304	23,088,356
ENDING IN NET POSITION	\$ 73,985,725	\$ 64,170,068	\$ 51,959,854	\$ 35,726,639	\$ 21,811,304

See accompanying independent auditor's report.

**WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY**

HARRIS AND FORT BEND COUNTIES, TEXAS

ANNUAL FINANCIAL REPORT

DECEMBER 31, 2016

TABLE OF CONTENTS

	<u>PAGE</u>
INDEPENDENT AUDITOR'S REPORT	1-2
MANAGEMENT'S DISCUSSION AND ANALYSIS	3-8
BASIC FINANCIAL STATEMENTS	
STATEMENT OF NET POSITION	10-11
STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION	12
STATEMENT OF CASH FLOWS	13
NOTES TO FINANCIAL STATEMENTS	15-36
SUPPLEMENTARY INFORMATION - REQUIRED BY THE WATER DISTRICT FINANCIAL MANAGEMENT GUIDE	
NOTES REQUIRED BY THE WATER DISTRICT FINANCIAL MANAGEMENT GUIDE (Included in notes to financial statements)	
SERVICES AND RATES	39-40
EXPENSES	41-42
INVESTMENTS	43
TAXES LEVIED AND RECEIVABLE (NOT APPLICABLE)	
LONG-TERM DEBT SERVICE REQUIREMENTS	44-53
CHANGE IN LONG-TERM BOND DEBT	54-55
COMPARATIVE SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION - FIVE YEARS	56-57
SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION - BUDGET AND ACTUAL	58
BOARD MEMBERS, KEY PERSONNEL AND CONSULTANTS	59-60

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INDEPENDENT AUDITOR'S REPORT

Board of Directors
West Harris County Regional
Water Authority
Harris and Fort Bend Counties, Texas

We have audited the accompanying financial statements of the business-type activities of West Harris County Regional Water Authority (the "Authority"), as of and for the year ended December 31, 2016, and the related notes to financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement in the financial statements, whether due to fraud or error. In making these risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Authority as of December 31, 2016, and the respective changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Authority's basic financial statements. The supplementary information required by the Texas Commission on Environmental Quality as published in the *Water District Financial Management Guide* is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The supplementary information, excluding that portion marked "Unaudited" on which we express no opinion or provide any assurance, has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the basic financial statements as a whole.

McCall Gibson Swedlund Barfoot PLLC

McCall Gibson Swedlund Barfoot PLLC
Certified Public Accountants
Houston, Texas

May 10, 2017

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED DECEMBER 31, 2016**

Management's discussion and analysis of West Harris County Regional Water Authority's (the "Authority") financial performance provides an overview of the Authority's financial activities for the fiscal year ended December 31, 2016. Please read it in conjunction with the Authority's financial statements.

USING THIS ANNUAL REPORT

This annual report consists of a series of financial statements. The basic financial statements include: (1) Statement of Net Position, (2) Statement of Revenues, Expenses and Changes in Net Position, (3) Statement of Cash Flows, and (4) notes to financial statements. This report also includes required and other supplementary information in addition to the basic financial statements.

FINANCIAL STATEMENTS

The Authority's annual report includes three financial statements. These financial statements provide both long-term and short-term information about the Authority's overall status. Financial reporting at this level uses a perspective similar to that found in the private sector with its basis in full accrual accounting and elimination or reclassification of internal activities.

The first of the financial statements is the Statement of Net Position. The Statement of Net Position is the financial statement presenting information that includes all of the Authority's assets, deferred outflows of financial resources, liabilities, and deferred inflows of financial resources with the residual reported as net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the Authority as a whole is improving or deteriorating. Evaluation of the overall health of the Authority would extend to other non-financial factors.

The second financial statement is the Statement of Revenues, Expenses and Changes in Net Position. This financial statement reports how the Authority's net position changed during the current fiscal year. All current year revenues and expenses are included regardless of when cash is received or paid.

The third financial statement is the Statement of Cash Flows. The Statement of Cash Flows shows the inflows and outflows of cash that occurred during the current fiscal year.

NOTES TO FINANCIAL STATEMENTS

The accompanying notes to financial statements provide information essential to a full understanding of the financial statements.

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED DECEMBER 31, 2016**

FINANCIAL ANALYSIS

Net position may serve over time as a useful indicator of the Authority's financial position. In the case of the Authority, assets exceeded liabilities and deferred inflows of resources by \$113,890,252 as of December 31, 2016. A portion of the Authority's net position reflects its investment in capital assets less any debt used to acquire those assets that is still outstanding. The Authority uses these assets to provide water service to its participants. The following table provides a summary of the Authority's net position at December 31, 2016, and December 31, 2015:

	Summary of Changes in the Statement of Net Position		
	2016	2015	Change Positive (Negative)
Current and Other Assets	\$ 197,485,626	\$ 158,543,611	\$ 38,942,015
Capital Assets (Net of Accumulated Depreciation)	294,590,027	274,085,920	20,504,107
Total Assets	<u>\$ 492,075,653</u>	<u>\$ 432,629,531</u>	<u>\$ 59,446,122</u>
Long-Term Liabilities	\$ 341,809,583	\$ 308,020,079	\$ (33,789,504)
Other Liabilities	20,502,516	14,870,316	(5,632,200)
Total Liabilities	<u>\$ 362,312,099</u>	<u>\$ 322,890,395</u>	<u>\$ (39,421,704)</u>
Total Deferred Inflows of Resources	<u>\$ 15,873,302</u>	<u>\$ 16,920,253</u>	<u>\$ 1,046,951</u>
Net Position:			
Net Investment in Capital Assets	\$ 54,449,426	\$ 24,670,445	\$ 29,778,981
Restricted	27,511,844	29,303,528	(1,791,684)
Unrestricted	31,928,982	38,844,910	(6,915,928)
Total Net Position	<u><u>\$ 113,890,252</u></u>	<u><u>\$ 92,818,883</u></u>	<u><u>\$ 21,071,369</u></u>

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED DECEMBER 31, 2016**

FINANCIAL ANALYSIS (Continued)

The following table provides a summary of the Authority's operations for the fiscal years ending December 31, 2016, and December 31, 2015. The Authority's net position increased by \$21,071,369, resulting in a 22.70% growth in net position.

	Summary of Changes in the Statement of Revenues, Expenses and Changes in Fund Net Position		
	2016	2015	Change Positive (Negative)
Operating Revenues			
Pumpage Fees	\$ 32,059,687	\$ 28,036,997	\$ 4,022,690
Surface Water Sold	19,801,873	16,844,860	2,957,013
Joint Facilities Revenue	125,295	115,340	9,955
Other	18,536		18,536
Total Operating Revenues	\$ 52,005,391	\$ 44,997,197	\$ 7,008,194
Operating Expenses	17,302,192	14,762,562	2,539,630
Operating Income	\$ 34,703,199	\$ 30,234,635	\$ 4,468,564
Nonoperating Revenues (Expenses)			
Investment Revenues	\$ 282,226	\$ 106,123	\$ 176,103
Capital Contributions		37,151	(37,151)
Professional Fees	(1,845,302)	(733,021)	(1,112,281)
Contracted Services		(31,925)	31,925
Bond Issuance Costs	(1,650,397)	(1,528,514)	(121,883)
Interest Expense	(11,173,035)	(10,319,405)	(853,630)
Chloramine Conversion/ Waterline Connections	(291,615)		(291,615)
Joint Facilities WIF Contribution	1,095,839	1,095,839	
City of Houston Luce Bayou Debt	(49,546)	(24,159)	(25,387)
Other		(3,566)	3,566
Total Nonoperating Revenues (Expenses)	\$ (13,631,830)	\$ (11,401,477)	\$ (2,230,353)
Change in Net Position	\$ 21,071,369	\$ 18,833,158	\$ 2,238,211
Net Position, Beginning of Year	92,818,883	73,985,725	18,833,158
Net Position, End of Year	\$ 113,890,252	\$ 92,818,883	\$ 21,071,369

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED DECEMBER 31, 2016**

CAPITAL ASSETS

The Authority's investment in capital assets as of December 31, 2016, is \$294,590,027 (net of accumulated depreciation/amortization). This investment in capital assets includes land, easements, water distribution facilities and capital contributions to the City of Houston. Significant capital asset events during the current fiscal year included the following:

Land Additions:	
• Land easements	<u>\$ 5,422,659</u>
Construction in Progress:	
• Contract 33	\$ 849,021
• Contract 33A	2,523,200
• Contract 33B	1,400
• Contract 34	6,435,806
• SWSP Segment A	2,330,700
• SWSP Segment B	2,891,797
• SWSP Segment C	2,188,166
• Pump Station	1,158,456
Total Construction in Progress	<u>\$ 18,378,546</u>

Capital Assets at Year-End Net of Accumulated Depreciation/Amortization

	<u>2016</u>	<u>2015</u>	Net Increase (Decrease)
Capital Assets Not Subject to Depreciation/Amortization:			
Land and Easements	\$ 40,399,927	\$ 35,044,466	\$ 5,355,461
Construction in Progress	18,378,546	4,843,828	13,534,718
Capital Assets Subject to Depreciation/Amortization			
Water Distribution System	149,535,229	148,345,698	1,189,531
Capital Contributions - City of Houston	79,467,012	78,481,427	985,585
Interest in Joint Facilities	6,809,313	7,370,501	(561,188)
Total Net Capital Assets	<u>\$ 294,590,027</u>	<u>\$ 274,085,920</u>	<u>\$ 20,504,107</u>

Additional information on the Authority's capital assets can be found in Note 6.

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED DECEMBER 31, 2016**

LONG-TERM DEBT ACTIVITY

At the end of the current fiscal year, the Authority had total long-term debt payable of \$331,645,000. The change in the long-term debt position of the Authority during the fiscal year ended December 31, 2016, is summarized as follows:

Bond Debt Payable - January 1, 2016	\$	293,145,000
Add: Debt Issuance		70,475,000
Less: Debt Defeased		21,010,000
Less: Principal Retirement		10,965,000
 Bond Debt Payable - December 31, 2016	 \$	 <u><u>331,645,000</u></u>

In connection with the issuance of the Series 2007, Series 2014, and Series 2015A Bonds (collectively the "Insured Bonds"), the Authority obtained bond insurance from various bond insurers. The Authority did not obtain bond insurance in connection with its Series 2009, Series 2012, Series 2013, Series 2015 Bonds, Series 2016 and Series 2016A Bonds. Independent of bond insurance, the Authority's Bonds have underlying ratings of "A+", "A1", and "AA-" from Fitch, Moody's Investor Service, and Standard & Poor's, respectively. The bond insurers of the Insured Bonds carry higher or lower ratings than the above-described ratings.

At the end of the current fiscal year, the Authority owed participants \$8,367,469 for capital contribution credits. See Note 7 for additional information.

The changes in the amount due to participants by the Authority during the fiscal year ended December 31, 2016, are summarized as follows:

Due to Participants - January 1, 2016	\$	8,763,968
Less: Capital Contribution Credits Applied in the Current Fiscal Year		<u>396,499</u>
 Due to Participants - December 31, 2016	 \$	 <u><u>8,367,469</u></u>

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED DECEMBER 31, 2016**

CONTACTING THE AUTHORITY'S FINANCIAL MANAGEMENT

This financial report is designed to provide a general overview of the Authority's finances. Questions concerning any of the information provided in this report or requests for additional information should be addressed to West Harris County Regional Water Authority, c/o Allen Boone Humphries Robinson, LLP, 3200 Southwest Freeway, Suite 2600, Houston, TX 77027.

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WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
STATEMENT OF NET POSITION
DECEMBER 31, 2016

ASSETS

CURRENT ASSETS

Cash	\$ 1,401,355
Investments	25,788,888
Accounts Receivable	5,603,999
Joint Facilities Receivable	9,144
Accrued Interest Receivable	9,245
Due From City of Houston	229,715
Prepaid Expenses	24,763

TOTAL CURRENT ASSETS \$ 33,067,109

NONCURRENT ASSETS

Restricted Cash	62,023,038
Restricted Investments	84,767,188
Construction Advances	865,485
Water Conservation Credits	1,853,488
Unamortized Bond Insurance	170,893
Joint Facilities WIF Receivable	14,738,425
Capital Assets:	
Land and Easements	40,399,927
Construction in Progress	18,378,546
Capital Assets (Net of Accumulated Depreciation/Amortization)	235,811,554

TOTAL NONCURRENT ASSETS \$ 459,008,544

TOTAL ASSETS \$ 492,075,653

LIABILITIES

CURRENT LIABILITIES

Accounts Payable	\$ 1,332,932
Accounts Payable-Capital	1,504,417
Retainage Payable-Capital	228,093
Other Payables	54,677
Accrued Bond Interest Payable	670,379
Joint Facilities Operating Reserve	8,585
Due to Participants	414,752
Due to Other Authority	933,681
Bonds Payable, Due Within One Year	15,355,000

TOTAL CURRENT LIABILITIES \$ 20,502,516

NONCURRENT LIABILITIES

Due to Participants	\$ 7,952,717
Bonds Payable, Due After One Year	333,856,866

TOTAL NONCURRENT LIABILITIES \$ 341,809,583

TOTAL LIABILITIES \$ 362,312,099

The accompanying notes to financial statements are an integral part of this report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
STATEMENT OF NET POSITION
DECEMBER 31, 2016

DEFERRED INFLOWS OF RESOURCES	
Deferred Joint Facilities WIF Revenues	\$ 14,738,425
Deferred Difference on Refunding Bonds	1,134,877
TOTAL DEFERRED INFLOWS OF RESOURCES	\$ 15,873,302
 NET POSITION	
Net Investment in Capital Assets	\$ 54,449,426
Restricted for Debt Service:	
Coverage Fund	7,505,063
Reserve Fund	7,862,202
Junior Lien Reserve Fund	2,505,779
Capitalized Interest	1,429,748
Junior Lien Capitalized Interest	943,166
Debt Service	1,444,372
Junior Lien Debt Service	81,560
Restricted for Water Conservation Credits	1,853,488
Restricted for Operations and Maintenance	1,541,922
Restricted for Joint Facilities	1,294,545
Restricted for Letter of Credit	1,000,000
Restricted for Mitigation	50,000
Unrestricted	31,928,981
TOTAL NET POSITION	\$ 113,890,252
TOTAL LIABILITIES, DEFERRED INFLOWS AND NET POSITION	\$ 492,075,653

The accompanying notes to financial
statements are an integral part of this report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
STATEMENT OF REVENUES, EXPENSES AND
CHANGES IN NET POSITION
FOR THE YEAR ENDED DECEMBER 31, 2016

OPERATING REVENUES	
Pumpage Fees	\$ 32,059,687
Surface Water Sold	19,801,873
Joint Facilities Revenue	125,295
Other	18,536
TOTAL OPERATING REVENUES	<u>\$ 52,005,391</u>
OPERATING EXPENSES	
Professional Fees	\$ 2,712,223
Contracted Services	844,839
Purchased Water Service	6,373,629
Utilities	533,677
Repairs and Maintenance	808,312
Depreciation/Amortization	5,369,677
Other	659,835
TOTAL OPERATING EXPENSES	<u>\$ 17,302,192</u>
OPERATING INCOME	<u>\$ 34,703,199</u>
NONOPERATING REVENUES (EXPENSES)	
Investment Revenues	282,226
Professional Fees	(1,845,302)
Bond Issuance Costs	(1,650,397)
Interest Expense	(11,173,035)
Chloramine Conversion/Waterline Connections	(291,615)
Joint Facilities WIF Contribution	1,095,839
City of Houston Luce Bayou Debt Service	(49,546)
TOTAL NONOPERATING REVENUES (EXPENSES)	<u>\$ (13,631,830)</u>
CHANGE IN NET POSITION	\$ 21,071,369
NET POSITION-JANUARY 1, 2016	92,818,883
NET POSITION-DECEMBER 31, 2016	<u><u>\$ 113,890,252</u></u>

The accompanying notes to financial
statements are an integral part of this report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2016

CASH FLOWS FROM OPERATING ACTIVITIES	
Cash Received from Participants	\$ 50,533,279
Cash Payments for Goods and Services	(9,440,738)
NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES	<u>\$ 41,092,541</u>
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES	
Net Proceeds from Sale of Bonds	\$ 72,255,801
Payment to Escrow Agent for Defeasance of Bonds	(22,379,635)
Bond Principal Payment	(10,965,000)
Payment of Bond Interest	(11,463,326)
Payment of Bond Issuance Costs	(1,650,397)
Payment of Luce Bayou Interest	(49,546)
Payments for Capital Assets	(23,196,290)
Received from NFBWA - Debt Service	1,095,839
Capital Contribution to City of Houston	(1,721,148)
Chloramine conversion reimbursement	(291,615)
Other Receipts/Expenses	(1,845,302)
NET CASH PROVIDED (USED) BY CAPITAL AND RELATED FINANCING ACTIVITIES	<u>\$ (210,619)</u>
CASH FLOWS FROM INVESTING ACTIVITIES	
Receipt of Interest	\$ 280,464
NET CASH PROVIDED (USED) BY INVESTING ACTIVITIES	<u>\$ 280,464</u>
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	\$ 41,162,386
CASH AND CASH EQUIVALENTS-JANUARY 1, 2016	<u>\$ 132,818,083</u>
CASH AND CASH EQUIVALENTS-DECEMBER 31, 2016	<u><u>\$ 173,980,469</u></u>
RECONCILIATION OF OPERATING INCOME (LOSS) TO NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES:	
Operating Income (Loss)	\$ 34,703,199
Depreciation/Amortization	5,369,677
Less Capital Contribution Credits Taken	(396,499)
(Increase) Decrease in Pumpage Fees Receivable	(1,073,406)
(Increase) Decrease in Joint Facilities Receivable	(2,207)
(Increase) Decrease in Water Conservation Credits	14,012
(Increase) Decrease in Prepaid Expenses	283,868
Increase (Decrease) in Due to Other Governments	1,963,766
(Increase) Decrease in Other Receivables	50
Increase (Decrease) in Accounts Payable	230,081
NET CASH PROVIDED (USED) BY OPERATING ACTIVITIES	<u>\$ 41,092,541</u>
CASH AND CASH EQUIVALENTS PER STATEMENT OF NET POSITION:	
Cash	\$ 1,401,355
Restricted cash	62,023,038
Investments	25,788,888
Restricted investments	84,767,188
Total cash and cash equivalents	<u><u>\$ 173,980,469</u></u>

The accompanying notes to financial statements are an integral part of this report.

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WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 1. CREATION OF AUTHORITY

The West Harris County Regional Water Authority (the "Authority") was created under Article 16, Section 59 of the Texas Constitution by House Bill 1842, as passed by the seventy-seventh (77th) Texas Legislature in 2001, and amended thereafter (the "Act"). The Act empowers the Authority for purposes including the acquisition and provision of surface water and groundwater for residential, commercial, industrial, agricultural, and other uses; the reduction of groundwater withdrawals; the conservation, preservation, protection, recharge, and prevention of waste of groundwater, and of groundwater reservoirs or their subdivisions; and the control of subsidence caused by withdrawal of water from those groundwater reservoirs or their subdivisions.

A nine-member board of directors governs the Authority. The directors serve staggered four year terms. Each director must qualify to serve as director in the manner provided by Section 49.055 of the Water Code and must meet certain other requirements set forth in the Act.

The Authority charges a fee, based on the amount of water pumped from the well, to the owner of wells located within the boundaries of the Authority, unless exempted, and to certain owners of wells located outside the Authority that have contracted with the Authority to be part of the Authority's Groundwater Reduction Plan. The Authority also charges a surface water fee for water sold by the Authority. These fees enable the Authority to fulfill its purposes and regulatory functions, as set forth in the Act.

NOTE 2. SIGNIFICANT ACCOUNTING POLICIES

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America as promulgated by the Governmental Accounting Standards Board ("GASB"). In addition, the accounting records of the Authority are maintained generally in accordance with the *Water District Financial Management Guide* published by the Texas Commission on Environmental Quality (the "Commission").

The Authority is a political subdivision of the State of Texas governed by a board that is appointed by the water districts and municipalities within the Authority. GASB has established the criteria for determining whether or not an entity is a primary government or a component unit of a primary government. The primary criteria are that it has a separately elected governing body, it is legally separate, and it is fiscally independent of other state and local governments. Under these criteria, the Authority is considered a primary government and is not a component unit of any other government. Additionally, no other entities meet the criteria for inclusion in the Authority's financial statement as component units.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial Statement Presentation

These financial statements have been prepared in accordance with GASB Codification of Governmental Accounting and Financial Reporting Standards Part II. Financial Reporting.

GASB Codification sets forth standards for external financial reporting for all state and local government entities, which include a requirement for a Statement of Net Position and a Statement of Activities. It requires the classification of net position into three components: Net Investment in Capital Assets; Restricted; and Unrestricted. These classifications are defined as follows:

- Net Investment in Capital Assets - This component of net position consists of capital assets, including restricted capital assets, net of accumulated depreciation and reduced by the outstanding balances of any bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvements of those assets.

- Restricted Net Position - This component of net position consists of external constraints placed on the use of assets imposed by creditors (such as through debt covenants), grantors, contributors, or laws or regulation of other governments or constraints imposed by law through constitutional provisions or enabling legislation.

- Unrestricted Net Position - This component of net position consists of assets that do not meet the definition of "Restricted" or "Net Investment in Capital Assets." Included in the Authority's unrestricted net assets of \$31,928,981 is \$16,638,551, which the Authority has deposited into separate bank/investment accounts and has designated as the Improvement Fund.

When both restricted and unrestricted resources are available for use, generally it is the Authority's policy to use restricted resources first.

The Authority follows proprietary fund accounting and reporting requirements, which utilize the economic resources measurement focus and the accrual basis of accounting. The measurement focus is upon determination of net revenue, financial position, and changes in cash flows. Proprietary funds distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses are those that result from providing services and delivering goods in connection with the Authority's primary activities. The Authority's primary source of revenue is pumpage fees and surface water fees. All revenues and expenses not meeting this definition are considered non-operating revenues and expenses.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Capital Assets

All capital assets, including infrastructure capital assets, are recorded at historical cost. Capital assets (except land, easements and construction in progress) are depreciated or amortized using the straight line method over the following estimated useful lives:

<u>Capital Asset Category</u>	<u>Estimated Life</u>
Water Distribution System	45 years
Interest in Joint Facilities	45 years
Capital Contributions	35-40 years

See Note 6 for additional disclosure.

Interest costs on assets acquired with tax-exempt borrowings are capitalized, net of interest earned on related interest-bearing investments acquired with proceeds of the related borrowings, from the date of borrowing until the assets are ready for their intended use. During the current fiscal year, the Authority incurred interest costs of \$11,173,035 on construction related borrowings.

Pension

The Authority has not established a pension plan as the Authority does not have employees. The Internal Revenue Service has determined that fees of office received by Directors are considered to be wages subject to federal income tax withholding for payroll purposes only.

Cash and Cash Equivalents

The Authority considers all amounts in checking accounts, money market accounts, savings accounts, mutual funds, external investment pools and all highly liquid investments with a maturity of ninety days or less when purchased to be cash and cash equivalents. Certificates of deposit are included in cash and cash equivalents regardless of their maturity date. The carrying value of cash and cash equivalents approximates fair value because of the short maturities of these financial instruments. See Note 5 for additional disclosure.

Prepaid Expenses

Certain payments made by the Authority reflect costs applicable to future accounting periods and are recorded as a prepaid expense on the Authority's Statement of Net Position.

Budgeting

In compliance with Commission requirements, the Board of Directors annually adopts a budget for the Authority. The budget is then amended during the current fiscal year if need be.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 2. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Accounting Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

NOTE 3. BONDS PAYABLE

	Water System Revenue Bonds Series 2007	Water System Revenue Bonds Series 2009	Water System Revenue Bonds Series 2012	Water System Revenue Refunding Bonds Series 2013	Water System Revenue Refunding Bonds Series 2014
Amount Outstanding - December 31, 2016	\$ 22,195,000	\$ 52,260,000	\$ 32,825,000	\$ 35,860,000	\$ 40,370,000
Interest Rates	4.00% - 5.00%	4.00% - 5.00%	0.00% - 1.86%	3.00% - 5.00%	2.00% - 5.00%
Maturity Dates:					
Beginning - Ending	December 15, 2017-2025	December 15, 2017-2019, 2021-2029, 2035	December 15, 2017-2031	December 15, 2017-2024	December 15, 2017-2022, 2024-2025, 2027-2029
Interest Payment Dates	June 15/ December 15	June 15/ December 15	June 15/ December 15	June 15/ December 15	June 15/ December 15
Callable Dates	December 15, 2017*	December 15, 2019*	December 15, 2022*	December 15, 2021*	December 15, 2023*

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 3. BONDS PAYABLE (Continued)

	Water System Junior Lien Revenue Bonds Series 2015	Water System Revenue and Refunding Bonds Series 2015A	Water System Junior Lien Revenue Bonds Series 2016	Water System Revenue Bonds Series 2016A
Amount Outstanding - December 31, 2016	\$ 17,940,000	\$ 59,720,000	\$ 37,960,000	\$ 32,515,000
Interest Rates	0.38% - 2.41%	3.250% - 5.00%	0.65% - 3.04%	4.00% - 5.00%
Maturity Dates:				
Beginning - Ending	December 15, 2017-2035	December 15, 2017-2035, 2039, 2045	December 15, 2018-2046	December 15, 2020-2036, 2041, 2046
Interest Payment Dates	June 15/ December 15	June 15/ December 15	June 15/ December 15	June 15/ December 15
Callable Dates	December 15, 2025*	December 15, 2025*	December 15, 2026*	December 15, 2025*

*Or any date thereafter, callable at par plus unpaid accrued interest in whole or in part at the option of the Authority. Series 2009 term bonds maturing December 15, 2021, and December 15, 2035, are subject to mandatory redemption beginning December 15, 2020, and December 15, 2030, respectively. Series 2015A term bonds maturing December 15, 2039 and December 15, 2045 are subject to mandatory redemption beginning December 15, 2036 and December 15, 2040, respectively. Series 2016A term bonds maturing December 15, 2041 and December 15, 2046 are subject to mandatory redemption beginning December 15, 2037 and December 15, 2042, respectively.

During 2015, the Texas Water Development Board (TWDB) made a commitment to the Authority for financial assistance in the amount of \$812,140,000 from the State Water Implementation Revenue Fund. The TWDB proposes to purchase water system junior lien revenue bonds from the Authority each year from 2015 through 2025. The proceeds are proposed to be used for the Northeast Water Purification Plant Expansion in the amount of \$306,200,000, the Surface Water Supply Project in the amount of \$325,440,000, and internal transmission lines in the amount of \$180,500,000.

On October 27, 2016, the Authority sold \$37,960,000 Series 2016 Water System Junior Lien Revenue Bonds at a net effective interest rate of 2.557636% to the TWDB. Proceeds of the bonds will be used to 1) fund the realty interest acquisition, engineering, environmental work,

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 3. BONDS PAYABLE (Continued)

and construction and acquisition for System improvements and capacity, including, (a) storage, pumping and transmission facilities to transport and convey water along some or all of the distance from the Northeast Water Purification Plant (“NEWPP”) to areas near, in and through the Authority’s boundaries (“Surface Water Supply Project”), (b) storage, pumping and transmission facilities to transport and convey water to Authority water customers, and (c) payments due to the City for expansion of the NEWPP; 2) fund the Junior Lien Reserve Fund Requirement attributable to the Series 2016 Bonds; and 3) fund capitalized interest and pay for the costs of issuance of the Series 2016 Bonds.

On November 22, 2016, the Authority executed a cash defeasance of \$21,010,000 of outstanding Series 2007 Water System Revenue Bonds. Since these bonds were not yet subject to redemption, the Authority placed \$22,378,135 in an escrow account with an escrow agent and irrevocably pledged the funds for the payment of debt service payments through December 15, 2017, the redemption date of the bonds. As a result, such portion of the Series 2007 bonds are considered defeased and the liability for the defeased bonds has been removed from the Authority’s Statement of Financial Position. As of December 31, 2016, the outstanding principal of defeased bonds is \$21,010,000.

On December 22, 2016, the Authority issued its \$32,515,000 Series 2016A Water System Revenue Bonds at a net effective interest rate of 4.076992%. The proceeds of the Bonds will be used to 1) fund certain payments due to the City of Houston, Texas under a Water Supply Contract between the Authority and the City, as amended and supplemented; 2) fund costs of design, construction and acquisition of System improvements and capacity and acquisition of realty interests for the System; 3) fund the purchase of the Series 2016A Debt Service Reserve Fund Surety Policy; and 4) fund capitalized interest and pay for the costs of issuance of the Series 2016A Bonds.

The following is a summary of transactions regarding bonds payable for the year ended December 31, 2016:

	January 1 2016	Additions	Retirements	December 31 2016
Bond Debt Payable	\$ 293,145,000	\$ -	-	\$ 293,145,000
Bonds Issued		70,475,000		70,475,000
Bonds Defeased			21,010,000	21,010,000
Unamortized Premiums	17,472,610	1,266,130	1,171,874	17,566,866
Principal Retirement			10,965,000	10,965,000
Bonds Payable, Net	\$ 310,617,610	\$ 71,741,130	\$ 33,146,874	\$ 349,211,866
			Due Within One Year	\$ 15,355,000
			Due After One Year	333,856,866
			Bonds Payable, Net	\$ 349,211,866

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 3. BONDS PAYABLE (Continued)

As of December 31, 2016, the debt service requirements on the bonds outstanding were as follows:

Fiscal Year	Principal	Interest	Total
2017	\$ 15,355,000	\$ 12,501,635	\$ 27,856,635
2018	16,880,000	11,941,374	28,821,374
2019	17,985,000	11,415,986	29,400,986
2020	19,245,000	10,770,453	30,015,453
2021	19,940,000	10,079,911	30,019,911
2022-2026	86,590,000	39,170,146	125,760,146
2027-2031	72,075,000	23,315,050	95,390,050
2032-2036	37,700,000	12,486,006	50,186,006
2037-2041	21,730,000	6,776,698	28,506,698
2042-2046	24,145,000	2,579,656	26,724,656
	<u>\$ 331,645,000</u>	<u>\$ 141,036,915</u>	<u>\$ 472,681,915</u>

NOTE 4. INDENTURE OF TRUST AGREEMENT

The Authority entered into the Indenture of Trust Agreement dated as of August 1, 2003; the First Supplemental Indenture of Trust, dated as of August 1, 2003; the Second Supplemental Indenture of Trust dated as of April 1, 2005; the Third Supplemental Indenture of Trust dated as of August 1, 2006; the Fourth Supplemental Indenture of Trust dated as of October 1, 2007; the Fifth Supplemental Indenture of Trust dated September 1, 2009; the Sixth Supplemental Indenture of Trust dated March 1, 2012; the Seventh Supplemental Indenture of Trust dated June 1, 2013; the Eighth Supplemental Indenture of Trust dated September 1, 2014; the Ninth Supplemental Indenture of Trust dated November 1, 2015; the Tenth Supplemental Indenture of Trust dated December 1, 2015; the Eleventh Supplemental Indenture of Trust dated October 1, 2016; and the Twelfth Supplemental Indenture of Trust dated December 1, 2016 (collectively, the "Agreement"). Effective November 2, 2005, Regions Bank became the Trustee under the Agreement. The Agreement was entered into with the Trustee for the purpose of establishing various funds and assigning and pledging the monies held by Trustee to secure the payment of principal and interest on the bonds and payments of certain obligations. The Trustee is responsible for allocating certain available monies of the Authority in accordance with the terms of the Agreement. The following are certain requirements and provisions of the Agreement:

- A. The Authority is required to maintain a Coverage Fund. The Coverage Fund requirement (1) for Parity Bonds, Parity Notes, and Parity Obligations is twenty-five percent (25%) of their maximum annual debt service requirements, and (2) for Junior Lien Bonds, Junior Lien Notes, and Junior Lien Obligations is twenty-five percent (25%) of their maximum annual debt service requirements. The maximum annual

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 4. INDENTURE OF TRUST AGREEMENT (Continued)

debt service requirement for Parity Bonds is currently \$27,015,188, with 25% being \$6,753,797. The maximum annual debt service requirement for Junior Lien Bonds is currently \$3,015,898, with 25% being \$753,975. As of December 31, 2016, funds of \$7,505,063 are invested in a money market mutual fund at the Trustee. Subsequent to year end, \$2,709 was deposited to the Coverage Fund to bring the balance to \$7,507,772.

- B. The Agreement calls for the establishment of a Reserve Fund Requirement which for Parity Bonds and Parity Notes is the lesser of (i) the maximum annual debt service requirements or (ii) 125% of the average annual aggregate debt service requirements on the Parity Bonds and Parity Notes, calculated as of the date of issuance of each series. The Reserve Fund Requirement is established and stipulated to be \$16,813,162. The Reserve Fund Requirement will be satisfied by (1) debt service reserve fund surety policies as follows: the Series 2007 Debt Service Reserve Fund Surety Policy in the amount of \$3,100,600, the Series 2014 Debt Service Reserve Fund Surety Policy in the amount of \$4,400,100, the Series 2016A Debt Service Reserve Fund Surety Policy in the amount of \$1,527,453; and (2) a cash deposit of \$7,785,009 comprised of previous deposits from the proceeds of Parity Bonds issued heretofore and a previous deposit from the Improvement Fund. As of December 31, 2016, the Debt Service Reserve Cash Balance was \$7,862,202.
- C. The Agreement calls for the establishment of a Junior Lien Reserve Fund Requirement, which for Junior Lien Bonds and Junior Lien Notes, is the average annual aggregate debt service requirements on the Junior Lien Bonds and Junior Lien Notes, calculated as of the date of issuance of each series. Upon issuance of the Series 2016 Bonds, the amount of the Junior Lien Reserve Fund Requirement is established to be \$2,505,637. The Junior Lien Reserve Fund Requirement was satisfied by a deposit of \$1,137,281 from proceeds of the Series 2015 Bonds and a deposit of \$1,368,356 from proceeds of the Series 2016 Bonds. As of December 31, 2016, the Junior Lien Reserve Fund cash balance was \$2,505,779.
- D. In connection with the United States Securities and Exchange Commission Rule 15c2-12, the Authority provides continuing disclosure of certain financial information and operating data to the Municipal Securities Rulemaking Board ("MSRB") via the Electronic Municipal Market Access system established by MSRB. This information, along with the audited annual financial statements, is to be provided within six months after the end of each fiscal year.
- E. The Authority has covenanted that it will take all necessary steps to comply with the requirement that rebatable arbitrage earnings on the investment of the gross proceeds of the bonds, within the meaning of section 148 (f) of the Internal Revenue Code, be rebated to the federal government. The minimum requirement for determination of the rebatable amount is on the 5th year anniversary of each issue.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 5. DEPOSITS AND INVESTMENTS

Deposits

Custodial credit risk is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover deposits (i.e., cash and certificates of deposit) or will not be able to recover collateral securities that are in the possession of an outside party. The Authority's deposit policy for custodial credit risk requires compliance with the provisions of Texas statutes.

Texas statutes require that any cash balance in any fund shall, to the extent not insured by the Federal Deposit Insurance Corporation or its successor, be continuously secured by a valid pledge to the Authority of securities eligible under the laws of Texas to secure the funds of the Authority, having an aggregate market value, including accrued interest, at all times equal to the uninsured cash balance in the fund to which such securities are pledged. At fiscal year end, the carrying amount of the Authority's deposits was \$64,678,940 and the bank balance was \$65,618,406. Of the bank balance, \$1,245,000 was covered by federal depository insurance, and \$64,373,406 was covered by collateral pledged in the name of the Authority and held in a third-party depository, or letters of credit payable to the Authority.

The carrying values of the deposits at December 31, 2016, are as listed below:

Unrestricted:	
Cash	\$ 1,401,355
Certificates of Deposit	1,254,547
Restricted:	
Money Market Accounts	62,023,038
TOTAL DEPOSITS	<u><u>\$ 64,678,940</u></u>

For financial statement reporting purposes, the Authority's investments in certificates of deposit are classified with investments on the Statement of Net Position.

Investments

Under Texas law, the Authority is required to invest its funds under written investment policies that primarily emphasize safety of principal and liquidity and that address investment diversification, yield, maturity, and the quality and capability of investment management, and all Authority funds must be invested in accordance with the following investment objectives: understanding the suitability of the investment to the Authority's financial requirements, first preservation and safety of principal, second; liquidity, third; marketability of the investments if the need arises to liquidate the investment before maturity, fourth; diversification of the investment portfolio, fifth; and yield, sixth. The Authority's investments must be made "with judgment and care, under prevailing circumstances, that a person of prudence, discretion, and

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 5. DEPOSITS AND INVESTMENTS (Continued)

intelligence would exercise in the management of the person's own affairs, not for speculation, but for investment, considering the probable safety of capital and the probable income to be derived." No person may invest Authority funds without express written authority from the Board of Directors.

Texas statutes include specifications for and limitations applicable to the Authority and its authority to purchase investments as defined in the Public Funds Investment Act. Authorized investments are summarized as follows: (1) obligations of the United States or its agencies and instrumentalities, (2) direct obligations of the State of Texas or its agencies and instrumentalities, (3) certain collateralized mortgage obligations, (4) other obligations, the principal of and interest on which are unconditionally guaranteed or insured by the State of Texas or the United States or its agencies and instrumentalities, including obligations that are fully guaranteed or insured by the Federal Deposit Insurance Corporation or by the explicit full faith and credit of the United States (5) certain A rated or higher obligations of states, agencies, counties, cities, and other political subdivisions of any state, (6) bonds issued, assumed or guaranteed by the State of Israel, (7) insured or collateralized certificates of deposit, (8) certain fully collateralized repurchase agreements secured by delivery, (9) certain bankers' acceptances with limitations, (10) commercial paper rated A-1 or P-1 or higher and a maturity of 270 days or less, (11) no-load money market mutual funds and no-load mutual funds with limitations, (12) certain guaranteed investment contracts, (13) certain qualified governmental investment pools and (14) a qualified securities lending program.

The Authority's investment policy is more restrictive than the Public Funds Investment Act. In accordance with the Authority's adopted investment policy, the Authority may invest in any of the above investment items except (3), (6), (8), (9), (10), (12) and (14). The Authority was in compliance with the Public Funds Investment Act.

The Authority participates in Texas Short Term Asset Reserve fund (TexSTAR) which is managed by First Southwest, a division of Hilltop Securities, Inc., and J.P. Morgan Investment Management, Inc. First Southwest provides participant and marketing services while J.P. Morgan provides investment management services. Custodial and depository services are provided by J.P. Morgan Chase Bank N.A. or its subsidiary.

Investments held by TexSTAR are valued using fair value. TexSTAR seeks to maintain a constant dollar value per share. Accordingly, the fair value of the Authority's position in TexSTAR is the same as the value of TexSTAR shares. The Authority implemented GASB Statement No. 72, "Fair Value Measurement and Application," during the current fiscal year. This statement establishes a hierarchy of inputs used to measure fair value as follows: Level 1 inputs are based on quoted prices in active markets, Level 2 inputs are based on significant other observable inputs, and Level 3 inputs are based on significant unobservable inputs. The Authority's investment in TexSTAR is measured using Level 1 inputs.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 5. DEPOSITS AND INVESTMENTS (Continued)

Investments in TexSTAR may be withdrawn via wire transfer on a same day basis, as long as the transaction is executed by 4 p.m. ACH withdrawals made by 4 p.m. will settle on the next business day.

As of December 31, 2016, the Authority had the following investments and maturities:

Fund and Investment Type	Fair Values	Maturities in Years		
		Less Than 1	1 -5	6 -10
TexSTAR				
Restricted - Operations and Maintenance	\$ 1,541,922	\$ 1,541,922	\$ -	\$ -
Restricted - Mitigation	50,238	50,238		
Restricted - Construction	60,732,758	60,732,758		
Unrestricted - Improvement Fund	15,797,875	15,797,875		
Unrestricted - Operations and Maintenance	8,736,467	8,736,467		
Money Market Mutual Funds				
Restricted Debt Service	22,442,269	22,442,269		
Certificates of Deposits				
Unrestricted - Operations and Maintenance	245,000	245,000		
Unrestricted - Operations and Maintenance	1,009,547	1,009,547		
TOTAL INVESTMENTS	\$ 110,556,076	\$ 110,556,076	\$ - 0 -	\$ - 0 -

Credit risk is the risk that the issuer or other counterparty to an investment will not fulfill its obligations. At December 31, 2016, the Authority's investments in TexSTAR and money market mutual funds were rated "AAAm" by Standard & Poor's.

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The Authority considers the investments in TexSTAR and the money market mutual funds to have a maturity of less than one (1) year due to the fact the share positions can usually be redeemed each day at the discretion of the Authority, unless there has been a significant change in value.

The Authority's investment policies do not address investment credit and interest rate risk beyond the rating and maturity restrictions established by state statutes.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 6. CAPITAL ASSETS

Capital asset activity for the year ended December 31, 2016:

	January 1, 2016	Increases	Decreases	December 31, 2016
Capital Assets Not Being Depreciated/Amortized				
Land and Easements	\$ 35,044,466	\$ 5,422,659	\$ 67,198	\$ 40,399,927
Construction in Progress	4,843,828	17,215,056	3,680,338	18,378,546
Total Capital Assets Not Being Depreciated/Amortized	\$ 39,888,294	\$ 22,637,715	\$ 3,747,536	\$ 58,778,473
Capital Assets Subject to Depreciated/Amortization				
Water Distribution System	\$ 172,046,913	\$ 5,224,645	\$ 101,953	\$ 177,169,605
Capital Contributions - City of Houston - Existing Facilities	103,582,126	1,721,148		105,303,274
Capital Contributions - City of Houston - Luce Bayou	2,080,670			2,080,670
Capital Contributions - City of Houston - NETL		525,821		525,821
Interest in Joint Facilities - Bellaire Pump Station	7,881,022		386,055	7,494,967
Total Capital Assets Subject to Historical Cost	\$ 285,590,731	\$ 7,471,614	\$ 488,008	\$ 292,574,337
Less Accumulated Depreciated/Amortization				
Water Distribution System	\$ 23,701,215	\$ 3,933,161	\$ -	\$ 27,634,376
Capital Contributions - City of Houston - Existing Facilities	26,820,811	1,226,289		28,047,100
Capital Contributions - City of Houston - Luce Bayou	360,558	29,023	2,144	387,437
Capital Contributions - City of Houston - NETL		8,216		8,216
Interest in Joint Facilities - Bellaire Pump Station	510,521	175,133		685,654
Total Accumulated Depreciated/Amortization	\$ 51,393,105	\$ 5,371,822	\$ 2,144	\$ 56,762,783
Total Depreciable Capital Assets, Net of Accumulated Depreciated/Amortization	\$ 234,197,626	\$ 2,099,792	\$ 485,864	\$ 235,811,554
Total Capital Assets, Net of Accumulated Depreciation/Amortization	\$ 274,085,920	\$ 24,737,507	\$ 4,233,400	\$ 294,590,027

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

**NOTE 7. WATER TRUNKLINE FINANCING AGREEMENT/RESOLUTION
AUTHORIZING CAPITAL ADVANCE AND REIMBURSEMENT
PROCEDURE**

On May 6, 2002, as amended on August 14, 2002, and March 1, 2004, the Authority entered into the Water Trunkline Financing Agreement ("Trunkline Agreement") with Harris County Municipal Utility District No. 130, Harris County Municipal Utility District No. 162, Harris County Municipal Utility District No. 163, Harris County Municipal Utility District No. 179, Harris County Municipal Utility District No. 186, Harris County Municipal Utility District No. 188, Harris County Municipal Utility District No. 208 and Spencer Road Public Utility District (the "Copperfield Districts"). The Copperfield Districts, except No. 130, are referred to herein as the "Participating Copperfield Districts."

Pursuant to the Trunkline Agreement, the Participating Copperfield Districts funded a portion of the costs to design and construct the water distribution trunkline system to deliver water purchased by the Authority from the City of Houston to the Participating Copperfield Districts and other areas. The Authority funded the remainder of the costs to design and construct the trunkline and constructed the trunkline for ownership, operation and maintenance by the Authority as part of its regional surface water distribution system.

Through June 1, 2003, the Participating Copperfield Districts advanced \$5,686,664 to the Authority in accordance with the Trunkline Agreement. With the addition of an interest component and an issuance cost component, the total principal amount of the reimbursement credits to be received by the Participating Copperfield Districts in accordance with the Trunkline Agreement is \$5,788,688. Beginning on June 1, 2003, the Authority initiated the monthly reimbursement credits to each Participating Copperfield District. The reimbursement credits, which include interest, will be provided in 307 equal monthly credits to be applied against all fees, rates and charges due to the Authority for groundwater pumpage and/or surface water purchased. The monthly reimbursement credit received by the Participating Copperfield Districts is \$31,940.

In addition to the Trunkline Agreement, the Authority has adopted a Resolution Authorizing Capital Advance and Reimbursement Procedure (collectively, the "Resolution") prior to certain bond issues. The Authority has adopted the Resolution pursuant to Section 4.04 of the Act to provide each district and municipality within its boundaries the opportunity to fund its share of certain capital costs of the Authority's system and to provide a mechanism for the reimbursement credit thereof. During 2005, and pursuant to the Resolution, the Authority received capital contributions from Mayde Creek Municipal Utility District, West Harris County Municipal Utility District No. 2 and West Park Municipal Utility District in the amount of \$2,148,762. With the addition of an issuance cost component, the total principal amount of the reimbursement credit to be received by these three districts is \$2,168,282. The reimbursement credits, which include interest, to these three districts will be provided in 306 equal monthly credits to be applied against all fees, rates and charges due to the Authority for groundwater pumpage and/or surface water purchased. The monthly reimbursement credit received by these three districts for this capital contribution is \$12,206.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

**NOTE 7. WATER TRUNKLINE FINANCING AGREEMENT/RESOLUTION
AUTHORIZING CAPITAL ADVANCE AND REIMBURSEMENT
PROCEDURE (Continued)**

During 2007, and pursuant to the Resolution, the Authority received capital contributions from Harris County Municipal Utility District No. 61 and West Park Municipal District in the amount of \$647,465. With the addition of an issuance cost component, the total principal amount of the reimbursement credit to be received by these two districts is \$664,475. The reimbursement credits, which include interest, to these two districts will be provided in 306 equal monthly credits to be applied against all fees, rates and charges due to the Authority for groundwater pumpage and/or surface water purchased. The monthly reimbursement credit received by these two districts for this capital contribution is \$3,707.

During 2008, and pursuant to the Resolution, the Authority received a capital contribution from West Park Municipal District in the amount of \$392,628. With the addition of an issuance cost component, the total principal amount of the reimbursement credit to be received by this one district is \$396,454. The reimbursement credit, which includes interest, to this one district will be provided in 310 equal monthly credits to be applied against all fees, rates and charges due to the Authority for groundwater pumpage and/or surface water purchased. The monthly reimbursement credit received by this one district for this capital contribution is \$2,222.

During 2010, and pursuant to the Resolution, the Authority received capital contributions from Mayde Creek Municipal Utility District and West Park Municipal District in the amount of \$1,343,665. With the addition of an issuance cost component, the total principal amount of the reimbursement credit to be received by these two districts is \$1,359,219. The reimbursement credits, which include interest, to these two districts will be provided in 310 equal monthly credits to be applied against all fees, rates and charges due to the Authority for groundwater pumpage and/or surface water purchased. The monthly reimbursement credit received by these two districts for this capital contribution is \$7,479.

During 2015, and pursuant to the Resolution, the Authority received capital contributions from Memorial Municipal Utility District and West Park Municipal District in the amount of \$1,411,356. With the addition of an issuance cost component, the total principal amount of the reimbursement credit to be received by these two districts is \$1,428,292. The reimbursement credits, which include interest, to these two districts will be provided in 300 equal monthly credits to be applied against all fees, rates and charges due to the Authority for groundwater pumpage and/or surface water purchased. The monthly reimbursement credit received by these two districts for this capital contribution is \$7,264.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 7. WATER TRUNKLINE FINANCING AGREEMENT/RESOLUTION AUTHORIZING CAPITAL ADVANCE AND REIMBURSEMENT PROCEDURE (Continued)

During the current fiscal year, the interest cost on all the contribution credits was \$381,297. The following is a schedule of the credits and interest to be given by the Authority.

Fiscal Year	Principal	Interest	Total
2017	\$ 414,752	\$ 363,044	\$ 777,796
2018	433,849	343,947	777,796
2019	453,829	323,967	777,796
2020	474,732	303,064	777,796
2021	496,603	281,193	777,796
2022-2026	2,848,158	1,040,822	3,888,980
2027-2031	2,176,360	404,102	2,580,462
2032-2036	745,173	125,332	870,505
2037-2040	324,013	24,659	348,672
	<u>\$ 8,367,469</u>	<u>\$ 3,210,130</u>	<u>\$ 11,577,599</u>
Payable Within			
One Year	<u>\$ 414,752</u>	<u>\$ 363,044</u>	<u>\$ 777,796</u>
Payable After			
One Year	<u>\$ 7,952,717</u>	<u>\$ 2,847,086</u>	<u>\$ 10,799,803</u>

The changes in the amount due to participants by the Authority during the fiscal year ended December 31, 2016, are summarized as follows:

Due to Other Governmental Units-January 1, 2016	\$ 8,763,968
Less: Capital Contribution Credits Applied in the Current Fiscal Year	<u>396,499</u>
Due to Other Governmental Units-December 31, 2016	<u>\$ 8,367,469</u>

NOTE 8. GROUNDWATER REDUCTION PLAN PARTICIPATION AGREEMENT

On April 30, 2002, the Authority entered into Groundwater Reduction Plan Participation Agreements ("GRPPA") with Trail of the Lakes Municipal Utility District, Harris County Municipal Utility District No. 46, Harris County Municipal Utility District No. 106, Harris County Municipal Utility District No. 132, Harris County Municipal Utility District No. 151, Harris County Municipal Utility District No. 152, Harris County Municipal Utility District No. 180, Harris County Municipal Utility District No. 290, and Harris County Municipal Utility District No. 292 (the "GRPPA Districts"). The GRPPA Districts are located outside the Authority's boundaries. The Authority agreed to include the GRPPA Districts into the Authority's groundwater reduction plan as non-voting members, and the GRPPA Districts agreed to pay the Authority the monthly groundwater pumpage fee, and if the Authority delivers surface water to them, the monthly surface water fee.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 9. WATER SUPPLY CONTRACT WITH THE CITY OF HOUSTON

On April 8, 2003, the Authority entered into a Water Supply Contract (the "Contract") with the City of Houston (the "City"). Under the Contract, the Authority purchases potable treated surface water from the City for distribution and use for domestic, commercial and other purposes. The City is responsible for the design, construction, ownership, maintenance and operation of the Untreated Water Facilities and the Treated Water Facilities upstream from the point(s) of delivery. The Authority is responsible for the design, construction, ownership, maintenance and operation of all facilities downstream of the point(s) of delivery. The City will make available to the Authority at the point(s) of delivery the amount of water that equals the Water Demand Allocation, which is currently 28.25 million gallons per day ("mgd").

In 2003, the Authority paid \$51,440,991 for the Treated Water Facilities Capital Contribution for the initial 18.25 mgd Treated Water Facilities Demand Allocation. In addition, prior to December 31, 2009, the Authority paid the City \$12,833,590 for the Untreated Water Facilities Demand Allocation for its initial 18.25 mgd.

The Authority may submit a reservation request to the City for an increase in its Water Facilities Demand Allocation and make appropriate payment for the approved reservation increase. In 2006, the Authority obtained City approval of an additional 10 mgd reservation request and the Authority paid the City an additional \$33,374,275 for the 10 mgd increase in its Treated Water Facilities Demand Allocation to bring the total Treated Water Facilities Demand Allocation to 28.25 mgd. The Authority paid the City \$7,032,104 in April of 2010 for its 10 mgd increase in the Untreated Water Facilities Demand Allocation. In the event the City constructs or acquires New Untreated Water Facilities, the Authority is also responsible to annually pay the City for the Authority's share of the City's annual debt service for the New Untreated Water Facilities.

The Authority is required to reimburse the City on a periodic basis for the expenses incurred by the City in producing and treating the water delivered to the Authority. The City is required to engage an independent auditor on an annual basis to true-up the costs charged to the Authority. During the current fiscal year, the Authority recorded an expense of \$6,373,629 for purchased water, which was partially offset by a credit from the City in the amount of \$229,175 for the years 2015 and 2016 true-ups.

Effective January 30, 2009, the Authority and the City entered into the First Supplement to the Water Supply Contract, as amended January 22, 2013 (the "First Supplement"), to increase the supply of untreated surface water available to the Authority, the City and the other participating regional water authorities through the construction of the Luce Bayou Interbasin Transfer Project ("Luce Bayou"). When completed, Luce Bayou will convey approximately 400 mgd of untreated surface water from the Trinity River to Lake Houston. The First Supplement and Water Supply Contract remain in effect until January 1, 2080.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 9. WATER SUPPLY CONTRACT WITH THE CITY OF HOUSTON
(Continued)

Under the terms of the First Supplement, the Authority will make the following payments to the City:

Lump Sum Payments for Right-of-Way Costs. The Authority paid the City a lump sum payment for its share of Luce Bayou rights-of-way costs in three payments as follows: (1) \$1,110,000, which was paid in 2009, (2) \$555,000 was paid in 2010, and (3) \$555,000 was paid in 2012. At the completion of right-of-way acquisition, a "true-up" was required to be performed such that the Authority received a reimbursement of \$139,417 including interest for the amount overpaid. This was recorded as a reduction to Capital Assets- Interest in Joint Facilities in the financial statements.

Payments for Existing Untreated Water Facilities. The Authority seeks to increase its Untreated Water Facilities Demand Allocation from 28.25 mgd to 110.3 mgd, which is currently estimated to be the Authority's surface water demand in the year 2040. Under the terms of the First Supplement, the Authority is required to make four payments to the City for Existing Untreated Water Facilities.

Each payment is based on a formula defined in the First Supplement based on the Authority's water demand needs in 2025, 2030, 2035 and 2040. The payments are due as follows: (1) the first payment is due at the time Luce Bayou has been completed; (2) the second payment is due upon the earlier of (i) June 30, 2025, or (ii) when the Authority needs its 2030 water demand; (3) the third payment is due upon the earlier of (i) June 30, 2030, or (ii) when the Authority needs its 2035 water demand; and (4) the fourth payment is due upon the earlier of (i) June 30, 2035, or (ii) when the Authority needs its 2040 water demand.

Payment for Phases 1 and 2 Annual New Untreated Water Facilities. Payments made to the City for Phase 1 and 2 Annual New Untreated Water Facilities are to be used only for the purpose of making debt service payments on obligations issued for the construction of Phase 1 and Phase 2 of Luce Bayou. The formulas used to calculate payments are defined in the contract and take into consideration the Authority's 110.3 mgd Untreated Water Facilities Demand Allocation (comprised of the Authority's current 28.25 mgd plus an additional 82.05 mgd upon completion of Luce Bayou), the total amount of untreated water sold by the City to all customers and the City's annual debt service requirement. During the current year, the Authority paid the City \$49,546 for its share of the Luce Bayou State Participation Loan Annual payment.

Effective February 25, 2015, the Authority and the City executed the Second Supplement to the Water Supply Contract (the "Second Supplement") to provide for sharing the cost to construct additional treated water facilities to add 320 mgd of treated water capacity to Houston's Northeast Water Purification Plant ("NEWPP"). The Authority seeks to increase its Treated Water Facilities Demand Allocation from 28.25 mgd to 110.67 mgd.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 9. WATER SUPPLY CONTRACT WITH THE CITY OF HOUSTON
(Continued)

Under the terms of the Second Supplement:

- The parties intend Houston to cause Phase 1 to be substantially complete not later than August 31, 2021 for 80 mgd of treated water capacity, of which the Authority made a reservation for 17.03 mgd
- The parties intend Houston to cause Phase 2 to be substantially complete not later than June 30, 2024 for 240 mgd of treated water capacity, of which the Authority made a reservation for 65.39 mgd
- As stipulated by the Second Supplement, the Authority paid to the City \$471,011 for costs incurred by Houston prior to December 1, 2014
- Total cash calls due from the Authority are estimated to be \$326,995,224 through 2025
- Cash Call No. 1 in the amount of \$1,796,543, Cash Call No. 2 in the amount of \$1,702,385, Cash Call No. 2B in the amount of \$1,205,973 and Cash Call No. 4 & 4A in the amount of \$4,120,960 were paid to the City by the Authority to be used toward the costs of the NEWPP expansion
- The Central Harris County Regional Water Authority, North Fort Bend Water Authority, and North Harris County Regional Water Authority (“Other Authorities”) are also participating in the 320 mgd expansion to the NEWPP and Houston has entered into agreements (“Other Second Supplements”) with them that are similar to the Authority’s Second Supplement
- The Other Authorities are third party beneficiaries to the Authority’s Second Supplement, with the right to enforce Houston’s and the Authority’s respective obligations thereunder, and the Authority is a third party beneficiary to the Other Second Supplements with the right to enforce Houston’s and the Other Authorities’ respective obligations thereunder.

The NEWPP expansion project cost estimate, phasing, and estimated delivery dates described above are based on various project-scope, cost, and schedule assumptions, which assumptions will be revised from time to time throughout the course of the project. These assumptions are currently being reviewed by the parties participating in the project and it is expected that, upon completion of this review, the cost estimate for the NEWPP expansion project may increase beyond the current estimate, the phasing may be adjusted, and the estimated delivery dates may be delayed. These revisions to the cost estimate and delivery dates could substantially increase the cost of the project and delay completion of the project.

On November 10, 2015, the Authority and the City executed the Third Supplement to the Water Supply Contract to provide for sharing the cost to construct a segment of water transmission lines known as the Segment 1 or Northeast Transmission Line (NETL) Project. This project is to be substantially complete not later than September 1, 2020. The Authority’s NETL Project reservation is 82.42 mgd

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 9. WATER SUPPLY CONTRACT WITH THE CITY OF HOUSTON
(Continued)

The Authority's estimated share of the total costs is approximately \$3,652,504. The City will invoice the Authority prior to engaging a design engineer and after the City's Utility Official has selected a construction contractor to whom the Utility Official will recommend the City award the construction contract. During 2016, the Authority made payments under the Third Supplement for the NETL Project in the amount of \$525,821.

NOTE 10. WATER CONSERVATION CREDITS

The Authority participates in the Water Wise program sponsored by the Harris Galveston Subsidence District (the "Subsidence District"). The Authority receives a Certificate of Deposit water conservation credit equal to 84,000 gallons of groundwater (which equals 1,400 gallons per month for five years) for each student sponsored. Redemption of the Certificate of Deposit requires the Subsidence District to increase the redeemer's groundwater allocation by the amount of the water conservation credit, provided however that Certificates of Deposit issued beginning with the 2001-2002 school year (Series B) may only be applied to a maximum of thirty percent of the permittee's total water demand. The Authority began purchasing water conservation credits from other entities in 2002. The cost paid to the Subsidence District to sponsor each student and the cost paid to other entities to purchase water conservation credits is recorded as an asset and will be expensed in the year in which the credit(s) are redeemed. The Authority also sells credits to other entities. As of December 31, 2016, the Authority's investment in the water conservation credits is \$1,853,488.

NOTE 11. JOINT FACILITIES AGREEMENT

The Authority and North Fort Bend Water Authority (the "Fort Bend Authority") entered into a Joint Facilities Agreement dated July 1, 2011, as amended March 1, 2012, (the "Agreement") to jointly design, acquire, construct, finance, operate and maintain (i) certain booster pump stations and water transmission facilities in the Mission Bend area to receive water from the City for ultimate delivery to the authorities' respective customers, and (ii) the Surface Water Supply Project described below.

Segments 0 & 1A. The Fort Bend Authority is responsible for the design and construction of Segments 0 & 1A. The Authority will pay to the Fort Bend Authority its pro rata share of total project costs which varies depending on the segment. The Fort Bend Authority will own and operate the segments for the benefit of both parties. Each authority will have an equitable interest to the extent of its pro rata share.

Bellaire Pump Station. The Fort Bend Authority is responsible for the purchase of land for the Bellaire Pump Station as well as the design and construction of Phases 1 and 2. In 2011, the Authority paid the Fort Bend Authority \$364,550 for its portion of realty costs associated with the Bellaire Pump Station, which is included in the Authority's capital asset schedule.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 11. JOINT FACILITIES AGREEMENT (Continued)

The Authority was invoiced for its estimated share of construction costs of Phase 1 based on its current pro-rata share of 8%, plus its share of Phase 1 facilities that are over-sized for the Authority's future needs. In 2012, the Authority paid \$6,201,866 to the Fort Bend Authority for its portion of the estimated share of these costs. The Fort Bend Authority will own and operate the Bellaire Pump Station for the benefit of both parties. Each authority will have an equitable interest to the extent of its pro rata share.

During the 2015 fiscal year, The Fort Bend Authority performed a reconciliation and final accounting of Segments 0 and 1A project costs and Phase I the Bellaire Pump Station costs as required by the Agreement. Based on the final accounting, the Authority recorded \$933,681 as Due to Other Authority for its remaining pro-rata share of the projects.

Phase 2 is planned to add capacity to the Bellaire Pump Station for the benefit of the Authority. The Fort Bend Authority will design and construct Phase 2 provided that the Authority pays all Phase 2 project costs. The Fort Bend Authority will invoice the Authority for 100% of Phase 2 design and construction costs.

Surface Water Supply Project (formerly known as the Second Source Waterline). This project consists of water mains, pump stations, re-pump stations, re-pressurization stations and related appurtenances needed to convey water from the City's NEWPP to the authorities. The Surface Water Supply Project is required to be completed no later than June 30, 2024. The Authority will own and operate the Surface Water Supply Project for the benefit of both parties. Each authority will have an equitable interest to the extent of its pro rata share.

The Authority will invoice itself and the Fort Bend Authority for each authority's respective pro-rata share of realty acquisition costs, engineering costs, and construction costs, which invoices are required to be paid pursuant to the terms of the Agreement. All deposits are to be deposited into a separate bank account and the bookkeeper will provide monthly reports of the application of each authority's payment for project costs and of related interest earnings.

The responsible authority, which means the Fort Bend Authority for Segment 0, Segment 1A, and the Bellaire Pump Station and the Authority for the Surface Water Supply Project, will maintain, repair and operate the joint facilities for which it is responsible. Prior to the joint facilities going into service, each authority will pay their respective shares of operation and maintenance expenses which will be allocated based on the authorities' pro-rata share of the applicable joint facility. After the facilities go into service, each authority will pay a fraction of the monthly operation and maintenance expenses based on the amount of water received.

Each authority is required to establish a separate joint facilities account. All funds received and any expenses related to the joint facilities shall be accounted for through this account. Each month, the responsible authority will provide a bill to each authority for its respective share of the actual expenses made from the joint facilities account. Additionally, an initial deposit of one fourth of the annual budget prepared for the joint facilities account will be billed. The

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 11. JOINT FACILITIES AGREEMENT (Continued)

authorities will establish a capital replacement account for each joint facility, and the amount and timing of funding of this account will be mutually agreed upon.

As required by the Agreement, the Authority established the Surface Water Supply Project fund to account for project costs associated with the Surface Water Supply Project. The Fort Bend Authority has deposited a total of \$10,364,862 into this account for its portion of the estimated Surface Water Supply Project realty costs. As of December 31, 2016, the remaining balance from these advances is \$865,485 which is recorded as a construction advance.

Additionally, the Fort Bend Authority and the Authority deposited \$8,585 and \$12,665 respectively into the joint facilities account for its portion of the operating reserve. During the current year, the Fort Bend Authority was billed \$125,295 for its share of operation and maintenance expenses related to the joint facilities.

Water Improvement Fund Bonds. The Authority is authorized to issue bonds financed through the Water Improvement Fund (WIF) of the Texas Water Development Board (TWDB) to fund a portion of the Surface Water Supply Project costs. Debt service requirements for these bonds will be shared between the Authority and the Fort Bend Authority on a pro-rata basis. The Fort Bend Authority is required to make two payments to the Authority each year equal to the Fort Bend Authority's pro-rata share of the annual debt service on the bonds. In 2012, the Authority issued its \$41,965,000 Series 2012 Water System Revenue Bonds to the TWDB related to this Agreement. The Fort Bend Authority's pro-rata share of these bonds is \$18,842,285, which was recorded as an asset and a deferred inflow of resources on the Statement of Net Position. During the current year, the Fort Bend Authority paid the Authority \$1,095,839 for its pro-rata share of the annual debt service payment and paying agent fees, which consists of a principal reduction of \$936,165 and an interest component of \$157,987. As of December 31, 2016, the outstanding balance of the receivable and deferred inflow is \$14,738,425.

The Fort Bend Authority's share of the debt service requirements on the WIF bonds is as follows:

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2017	\$ 936,165	\$ 157,987	\$ 1,094,152
2018	936,165	157,987	1,094,152
2019	936,165	156,677	1,092,842
2020	940,655	153,868	1,094,523
2021	945,145	149,072	1,094,217
2022-2026	4,853,690	616,018	5,469,708
2027-2031	5,190,440	276,194	5,466,634
	<u>\$ 14,738,425</u>	<u>\$ 1,667,803</u>	<u>\$ 16,406,228</u>

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2016

NOTE 12. RISK MANAGEMENT

The Authority is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; and natural disasters for which the Authority carries commercial insurance. There were no significant reductions in insurance coverage from the prior year and settlements have not exceeded coverage in the past three years.

NOTE 13. UNUSED LETTER OF CREDIT

The Authority is required to issue an Irrevocable Standby Letter of Credit in the amount of \$1,000,000 for the benefit of CenterPoint Energy Houston Electric, LLC. The letter of credit was amended to extend the expiration date to February 13, 2018.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

SUPPLEMENTARY INFORMATION -- REQUIRED BY THE

WATER DISTRICT FINANCIAL MANAGEMENT GUIDE

DECEMBER 31, 2016

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
SERVICES AND RATES
FOR THE YEAR ENDED DECEMBER 31, 2016**

1. SERVICES PROVIDED BY THE DISTRICT DURING THE FISCAL YEAR:

<input type="checkbox"/> Retail Water	<input checked="" type="checkbox"/> Wholesale Water	<input type="checkbox"/> Drainage
<input type="checkbox"/> Retail Wastewater	<input type="checkbox"/> Wholesale Wastewater	<input type="checkbox"/> Irrigation
<input type="checkbox"/> Parks / Recreation	<input type="checkbox"/> Fire Protection	<input type="checkbox"/> Security
<input type="checkbox"/> Solid Waste / Garbage	<input type="checkbox"/> Flood Control	<input type="checkbox"/> Roads
<input type="checkbox"/> Participates in joint venture, regional system and/or wastewater service (other than emergency interconnect)		
<input checked="" type="checkbox"/> Other (Specify): Ground Water Reduction Plan Services		

2. WHOLESALE RATES FOR SURFACE WATER:

Based on rate order approved November 11, 2015:

	<u>Minimum Charge</u>	<u>Minimum Usage</u>	<u>Flat Rate Y/N</u>	<u>Rate per 1,000 Gallons Over Minimum Usage</u>	<u>Usage Levels</u>
SURFACE WATER:	\$ -0-	0,001	N	2.65*	0,001 and up
GROUND WATER REDUCTION PLANS FEE:					
	\$ -0-	0,001	N	2.25*	0,001 and up

*Effective January 1, 2017, the rate for surface water increased to \$2.85 and the rate for groundwater reduction plan fee increased to \$2.45.

3. TOTAL WATER CONSUMPTION DURING THE FISCAL YEAR ROUNDED TO THE NEAREST THOUSAND: (UNAUDITED)

	Water Accountability Ratio: 98% (Gallons billed and sold/Gallons pumped and purchased)
Gallons purchased:	8,353,910,000 From: City of Houston
Gallons sold to participants:	8,216,795,600

See accompanying independent auditor's report.

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
SERVICES AND RATES
FOR THE YEAR ENDED DECEMBER 31, 2016**

4. STANDBY FEES (authorized only under TWC Section 49.231) (Not Applicable)

5. LOCATION OF DISTRICT

Is the Authority located entirely within one county?

Yes _____ No X

County or Counties in which the Authority is located:

Harris County, Texas and Fort Bend County, Texas

Is the Authority located within a city?

Entirely _____ Partly X Not at all _____

Is the Authority located within a city's extra territorial jurisdiction (ETJ)?

Entirely _____ Partly X Not at all _____

ETJs in which the Authority is located:

City of Houston, Texas and City of Katy, Texas

Are Board members appointed by an office outside the Authority?

Yes X No _____

Pursuant to the Act, the water districts and municipalities within each of the nine director precincts within the Authority appoint the director for that precinct.

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
EXPENSES
DECEMBER 31, 2016

PERSONNEL EXPENDITURES (Including Benefits):	<u>\$</u>	<u>-0-</u>
PROFESSIONAL FEES:		
Auditing		55,900
Accounting		21,000
Engineering		1,886,472
Legal		653,851
Risk Management Services		70,000
Rate Study		25,000
TOTAL PROFESSIONAL FEES	<u>\$</u>	<u>2,712,223</u>
PURCHASED SERVICES FOR RESALE:		
Purchased Water	<u>\$</u>	<u>6,373,629</u>
CONTRACTED SERVICES:		
Bookkeeping	\$	208,068
Operations		424,600
Website and Communications		186,371
Paying Agent		25,800
TOTAL CONTRACTED SERVICES	<u>\$</u>	<u>844,839</u>
UTILITIES:		
Electricity	<u>\$</u>	<u>533,677</u>
REPAIRS AND MAINTENANCE	<u>\$</u>	<u>808,312</u>
OTHER EXPENSES:		
Director Fees	\$	54,050
Dues		1,108
Insurance		151,656
Laboratory Fees		33,523
Office Supplies and Postage		5,459
Other		721
Permit Fees		303,623
Legal Notices & Publications		91,343
Payroll Taxes		4,290
Travel and Meetings		14,062
TOTAL OTHER EXPENSES	<u>\$</u>	<u>659,835</u>

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
EXPENSES
DECEMBER 31, 2016

DEPRECIATION/AMORTIZATION:

Amortized Capital Contributions to City of Houston	\$ 1,261,381
Depreciation	4,108,296
TOTAL DEPRECIATION/AMORTIZATION	<u>\$ 5,369,677</u>

TOTAL OPERATING EXPENSES	<u>\$ 17,302,192</u>
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NON-OPERATING EXPENSES

Professional Fees	1,845,302
Reimbursement for Chloramine Conversions	291,615
Bond Issuance Costs	1,650,397
City of Houston Luce Bayou Debt Service	49,546
Interest Expense	11,173,035
TOTAL NON-OPERATING EXPENSES	<u>\$ 15,009,895</u>

TOTAL EXPENSES	<u><u>\$ 32,312,087</u></u>
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See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
INVESTMENTS
DECEMBER 31, 2016

<u>Funds</u>	<u>Identification or Certificate Number</u>	<u>Interest Rate</u>	<u>Maturity Date</u>	<u>Balance at End of Year</u>	<u>Accrued Interest Receivable at End of Year</u>
<u>ENTERPRISE FUND</u>					
Investment Pools:					
TexSTAR	XXXXXX1111	0.4815%	Daily	\$ 10,278,389	\$ -
TexSTAR	XXXXXX2550	0.4815%	Daily	15,797,875	
TexSTAR	XXXXXX2560	0.4815%	Daily	25,119	
TexSTAR	XXXXXX2561	0.4815%	Daily	25,119	
TexSTAR	XXXXXX0160	0.4815%	Daily	28,713,890	
TexSTAR	XXXXXX0161	0.4815%	Daily	32,018,868	
Fidelity Institutional Money Market Treasury Portfolio Fund:					
Regions Bank	XXXXXX5410	0.0100%	Daily	81,560	
Regions Bank	XXXXXX0834	0.0100%	Daily	2,114,751	
Regions Bank	XXXXXX0816	0.0100%	Daily	7,505,063	
Regions Bank	XXXXXX0843	0.0100%	Daily	7,862,202	
Regions Bank	XXXXXX5429	0.0100%	Daily	2,505,779	
Regions Bank	XXXXXX6543	0.0100%	Daily	943,166	
Regions Bank	XXXXXX6696	0.0100%	Daily	1,429,748	
Certificates of Deposits:					
Icon Bank	XX7237	0.90%	11/17/2017	245,000	266
Central Bank	XXXX0277	0.75%	11/13/2017	1,009,547	996
TOTAL - ENTERPRISE FUND				<u>\$ 110,556,076</u>	<u>\$ 1,262</u>

See accompanying independent auditor's report.

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
LONG-TERM DEBT SERVICE REQUIREMENTS
DECEMBER 31, 2016**

Due During Fiscal Years Ending December 31	SERIES - 2007		
	Principal Due December 15	Interest Due June 15/ December 15	Total
2017	\$ 2,035,000	\$ 1,053,738	\$ 3,088,738
2018	2,115,000	972,338	3,087,338
2019	2,220,000	866,588	3,086,588
2020	2,340,000	755,588	3,095,588
2021	2,450,000	638,588	3,088,588
2022	2,570,000	516,088	3,086,088
2023	2,690,000	402,088	3,092,088
2024	2,815,000	274,313	3,089,313
2025	2,960,000	140,600	3,100,600
TOTAL	\$ 22,195,000	\$ 5,619,929	\$ 27,814,929

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
LONG-TERM DEBT SERVICE REQUIREMENTS
DECEMBER 31, 2016

Due During Fiscal Years Ending December 31	SERIES - 2009		
	Principal Due December 15	Interest Due June 15/ December 15	Total
2017	\$ 1,770,000	\$ 2,506,350	\$ 4,276,350
2018	1,855,000	2,417,850	4,272,850
2019	1,950,000	2,325,100	4,275,100
2020	2,045,000	2,227,600	4,272,600
2021	2,130,000	2,145,800	4,275,800
2022	2,215,000	2,060,600	4,275,600
2023	2,325,000	1,949,850	4,274,850
2024	2,415,000	1,856,850	4,271,850
2025	2,515,000	1,760,250	4,275,250
2026	2,640,000	1,634,500	4,274,500
2027	2,770,000	1,502,500	4,272,500
2028	2,905,000	1,364,000	4,269,000
2029	3,050,000	1,218,750	4,268,750
2030	3,185,000	1,083,750	4,268,750
2031	3,345,000	924,500	4,269,500
2032	3,515,000	757,250	4,272,250
2033	3,690,000	581,500	4,271,500
2034	3,875,000	397,000	4,272,000
2035	4,065,000	203,250	4,268,250
TOTAL	\$ 52,260,000	\$ 28,917,250	\$ 81,177,250

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
LONG-TERM DEBT SERVICE REQUIREMENTS
DECEMBER 31, 2016

Due During Fiscal Years Ending December 31	SERIES - 2 0 1 2		
	Principal Due December 15	Interest Due June 15/ December 15	Total
2017	\$ 2,085,000	\$ 351,865	\$ 2,436,865
2018	2,085,000	351,865	2,436,865
2019	2,085,000	348,946	2,433,946
2020	2,095,000	342,691	2,437,691
2021	2,105,000	332,006	2,437,006
2022	2,120,000	317,271	2,437,271
2023	2,135,000	299,252	2,434,252
2024	2,160,000	277,048	2,437,048
2025	2,185,000	252,424	2,437,424
2026	2,210,000	225,985	2,435,985
2027	2,240,000	196,592	2,436,592
2028	2,270,000	164,112	2,434,112
2029	2,310,000	124,160	2,434,160
2030	2,350,000	85,814	2,435,814
2031	2,390,000	44,454	2,434,454
TOTAL	\$ 32,825,000	\$ 3,714,485	\$ 36,539,485

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
LONG-TERM DEBT SERVICE REQUIREMENTS
DECEMBER 31, 2016

Due During Fiscal Years Ending December 31	SERIES - 2 0 1 3		
	Principal Due December 15	Interest Due June 15/ December 15	Total
2017	\$ 4,080,000	\$ 1,555,200	\$ 5,635,200
2018	4,205,000	1,432,800	5,637,800
2019	4,370,000	1,264,600	5,634,600
2020	4,545,000	1,089,800	5,634,800
2021	4,730,000	908,000	5,638,000
2022	4,965,000	671,500	5,636,500
2023	5,185,000	448,250	5,633,250
2024	3,780,000	189,000	3,969,000
TOTAL	\$ 35,860,000	\$ 7,559,150	\$ 43,419,150

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
LONG-TERM DEBT SERVICE REQUIREMENTS
DECEMBER 31, 2016

Due During Fiscal Years Ending December 31	SERIES - 2014		
	Principal Due December 15	Interest Due June 15/ December 15	Total
2017	\$ 2,970,000	\$ 1,750,813	\$ 4,720,813
2018	3,090,000	1,632,013	4,722,013
2019	3,155,000	1,570,213	4,725,213
2020	3,275,000	1,444,013	4,719,013
2021	3,410,000	1,313,013	4,723,013
2022	2,305,000	1,223,500	3,528,500
2023		1,108,250	1,108,250
2024	3,875,000	1,108,250	4,983,250
2025	4,070,000	914,500	4,984,500
2026		711,000	711,000
2027	4,510,000	711,000	5,221,000
2028	4,735,000	485,500	5,220,500
2029	4,975,000	248,750	5,223,750
TOTAL	\$ 40,370,000	\$ 14,220,815	\$ 54,590,815

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
LONG-TERM DEBT SERVICE REQUIREMENTS
DECEMBER 31, 2016

Due During Fiscal Years Ending December 31	SERIES - 2015		
	Principal Due December 15	Interest Due June 15/ December 15	Total
2017	\$ 830,000	\$ 297,437	\$ 1,127,437
2018	835,000	294,283	1,129,283
2019	840,000	289,607	1,129,607
2020	850,000	283,559	1,133,559
2021	855,000	276,164	1,131,164
2022	865,000	267,529	1,132,529
2023	880,000	257,495	1,137,495
2024	895,000	246,055	1,141,055
2025	905,000	233,614	1,138,614
2026	925,000	220,310	1,145,310
2027	940,000	205,140	1,145,140
2028	960,000	188,126	1,148,126
2029	980,000	169,310	1,149,310
2030	1,000,000	148,731	1,148,731
2031	1,025,000	126,731	1,151,731
2032	1,050,000	103,360	1,153,360
2033	1,075,000	79,000	1,154,000
2034	1,100,000	53,523	1,153,523
2035	1,130,000	27,233	1,157,233
TOTAL	\$ 17,940,000	\$ 3,767,207	\$ 21,707,207

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
LONG-TERM DEBT SERVICE REQUIREMENTS
DECEMBER 31, 2016

Due During Fiscal Years Ending December 31	SERIES - 2015 A		
	Principal Due	Interest Due	Total
	December 15	June 15/ December 15	
2017	\$ 1,585,000	\$ 2,613,331	\$ 4,198,331
2018	1,650,000	2,549,931	4,199,931
2019	2,315,000	2,467,431	4,782,431
2020	2,430,000	2,351,681	4,781,681
2021	2,555,000	2,230,181	4,785,181
2022	2,680,000	2,102,432	4,782,432
2023	2,820,000	1,968,432	4,788,432
2024	2,960,000	1,827,431	4,787,431
2025	3,095,000	1,679,431	4,774,431
2026	3,250,000	1,524,681	4,774,681
2027	3,375,000	1,362,181	4,737,181
2028	3,560,000	1,193,431	4,753,431
2029	3,710,000	1,051,031	4,761,031
2030	3,865,000	902,631	4,767,631
2031	1,025,000	748,031	1,773,031
2032	1,055,000	714,719	1,769,719
2033	1,090,000	679,113	1,769,113
2034	1,130,000	642,325	1,772,325
2035	1,165,000	604,187	1,769,187
2036	1,210,000	563,413	1,773,413
2037	1,255,000	518,038	1,773,038
2038	1,300,000	470,975	1,770,975
2039	1,350,000	422,225	1,772,225
2040	1,400,000	371,600	1,771,600
2041	1,455,000	315,600	1,770,600
2042	1,515,000	257,400	1,772,400
2043	1,575,000	196,800	1,771,800
2044	1,640,000	133,800	1,773,800
2045	1,705,000	68,200	1,773,200
TOTAL	\$ 59,720,000	\$ 32,530,662	\$ 92,250,662

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
LONG-TERM DEBT SERVICE REQUIREMENTS
DECEMBER 31, 2016

Due During Fiscal Years Ending December 31	SERIES - 2016		
	Principal Due December 15	Interest Due June 15/ December 15	Total
2017	\$ -	\$ 943,153	\$ 943,153
2018	1,045,000	832,194	1,877,194
2019	1,050,000	825,401	1,875,401
2020	1,055,000	817,421	1,872,421
2021	1,065,000	808,559	1,873,559
2022	1,070,000	798,868	1,868,868
2023	1,080,000	788,275	1,868,275
2024	1,095,000	776,503	1,871,503
2025	1,105,000	763,363	1,868,363
2026	1,120,000	749,108	1,869,108
2027	1,130,000	733,764	1,863,764
2028	1,150,000	716,023	1,866,023
2029	1,170,000	696,588	1,866,588
2030	1,190,000	673,071	1,863,071
2031	1,215,000	647,129	1,862,129
2032	1,240,000	619,306	1,859,306
2033	1,270,000	590,414	1,860,414
2034	1,300,000	560,061	1,860,061
2035	1,330,000	527,301	1,857,301
2036	1,365,000	494,051	1,859,051
2037	1,400,000	459,380	1,859,380
2038	1,440,000	421,440	1,861,440
2039	1,480,000	382,416	1,862,416
2040	1,520,000	342,308	1,862,308
2041	1,565,000	301,116	1,866,116
2042	1,605,000	258,704	1,863,704
2043	1,655,000	209,912	1,864,912
2044	1,700,000	159,600	1,859,600
2045	1,750,000	107,920	1,857,920
2046	1,800,000	54,720	1,854,720
TOTAL	\$ 37,960,000	\$ 17,058,069	\$ 55,018,069

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
LONG-TERM DEBT SERVICE REQUIREMENTS
DECEMBER 31, 2016

Due During Fiscal Years Ending December 31	SERIES - 2 0 1 6 A		
	Principal Due	Interest Due	Total
	December 15	June 15/ December 15	
2017	\$ -	\$ 1,429,748	\$ 1,429,748
2018		1,458,100	1,458,100
2019		1,458,100	1,458,100
2020	610,000	1,458,100	2,068,100
2021	640,000	1,427,600	2,067,600
2022	670,000	1,395,600	2,065,600
2023	705,000	1,362,100	2,067,100
2024	740,000	1,326,850	2,066,850
2025	780,000	1,289,850	2,069,850
2026	815,000	1,250,850	2,065,850
2027	860,000	1,210,100	2,070,100
2028	900,000	1,167,100	2,067,100
2029	945,000	1,122,100	2,067,100
2030	995,000	1,074,850	2,069,850
2031	1,045,000	1,025,100	2,070,100
2032	1,095,000	972,850	2,067,850
2033	1,150,000	918,100	2,068,100
2034	1,205,000	860,600	2,065,600
2035	1,265,000	800,350	2,065,350
2036	1,330,000	737,100	2,067,100
2037	1,395,000	670,600	2,065,600
2038	1,455,000	614,800	2,069,800
2039	1,510,000	556,600	2,066,600
2040	1,570,000	496,200	2,066,200
2041	1,635,000	433,400	2,068,400
2042	1,700,000	368,000	2,068,000
2043	1,765,000	300,000	2,065,000
2044	1,840,000	229,400	2,069,400
2045	1,910,000	155,800	2,065,800
2046	1,985,000	79,400	2,064,400
TOTAL	\$ 32,515,000	\$ 27,649,348	\$ 60,164,348

See accompanying independent auditor's report.

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
LONG-TERM DEBT SERVICE REQUIREMENTS
DECEMBER 31, 2016**

ANNUAL REQUIREMENT
FOR ALL SERIES

Due During Fiscal Years Ending December 31	Total Principal Due	Total Interest Due	Total Principal and Interest Due
2017	\$ 15,355,000	\$ 12,501,635	\$ 27,856,635
2018	16,880,000	11,941,374	28,821,374
2019	17,985,000	11,415,986	29,400,986
2020	19,245,000	10,770,453	30,015,453
2021	19,940,000	10,079,911	30,019,911
2022	19,460,000	9,353,388	28,813,388
2023	17,820,000	8,583,992	26,403,992
2024	20,735,000	7,882,300	28,617,300
2025	17,615,000	7,034,032	24,649,032
2026	10,960,000	6,316,434	17,276,434
2027	15,825,000	5,921,277	21,746,277
2028	16,480,000	5,278,292	21,758,292
2029	17,140,000	4,630,689	21,770,689
2030	12,585,000	3,968,847	16,553,847
2031	10,045,000	3,515,945	13,560,945
2032	7,955,000	3,167,485	11,122,485
2033	8,275,000	2,848,127	11,123,127
2034	8,610,000	2,513,509	11,123,509
2035	8,955,000	2,162,321	11,117,321
2036	3,905,000	1,794,564	5,699,564
2037	4,050,000	1,648,018	5,698,018
2038	4,195,000	1,507,215	5,702,215
2039	4,340,000	1,361,241	5,701,241
2040	4,490,000	1,210,108	5,700,108
2041	4,655,000	1,050,116	5,705,116
2042	4,820,000	884,104	5,704,104
2043	4,995,000	706,712	5,701,712
2044	5,180,000	522,800	5,702,800
2045	5,365,000	331,920	5,696,920
2046	3,785,000	134,120	3,919,120
TOTAL	\$ 331,645,000	\$ 141,036,915	\$ 472,681,915

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
CHANGES IN LONG-TERM BOND DEBT
DECEMBER 31, 2016

Description	Original Bonds Issued	Bonds Outstanding January 1, 2016
West Harris County Regional Water Authority Water System Revenue Bonds - Series 2007	\$ 53,855,000	\$ 45,165,000
West Harris County Regional Water Authority Water System Revenue Bonds - Series 2009	60,000,000	53,940,000
West Harris County Regional Water Authority Water System Revenue Bonds - Series 2012	41,965,000	34,910,000
West Harris County Regional Water Authority Water System Revenue Refunding Bonds - Series 2013	35,860,000	35,860,000
West Harris County Regional Water Authority Water System Revenue Refunding Bonds - Series 2014	46,030,000	43,225,000
West Harris County Regional Water Authority Water System Junior Lien Revenue Bonds - Series 2015	18,740,000	18,740,000
West Harris County Regional Water Authority - Water System Revenue and Revenue Refunding Bonds - Series 2015A	61,305,000	61,305,000
West Harris County Regional Water Authority Water System Junior Lien Revenue Bonds - Series 2016	37,960,000	
West Harris County Regional Water Authority Water System Revenue Bonds - Series 2016A	32,515,000	
TOTAL	<u>\$ 388,230,000</u>	<u>\$ 293,145,000</u>
Debt Service Funds as of December 31, 2016:		
Coverage Fund		\$ 7,505,063
Reserve Fund		7,862,202
Junior Lien Reserve Fund		2,505,779
Capitalized Interest		1,429,748
Junior Lien Capitalized Interest		943,166
Debt Service		2,114,751
Junior Lien Debt Service		81,560
Total		<u>\$ 22,442,269</u>
Average annual debt service payment (principal and interest) for remaining term of all bond debt (Includes Parity Bonds and Junior Lien Bonds):		<u>\$ 15,756,064</u>

See accompanying independent auditor's report.

Current Year Transactions					
Bonds Sold	Bonds Defeased	Retirements		Bonds Outstanding December 31, 2016	Paying Agent
		Principal	Interest		
\$ -	\$ 21,010,000	\$ 1,960,000	\$ 1,649,406	\$ 22,195,000	Regions Bank Houston, TX
		1,680,000	2,590,350	52,260,000	Regions Bank Houston, TX
		2,085,000	351,865	32,825,000	Regions Bank Houston, TX
			1,555,200	35,860,000	Regions Bank Houston, TX
		2,855,000	1,865,013	40,370,000	Regions Bank Houston, TX
		800,000	320,548	17,940,000	Regions Bank Houston, TX
		1,585,000	2,747,894	59,720,000	Regions Bank Houston, TX
37,960,000				37,960,000	Regions Bank Houston, TX
<u>32,515,000</u>	<u>\$ 21,010,000</u>	<u>\$ 10,965,000</u>	<u>\$ 11,080,276</u>	<u>32,515,000</u>	Regions Bank Houston, TX
<u>\$ 70,475,000</u>				<u>\$ 331,645,000</u>	
Bond Authority:		Tax Bonds	Refunding Bonds		
Amount Authorized by Voters		\$ -0-	\$ -0-		
Amount Issued		-0-	-0-		
Remaining to be Issued		\$ -0-	\$ -0-		

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
COMPARATIVE SCHEDULE OF REVENUES, EXPENSES AND CHANGES
IN NET POSITION – FIVE YEARS

	Amounts				
	2016	2015	2014	2013	2012
OPERATING REVENUES					
Pumpage Fees	\$ 32,059,687	\$ 28,036,997	\$ 25,227,627	\$ 28,098,868	\$ 26,674,006
Surface Water Sold	19,801,873	16,844,860	15,958,478	15,370,479	14,339,019
Joint Facilities Revenue	125,295	115,340	97,315	48,013	69,366
Other	18,536				
TOTAL OPERATING REVENUES	\$ 52,005,391	\$ 44,997,197	\$ 41,283,420	\$ 43,517,360	\$ 41,082,391
OPERATING EXPENSES					
Professional Fees	\$ 2,712,223	\$ 2,857,095	\$ 2,674,548	\$ 3,648,211	\$ 1,406,385
Contracted Services	844,839	652,781	7,625,159	616,728	583,099
Purchased Water Service	6,373,629	3,821,400	646,297	5,994,227	3,791,177
Utilities	533,677	498,221	533,122	445,740	462,669
Repairs and Maintenance	808,312	903,703	667,315	816,179	613,187
Depreciation/Amortization	5,369,677	5,226,934	6,747,093	6,472,044	6,115,065
Other	659,835	802,428	683,522	651,786	636,492
TOTAL OPERATING EXPENSES	\$ 17,302,192	\$ 14,762,562	\$ 19,577,056	\$ 18,644,915	\$ 13,608,074
OPERATING INCOME (LOSS)	\$ 34,703,199	\$ 30,234,635	\$ 21,706,364	\$ 24,872,445	\$ 27,474,317
NONOPERATING REVENUES (EXPENSES)					
Investment Revenues	\$ 282,226	\$ 106,123	\$ 115,146	\$ 155,668	\$ 506,885
Capital Contributions		37,151		(348,102)	899,144
Professional Fees	(1,845,302)	(733,021)			
Contracted Services		(31,925)			
Miscellaneous Revenues			18,356		100
Bond Issuance Costs	(1,650,397)	(1,528,514)	(825,875)	(684,865)	(369,500)
Interest Expense	(11,173,035)	(10,319,405)	(12,005,555)	(12,044,063)	(12,686,700)
Chloramine Conversion/Waterline Connections	(291,615)		(267,875)	(788,221)	(64,374)
Joint Facilities WIF Contribution	1,095,839	1,095,839	1,095,843	1,095,877	473,343
City of Houston Luce Bayou Debt Service	(49,546)	(24,159)			
Other		(3,566)	(20,747)	(48,525)	
TOTAL NONOPERATING REVENUES (EXPENSES)	\$ (13,631,830)	\$ (11,401,477)	\$ (11,890,707)	\$ (12,662,231)	\$ (11,241,102)
CHANGE IN NET POSITION	\$ 21,071,369	\$ 18,833,158	\$ 9,815,657	\$ 12,210,214	\$ 16,233,215
BEGINNING NET POSITION	92,818,883	73,985,725	64,170,068	51,959,854	35,726,639
ENDING IN NET POSITION	\$ 113,890,252	\$ 92,818,883	\$ 73,985,725	\$ 64,170,068	\$ 51,959,854

See accompanying independent auditor's report.

Percent of Total Revenues

2016	2015	2014	2013	2012
61.6%	62.3%	61.1%	64.6%	64.9%
38.1%	37.4%	38.7%	35.3%	34.9%
0.2%	0.3%	0.2%	0.1%	0.2%
0.1%				
<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
5.2%	6.3%	6.5%	8.4%	3.4%
1.6%	1.5%	18.5%	1.4%	1.4%
12.3%	8.5%	1.6%	13.8%	9.2%
1.0%	1.1%	1.3%	1.0%	1.1%
1.6%	2.0%	1.6%	1.9%	1.5%
10.3%	11.6%	16.3%	14.9%	14.9%
1.3%	1.8%	1.7%	1.5%	1.6%
<u>33.3%</u>	<u>32.8%</u>	<u>47.5%</u>	<u>42.9%</u>	<u>33.1%</u>
<u>66.7%</u>	<u>67.2%</u>	<u>52.5%</u>	<u>57.1%</u>	<u>66.9%</u>
0.5%	0.2%	0.3%	0.4%	1.2%
	0.1%		-0.8%	2.2%
-3.5%	-1.6%			
	-0.1%			
0.0%		0.0%		
-3.2%	-3.4%	-2.0%	-1.6%	-0.9%
-21.5%	-22.9%	-29.0%	-27.7%	-30.9%
-0.6%		-0.6%	-1.8%	-0.2%
2.1%	2.4%	2.7%	2.5%	1.2%
-0.1%	-0.1%			
		-0.1%	-0.1%	
<u>-26.3%</u>	<u>-25.4%</u>	<u>-28.7%</u>	<u>-29.1%</u>	<u>-27.4%</u>
<u>40.4%</u>	<u>41.8%</u>	<u>23.8%</u>	<u>28.0%</u>	<u>39.5%</u>

See accompanying independent auditor's report.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
BUDGET AND ACTUAL
FOR THE YEAR ENDED DECEMBER 31, 2016

	Final Budget	Actual	Variance Positive (Negative)
OPERATING REVENUES			
Pumpage Fees	\$ 33,406,222	\$ 32,059,687	\$ (1,346,535)
Surface Water Sold	19,002,646	19,801,873	799,227
Joint Facilities Revenue	134,116	125,295	(8,821)
Other	17,500	18,536	1,036
TOTAL OPERATING REVENUES	\$ 52,560,484	\$ 52,005,391	\$ (555,093)
OPERATING EXPENSES			
Professional Fees	\$ 2,241,000	\$ 2,712,223	\$ (471,223)
Contracted Services	689,950	844,839	(154,889)
Purchased Water Service	3,805,201	6,373,629	(2,568,428)
Utilities	525,000	533,677	(8,677)
Repairs and Maintenance	828,700	808,312	20,388
Depreciation/Amortization		5,369,677	(5,369,677)
Other	1,336,500	659,835	676,665
TOTAL OPERATING EXPENSES	\$ 9,426,351	\$ 17,302,192	\$ (7,875,841)
OPERATING INCOME (LOSS)	\$ 43,134,133	\$ 34,703,199	\$ (8,430,934)
NONOPERATING REVENUES (EXPENSES)			
Investment Revenues	\$ 25,000	\$ 282,226	\$ 257,226
Professional Fees		(1,845,302)	(1,845,302)
Miscellaneous Revenues	100,000		(100,000)
Bond Issuance Costs		(1,650,397)	(1,650,397)
Interest Expense	(22,562,544)	(11,173,035)	11,389,509
Chloramine Conversion/ Waterline Connections		(291,615)	(291,615)
Joint Facilities WIF Contribution	1,095,948	1,095,839	(109)
City of Houston Luce Bayou Debt Service	(50,000)	(49,546)	454
TOTAL NONOPERATING REVENUES (EXPENSES)	\$ (21,391,596)	\$ (13,631,830)	\$ 7,759,766
CHANGE IN NET POSITION	\$ 21,742,537	\$ 21,071,369	\$ (671,168)
NET POSITION - JANUARY 1, 2016	92,818,883	92,818,883	
NET POSITION - DECEMBER 31, 2016	\$ 114,561,420	\$ 113,890,252	\$ (671,168)

See accompanying independent auditor's report.

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
BOARD MEMBERS, KEY PERSONNEL AND CONSULTANTS
DECEMBER 31, 2016**

District Mailing Address West Harris County Regional Water Authority
 c/o Allen Boone Humphries Robinson, LLP
 3200 Southwest Freeway, Suite 2600
 Houston, TX 77027

District Telephone Number (713) 860-6400

Board Members	Appointed Term of Office	Fees of Office for the year ended December 31, 2016	Expense Reimbursements for the year ended December 31, 2016	Title
Bruce G. Parker	05/14 05/18	\$ 7,200	\$ 3,287	President
Larry A. Wepler	05/14 05/18	\$ 7,200	\$ 1,025	Vice President
Gary Struzick	05/16 05/20	\$ 7,200	\$ 788	Assistant Vice President
Douglas C. Postle	05/16 05/20	\$ 7,200	\$ 578	Secretary
Eric Hansen	05/16 05/20	\$ 7,200	\$ 4,956	Assistant Secretary
Mark Janneck	05/16 05/20	\$ 5,550	\$ 281	Director
Dennis Gorden	10/16 05/18	\$ 1,200	\$ 81	Director
Karla Cannon	05/14 05/18	\$ 4,350	\$ 512	Director
Michael Thornhill	09/14 05/18	\$ 7,200	\$ 1,815	Director
Johnny Nelson	05/14 07/16	\$ 450	\$ 32	Former Director

Notes: Submission date of most recent District Registration Form (TWC Sections 36.054 and 49.054): October 12, 2016. The limit on Fees of Office that a Director may receive during a fiscal year is the maximum extent allowed by law (TWC section 49.060) as set by Board Resolution on July 17, 2001. Fees of Office are the amounts actually paid to the Director during the Authority's current fiscal year.

See accompanying independent auditor's report.

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
BOARD MEMBERS, KEY PERSONNEL AND CONSULTANTS
DECEMBER 31, 2016**

<u>Consultants:</u>	<u>Date Hired</u>	<u>Fees for the year ended December 31, 2016</u>	<u>Title</u>
Allen Boone Humphries Robinson LLP	07/26/03	\$ 1,201,836 420,272	General Counsel Bond Counsel
McCall Gibson Swedlund Barfoot PLLC	12/18/01	\$ 55,900	Auditor
Myrtle Cruz, Inc.	06/06/01	\$ 230,568	Bookkeeper
McGrath & Co., PLLC	11/10/10	\$ 21,000	Accountant
Dannenbaum Engineering Corp.	06/06/01	\$ 6,538,626	Engineer
FirstSouthwest, a Division of Hilltop Securities, Inc.	10/16/01	\$ 281,249	Financial Advisor
Robert W. Baird & Co. Incorporated	02/02/15	\$ 278,444	Financial Advisor
Mary Jarmon	06/27/01	\$ - 0 -	Investment Officer
Severn Trent Services, Inc.	02/13/13	\$ 867,227	Operator
Payne Communications	07/17/01	\$ 62,158	Communications

Various other consultants are engaged from time to time by the Authority to perform legal, engineering, surveying, appraisal and right-of-way services.

See accompanying independent auditor's report.

Water System Refunding Bonds, Series 2013			Water System Refunding Bonds, Series 2014		
Principal	Interest	Total	Principal	Interest	Total
-	1,555,200	1,555,200	2,805,000	1,921,113	4,726,113
-	1,555,200	1,555,200	2,855,000	1,865,013	4,720,013
4,080,000	1,555,200	5,635,200	2,970,000	1,750,813	4,720,813
4,205,000	1,432,800	5,637,800	3,090,000	1,632,013	4,722,013
4,370,000	1,264,600	5,634,600	3,155,000	1,570,213	4,725,213
4,545,000	1,089,800	5,634,800	3,275,000	1,444,013	4,719,013
4,730,000	908,000	5,638,000	3,410,000	1,313,013	4,723,013
4,965,000	671,500	5,636,500	2,305,000	1,223,500	3,528,500
5,185,000	448,250	5,633,250	-	1,108,250	1,108,250
3,780,000	189,000	3,969,000	3,875,000	1,108,250	4,983,250
			4,070,000	914,500	4,984,500
			-	711,000	711,000
			4,510,000	711,000	5,221,000
			4,735,000	485,500	5,220,500
			4,975,000	248,750	5,223,750
<hr/>					
35,860,000	10,669,550	46,529,550	46,030,000	18,006,938	64,036,938

Series	Principal Amount	Current Holders
Water System Revenue Bonds, Series 2006	39,485,000	Open Market
Water System Revenue Bonds, Series 2007	47,040,000	Open Market
Water System Revenue Bonds, Series 2009	55,545,000	Open Market
Water System Revenue Bonds, Series 2012	36,995,000	TWDB
Water System Refunding Bonds, Series 2013	35,860,000	Open Market
Water System Refunding Bonds, Series 2014	46,030,000	Open Market
	<hr/>	
	260,955,000	

West Harris County Regional Water Authority - Outstanding Senior Lien Debt

PART C49

Year	W Sys Rev Bds, Srs 2007			W Sys Rev Bds, Srs 2009			W Sys Rev Bds, Srs 2012			W Sys Rev Ref Bds, Srs 2013		
	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total
2017	2,035,000	1,053,738	3,088,738	1,770,000	2,506,350	4,276,350	2,085,000	351,865	2,436,865	4,080,000	1,555,200	5,635,200
2018	2,115,000	972,338	3,087,338	1,855,000	2,417,850	4,272,850	2,085,000	351,865	2,436,865	4,205,000	1,432,800	5,637,800
2019	2,220,000	866,588	3,086,588	1,950,000	2,325,100	4,275,100	2,085,000	348,946	2,433,946	4,370,000	1,264,600	5,634,600
2020	2,340,000	755,588	3,095,588	2,045,000	2,227,600	4,272,600	2,095,000	342,691	2,437,691	4,545,000	1,089,800	5,634,800
2021	2,450,000	638,588	3,088,588	2,130,000	2,145,800	4,275,800	2,105,000	332,007	2,437,007	4,730,000	908,000	5,638,000
2022	2,570,000	516,088	3,086,088	2,215,000	2,060,600	4,275,600	2,120,000	317,272	2,437,272	4,965,000	671,500	5,636,500
2023	2,690,000	402,088	3,092,088	2,325,000	1,949,850	4,274,850	2,135,000	299,252	2,434,252	5,185,000	448,250	5,633,250
2024	2,815,000	274,313	3,089,313	2,415,000	1,856,850	4,271,850	2,160,000	277,048	2,437,048	3,780,000	189,000	3,969,000
2025	2,960,000	140,600	3,100,600	2,515,000	1,760,250	4,275,250	2,185,000	252,424	2,437,424			
2026				2,640,000	1,634,500	4,274,500	2,210,000	225,985	2,435,985			
2027				2,770,000	1,502,500	4,272,500	2,240,000	196,592	2,436,592			
2028				2,905,000	1,364,000	4,269,000	2,270,000	164,112	2,434,112			
2029				3,050,000	1,218,750	4,268,750	2,310,000	124,160	2,434,160			
2030				3,185,000	1,083,750	4,268,750	2,350,000	85,814	2,435,814			
2031				3,345,000	924,500	4,269,500	2,390,000	44,454	2,434,454			
2032				3,515,000	757,250	4,272,250						
2033				3,690,000	581,500	4,271,500						
2034				3,875,000	397,000	4,272,000						
2035				4,065,000	203,250	4,268,250						
2036												
2037												
2038												
2039												
2040												
2041												
2042												
2043												
2044												
2045												
2046												
	22,195,000	5,619,925	27,814,925	52,260,000	28,917,250	81,177,250	32,825,000	3,714,485	36,539,485	35,860,000	7,559,150	43,419,150

West Harris County Regional Water Authority - Outstanding Senior Lien Debt

Year	W Sys Rev Ref Bds, Srs 2014			W Sys Rev & Rev Ref Bds, Srs 2015A			W Sys Rev Bds, Srs 2016A		
	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total
2017	2,970,000	1,750,813	4,720,813	1,585,000	2,613,331	4,198,331	-	1,514,804	1,514,804
2018	3,090,000	1,632,013	4,722,013	1,650,000	2,549,931	4,199,931	-	1,458,100	1,458,100
2019	3,155,000	1,570,213	4,725,213	2,315,000	2,467,431	4,782,431	-	1,458,100	1,458,100
2020	3,275,000	1,444,013	4,719,013	2,430,000	2,351,681	4,781,681	610,000	1,458,100	2,068,100
2021	3,410,000	1,313,013	4,723,013	2,555,000	2,230,181	4,785,181	640,000	1,427,600	2,067,600
2022	2,305,000	1,223,500	3,528,500	2,680,000	2,102,431	4,782,431	670,000	1,395,600	2,065,600
2023	-	1,108,250	1,108,250	2,820,000	1,968,431	4,788,431	705,000	1,362,100	2,067,100
2024	3,875,000	1,108,250	4,983,250	2,960,000	1,827,431	4,787,431	740,000	1,326,850	2,066,850
2025	4,070,000	914,500	4,984,500	3,095,000	1,679,431	4,774,431	780,000	1,289,850	2,069,850
2026	-	711,000	711,000	3,250,000	1,524,681	4,774,681	815,000	1,250,850	2,065,850
2027	4,510,000	711,000	5,221,000	3,375,000	1,362,181	4,737,181	860,000	1,210,100	2,070,100
2028	4,735,000	485,500	5,220,500	3,560,000	1,193,431	4,753,431	900,000	1,167,100	2,067,100
2029	4,975,000	248,750	5,223,750	3,710,000	1,051,031	4,761,031	945,000	1,122,100	2,067,100
2030				3,865,000	902,631	4,767,631	995,000	1,074,850	2,069,850
2031				1,025,000	748,031	1,773,031	1,045,000	1,025,100	2,070,100
2032				1,055,000	714,719	1,769,719	1,095,000	972,850	2,067,850
2033				1,090,000	679,113	1,769,113	1,150,000	918,100	2,068,100
2034				1,130,000	642,325	1,772,325	1,205,000	860,600	2,065,600
2035				1,165,000	604,188	1,769,188	1,265,000	800,350	2,065,350
2036				1,210,000	563,413	1,773,413	1,330,000	737,100	2,067,100
2037				1,255,000	518,038	1,773,038	1,395,000	670,600	2,065,600
2038				1,300,000	470,975	1,770,975	1,455,000	614,800	2,069,800
2039				1,350,000	422,225	1,772,225	1,510,000	556,600	2,066,600
2040				1,400,000	371,600	1,771,600	1,570,000	496,200	2,066,200
2041				1,455,000	315,600	1,770,600	1,635,000	433,400	2,068,400
2042				1,515,000	257,400	1,772,400	1,700,000	368,000	2,068,000
2043				1,575,000	196,800	1,771,800	1,765,000	300,000	2,065,000
2044				1,640,000	133,800	1,773,800	1,840,000	229,400	2,069,400
2045				1,705,000	68,200	1,773,200	1,910,000	155,800	2,065,800
2046							1,985,000	79,400	2,064,400
	40,370,000	14,220,813	54,590,813	59,720,000	32,530,663	92,250,663	32,515,000	27,734,404	60,249,404

West Harris County Regional Water Authority - Outstanding Senior Lien Debt

<u>Series</u>	<u>Principal Amount</u>	<u>Current Holders</u>
Water System Revenue Bonds, Series 2007	22,195,000	Open Market
Water System Revenue Bonds, Series 2009	52,260,000	Open Market
Water System Revenue Bonds, Series 2012	32,825,000	TWDB
Water System Revenue Refunding Bonds, Series 2013	35,860,000	Open Market
Water System Revenue Refunding Bonds, Series 2014	40,370,000	Open Market
Water System Revenue & Revenue Refunding Bonds, Series 2015A	59,720,000	Open Market
Water System Revenue Bonds, Series 2016A	32,515,000	Open Market
	<u>275,745,000</u>	

West Harris County Regional Water Authority - Outstanding Junior Lien Debt

Year	W Sys Jr Lien Rev Bds, Srs 2015			W Sys Jr Lien Rev Bds, Srs 2016		
	Principal	Interest	Total	Principal	Interest	Total
2017	830,000	297,437	1,127,437	-	943,153	943,153
2018	835,000	294,283	1,129,283	1,045,000	832,194	1,877,194
2019	840,000	289,607	1,129,607	1,050,000	825,401	1,875,401
2020	850,000	283,559	1,133,559	1,055,000	817,421	1,872,421
2021	855,000	276,164	1,131,164	1,065,000	808,559	1,873,559
2022	865,000	267,529	1,132,529	1,070,000	798,868	1,868,868
2023	880,000	257,495	1,137,495	1,080,000	788,275	1,868,275
2024	895,000	246,055	1,141,055	1,095,000	776,503	1,871,503
2025	905,000	233,614	1,138,614	1,105,000	763,363	1,868,363
2026	925,000	220,311	1,145,311	1,120,000	749,108	1,869,108
2027	940,000	205,141	1,145,141	1,130,000	733,764	1,863,764
2028	960,000	188,127	1,148,127	1,150,000	716,023	1,866,023
2029	980,000	169,311	1,149,311	1,170,000	696,588	1,866,588
2030	1,000,000	148,731	1,148,731	1,190,000	673,071	1,863,071
2031	1,025,000	126,731	1,151,731	1,215,000	647,129	1,862,129
2032	1,050,000	103,361	1,153,361	1,240,000	619,306	1,859,306
2033	1,075,000	79,001	1,154,001	1,270,000	590,414	1,860,414
2034	1,100,000	53,523	1,153,523	1,300,000	560,061	1,860,061
2035	1,130,000	27,233	1,157,233	1,330,000	527,301	1,857,301
2036				1,365,000	494,051	1,859,051
2037				1,400,000	459,380	1,859,380
2038				1,440,000	421,440	1,861,440
2039				1,480,000	382,416	1,862,416
2040				1,520,000	342,308	1,862,308
2041				1,565,000	301,116	1,866,116
2042				1,605,000	258,704	1,863,704
2043				1,655,000	209,912	1,864,912
2044				1,700,000	159,600	1,859,600
2045				1,750,000	107,920	1,857,920
2046				1,800,000	54,720	1,854,720
	17,940,000	3,767,208	21,707,208	37,960,000	17,058,061	55,018,061

Series	Principal Amount	Current Holders
Water System Junior Lien Revenue Bonds, Series 2015	17,940,000	TWDB
Water System Junior Lien Revenue Bonds, Series 2016	37,960,000	TWDB
	55,900,000	

City of Houston Contract

WATER SUPPLY CONTRACT BETWEEN
THE CITY OF HOUSTON, TEXAS AND
THE WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

03-0242

54841

THIS WATER SUPPLY CONTRACT ("Contract") is made by and between the CITY OF HOUSTON, TEXAS ("Houston") and the WEST HARRIS COUNTY REGIONAL WATER AUTHORITY ("Authority").

WITNESSETH:

Recitals

Houston is a municipal corporation and home-rule city, principally located in Harris County, Texas. Houston owns a water treatment and distribution system and desires to sell water to the Authority.

The Authority is a Texas conservation and reclamation district organized and operating under the provisions of House Bill No. 1842, Seventy Seventh Legislature, Regular Session (2001) (the "Act"), as amended, and the Texas Water Code, as amended. The Authority desires to purchase potable treated surface water from Houston for distribution and use for domestic, commercial, and other purposes.

Houston is authorized to enter into this Contract pursuant to its Home Rule Charter, Section 402.021 of the Texas Local Government Code, as amended, and any other available law, as amended.

The Authority is authorized to enter into this Contract pursuant to the provisions of the Act, as amended, and the Texas Water Code, as amended.

Houston, as the regional water supplier and principal owner of surface water in Harris County, desires to provide potable treated surface water to the unincorporated area of Harris County to meet the Harris-Galveston Coastal Subsidence District ("HGCS D") requirements for Area Three as defined by the HGCS D's 1999 District Regulatory Plan, as amended.

NOW, THEREFORE, for and in consideration of the premises and the mutual covenants and agreements herein contained, the parties hereto do mutually agree as follows:

ARTICLE I

Definitions

Unless the context requires otherwise, the following terms as used in this Contract shall have meanings as follows:

"Advisory Committee" is defined in Section 8.17.

"Annual Audit" is defined in Section 4.06.

"Annual Interest Payment" is defined in Section 3.03.

"Annual New Untreated Water Facilities Payment" is defined in Section 3.02(c).

"Annual O&M Budget" is defined in Section 4.03.

"Annual Outstanding Debt Service" means the amount of debt service (principal and interest) actually owed by Houston during a Houston fiscal year on any and all bonds, notes, or other obligations for construction and acquisition of New Untreated Water Facilities.

"Authority System" shall mean all facilities owned and operated by the Authority to enable the Authority to receive Water from the Houston System, including without limitation, transmission lines, inter-connection lines, storage facilities, booster pumps, meter vaults, casings, air gap or other backflow prevention controls, valves and flow control devices.

"Commencement of Delivery of Water" shall mean commencement of delivery of Water for consumption and shall not mean delivery of Water for line testing or flushing purposes.

"Existing Untreated Water Facilities" means those facilities listed in Exhibit "A."

"GRP" is defined in Section 8.18.

"Houston System" shall mean all of Houston's Water production, treatment and distribution facilities, including all treatment plants, mains, distribution lines, booster pumps, storage tanks and meter facilities.

"Initial Untreated Water Facilities Demand Allocation" is defined in Section 3.02(a).

"Interest Rate" means the 20 City Municipal Bond Index on the first day of the Houston fiscal year during which the Contract is executed, which the parties hereby agree equals 5.10%.

"Major Rehabilitations" are major capital projects required to maintain and operate the Plant Facilities and Transmission Facilities at their current capacity or as required by applicable regulatory requirements and estimated to cost in excess of \$500,000.

"MGD" shall mean million of gallons per day of Water.

"New Untreated Water Facilities" means any untreated surface water canals, reservoirs, lakes, untreated surface water rights, or other major untreated surface water facilities not listed in Exhibit "A" that are hereafter constructed or acquired by Houston pursuant to Section 3.02(c).

"O&M Expenses" are defined in Section 4.02.

"O&M Reserve" is 25% of the then-current Annual O&M Budget.

"Outstanding Debt" means the amount of principal owed by Houston on any and all bonds, notes, or other obligations for construction and acquisition of Existing Untreated Water Facilities.

"Payment for Existing Untreated Water Facilities" is defined in Sections 3.02 (a), (b), and (c), as applicable.

"Payment for Untreated Water Facilities Costs Avoided" is defined in Section 3.02(c).

"Plant Facilities" means those facilities listed in Exhibit "B."

"Point(s) of Delivery" shall mean the output flanges of the tap(s) on Houston's System that will serve the Authority under the provisions of this Contract, as more particularly identified and described on Exhibit "C" attached hereto and incorporated herein for all purposes.

"Point(s) of Measurement" shall mean the location of the meter(s) at which the Authority's consumption of Water is measured, as more particularly described on Exhibit "C" attached hereto and incorporated herein for all purposes. All Point(s) of Measurement shall be at the Point(s) of Delivery, unless mutually agreed to in writing by the Utility Official and the Authority.

"Reservation" means a written request from the Authority, at the Authority's option, that is approved in writing by the Utility Official, seeking the Utility Official's approval to increase the Authority's then-current Untreated Water Facilities Demand Allocation and/or its Treated Water Facilities Demand Allocation.

"Ten Year Period" is defined in Section 3.02(c).

"Transmission Facilities" are those transmission lines and facilities described and shown on Exhibit "D".

"Treated Water Facilities" is defined in Section 3.03.

"Treated Water Facilities Capital Contribution" is defined in Section 3.03.

"Treated Water Facilities Capital Costs" means the actual costs incurred by Houston to construct or acquire the Treated Water Facilities, including engineering, testing services, construction, construction management, right-of-way, legal and auditing expenses, expenses related to contractor claims, and cost for services of employees of Houston for construction of the Treated Water Facilities.

"Treated Water Facilities Demand Allocation" is defined in Section 3.03.

"Untreated Water Facilities" means the Existing Untreated Water Facilities plus any New Untreated Water Facilities.

"Untreated Water Facilities Demand Allocation" is defined in Section 3.02.

"Utility Official" shall mean the Utility Official of the Department of Public Works and Engineering of Houston, or any other person who may hereafter exercise the functions of said Utility Official.

"Water" shall mean potable treated surface water from the Houston System serving its own inhabitants.

"Water Demand Allocation" shall mean the maximum amount of Water the Authority is entitled to take pursuant to the terms of this Contract and pursuant to the Authority's then-current Treated Water Facilities Demand Allocation.

ARTICLE II

Construction of Facilities

Section 2.01 Construction by Houston.

Houston shall be responsible for the design, construction, ownership, maintenance and operation of the Untreated Water Facilities and the Treated Water Facilities, which facilities are upstream from the Point(s) of Delivery.

Section 2.02 Construction by the Authority of Certain Facilities.

The Authority shall be responsible for the design, construction, ownership, maintenance and operation of all facilities located downstream of the Point(s) of Delivery necessary to enable it to receive Water at the Point(s) of Delivery. The Authority shall obtain the Utility Official's approval of all plans and specifications of the Authority facilities in the Authority System, which approval shall not be unreasonably delayed or withheld.

Section 2.03 Time of Completion.

If not already constructed, Houston agrees to proceed with due diligence to construct the facilities described in this Article in order to provide the quantities of Water to the Authority required by this Contract.

Section 2.04 Point(s) of Delivery.

The Point(s) of Delivery for Water sold under this Contract shall be located at the physical point(s) of connection between the Houston System and the Authority System shown on Exhibit "C." Additional Point(s) of Delivery and Point(s) of Measurement may be added from time to time, by mutual agreement of the Authority and the Utility Official.

ARTICLE III

Sale and Delivery of Water

Section 3.01 Delivery of Water.

Subject to the terms and conditions of this Contract, beginning July 1, 2004, and continuing thereafter, Houston shall deliver and make available to the Authority at the Point(s) of Delivery the amount of Water that equals the Water Demand Allocation. If for any reason the Authority takes more Water than its Water Demand Allocation during any given day, the

Authority shall pay Houston for operation and maintenance charges associated with such excess Water pursuant to Article IV of this Contract but will not be deemed to have increased its Untreated Water Facilities Demand Allocation or Treated Water Facilities Demand Allocation.

The Authority may, but is not obligated to, purchase Water from Houston in order to satisfy the Authority's year 2020 and year 2030 HGCSO conversion requirements. Currently, the Authority's total Water need is projected to be 18.25 MGD for the year 2010, 43.7 MGD for the year 2020 and 61.9 MGD for the year 2030. In the event the Authority purchases more than 18.25 MGD from Houston by increasing its Water Demand Allocation by Reservation, the cost sharing formulas and methods of calculating payments by the Authority to Houston that are provided in this Article III shall apply.

The Utility Official shall send the Authority written approval of any Authority Reservation request within ninety (90) days of receipt of same if Houston at the time of the Reservation request has sufficient capacity to serve the increase requested by the Authority. If Houston does not at that time have sufficient capacity to serve the increase requested by the Authority, the Utility Official shall send a written rejection of such Reservation request to the Authority within ninety (90) days of receipt of same, which rejection shall also advise the Authority of what new facilities are necessary to serve the requested Reservation. Unless the Utility Official agrees to a lesser period, the Authority shall provide a Reservation request at least five (5) years prior to the date the Authority requires the increase of its then-current Untreated Water Facilities Demand Allocation and/or its Treated Water Facilities Demand Allocation. The Utility Official shall provide the Authority with a copy of any Reservation request submitted by the North Harris County Regional Water Authority within twenty (20) days of the Utility Official's receipt of same.

Section 3.02 Untreated Water Capital Costs.

Untreated Water Facilities Demand Allocation shall mean 18.25 MGD; provided, however, that in the event the Authority increases its Untreated Water Facilities Demand Allocation pursuant to the terms of this Contract, then Untreated Water Facilities Demand Allocation shall mean such total increased amount.

Section 3.02(a) Initial Untreated Water Facilities Demand Allocation.

On no more than three (3) occasions prior to the year 2010, the Authority may, at its option, purchase any portion(s) of its 18.25 MGD Untreated Water Facilities Demand Allocation (the "Initial Untreated Water Facilities Demand Allocation") by payment to Houston of the Payment for Existing Untreated Water Facilities pursuant to this Section 3.02(a). The Authority

shall be obligated to purchase all of its Initial Untreated Water Facilities Demand Allocation no later than December 31, 2009, by payment to Houston of the Payment for Existing Untreated Water Facilities pursuant to this Section 3.02(a). The Payment for Existing Untreated Water Facilities under this Section 3.02(a) shall be calculated as follows:

Payment for Existing Untreated Water Facilities = (A/B)C

Where: "A" is the portion (in MGD) of the Initial Untreated Water Facilities Demand Allocation to be purchased.

"B" is the total amount of untreated surface water (in MGD) sold to Houston's water customers during Houston's fiscal year ending June 30, 2001, including such untreated surface water received at Houston's water treatment plants as well as the billable quantity (including any take-or-pay amounts) taken by Houston's untreated surface water customers, but excluding untreated surface water loss by evaporation or leakage.

"C" is the Outstanding Debt shown in items 1, 2, 7 and 8 on Exhibit "E" for all Existing Untreated Water Facilities (such facilities being shown on Exhibit "A") as of June 30, 2001; plus the additional Outstanding Debt shown in items 3 through 6 on Exhibit "E" for Existing Untreated Water Facilities, if such additional debt is incurred by Houston no later than July 1, 2009.

Within sixty (60) days after the Commencement of Delivery of Water, Houston shall calculate, according to the above formula, the Payment for Existing Untreated Water Facilities for the first portion of the Initial Untreated Water Facilities Demand Allocation to be purchased and send written notice to the Authority showing the amount of such payment and the calculation therefor. (In such calculation, Houston shall only include actual Outstanding Debt incurred by Houston as of the date of such notice, and no estimated Outstanding Debt shall be included.) The Authority shall make such Payment for Existing Untreated Water Facilities to Houston for the first portion of the Initial Untreated Water Facilities Demand Allocation no later than sixty (60) days after the date the Authority receives such notice from Houston.

If Houston actually incurs Outstanding Debt for any of items 3 through 6 in Exhibit "E" after the date of Houston's written notice to the Authority pursuant to the preceding paragraph but before July 1, 2009, Houston shall calculate (according to the above formula), for each portion of the Initial Untreated Water Facilities Demand Allocation already purchased by the Authority at the time of such Houston calculation, the Payment for Existing Untreated Water Facilities for such additional Outstanding Debt, and no later than July 31, 2009, send written notice to the Authority showing the amount of such additional payment and the calculation

therefor. The Authority shall make payment for such additional amount no later than sixty (60) days after the Authority receives such notice from Houston. In addition, if Houston actually incurs Outstanding Debt for any of items 3 through 6 in Exhibit "E" after the date of Houston's written notice to the Authority pursuant to the preceding paragraph but before July 1, 2009, the amount of such additional Outstanding Debt shall be included in the calculation of the Payment for Existing Untreated Water Facilities for any portion of the Initial Untreated Water Facilities Demand Allocation purchased by the Authority after the calculation performed by Houston under the first sentence of this paragraph.

For each portion of the Initial Untreated Water Facilities Demand Allocation that the Authority purchases after the first portion, the Authority shall pay Houston the Payment for Existing Untreated Water Facilities no later than sixty (60) days after the Authority has sent written notice to Houston that it intends to purchase an additional portion of the Initial Untreated Water Facilities Demand Allocation. Effective immediately upon the Authority's payment for each portion of the Initial Untreated Water Facilities Demand Allocation subsequent to the first portion, the Authority shall be entitled to take such additional Water.

In the event the Authority, as indicated by a written notice from the Authority to Houston, seeks to pay Houston the Payment for Existing Untreated Water Facilities over a maximum period of fifteen (15) years (with interest) in lieu of a lump sum payment, the Authority and the Utility Official shall in good faith negotiate a separate written agreement providing for such payment terms. If the Authority and the Utility Official are unable to enter into a separate written agreement upon terms mutually agreeable to both parties, then the Authority shall be required to pay the Payment for Existing Untreated Water Facilities to Houston as a lump sum payment.

In the event Houston constructs or acquires New Untreated Water Facilities for any reason, the Authority shall, in addition to the Payment for Existing Untreated Water Facilities paid under this Section 3.02(a), owe Houston the Annual New Untreated Water Facilities Payment, as provided in Section 3.02(c)(2).

Exhibit "E" hereto includes: (i) the first portion of the Initial Untreated Water Facilities Demand Allocation to be purchased by the Authority, (ii) the Outstanding Debt, and (iii) the total amount (in MGD) of factor "B" for the calculation of the Payment for Existing Untreated Water Facilities under this Section 3.02(a).

Section 3.02(b) Reservation Not Requiring Construction of New Untreated Water Facilities.

In the event the Authority submits a Reservation request on or after January 1, 2010, to the Utility Official for an increase in its Untreated Water Facilities Demand Allocation and Houston then has capacity available in the Existing Untreated Water Facilities to serve such increase, the Utility Official shall, within ninety (90) days of the Authority's request for the Reservation, send written approval of such Reservation request to the Authority. For the approved Reservation, the Authority shall owe Houston a Payment for Existing Untreated Water Facilities under this Section 3.02(b), calculated as follows:

$$\text{Payment for Existing Untreated Water Facilities} = (A/B)C$$

Where: "A" is the amount (in MGD) of the increase of the Authority's Untreated Water Facilities Demand Allocation pursuant to a Reservation under this Section 3.02(b).

"B" is the total amount of untreated surface water (in MGD) sold to Houston's water customers during Houston's fiscal year that precedes the fiscal year during which the Authority's Reservation request is approved in writing by the Utility Official, including such untreated surface water received at Houston's water treatment plants as well as billable quantity (including any take-or-pay amounts) taken by Houston's untreated surface water customers, but excluding untreated surface water loss by evaporation or leakage.

"C" is the Outstanding Debt for all Existing Untreated Water Facilities (such facilities being shown on Exhibit "A") as of the first day of Houston's fiscal year in which the Authority's Reservation request is approved in writing by the Utility Official.

If the Authority submits a Reservation request to the Utility Official prior to January 1, 2010, and Houston then has capacity available in the Existing Untreated Water Facilities to serve such increase, then, for purposes of calculating the Payment for Existing Untreated Water Facilities under this Section 3.02(b) for such Reservation only, factors "B" and "C" of Section 3.02(a) shall be used instead of factors "B" and "C" of this Section 3.02(b).

The Authority shall pay Houston the Payment for Existing Untreated Water Facilities under this Section 3.02(b) no later than sixty (60) days after the Authority sends written notice to Houston that the Authority requires Water from its Reservation made pursuant to this Section 3.02(b). The Authority shall send notice to Houston that the Authority requires Water from its

Reservation no later than five (5) years after the date of the Utility Official's written approval of the Reservation.

In the event the Authority, as indicated by a written notice from the Authority to Houston, seeks to pay Houston the Payment for Existing Untreated Water Facilities over a maximum period of fifteen (15) years (with interest) in lieu of a lump sum payment, the Authority and the Utility Official shall in good faith negotiate a separate written agreement providing for such payment terms. If the Authority and the Utility Official are unable to enter into a separate written agreement upon terms mutually agreeable to both parties, then the Authority shall be required to pay the Payment for Existing Untreated Water Facilities to Houston as a lump sum payment.

In the event Houston constructs or acquires New Untreated Water Facilities for any reason, the Authority shall, in addition to the Payment for Existing Untreated Water Facilities, if any, paid under this Section 3.02(b), owe Houston the Annual New Untreated Water Facilities Payment, as provided in Section 3.02(c)(2).

Section 3.02(c) New Untreated Water Facilities.

In the event the Authority sends a Reservation request to the Utility Official for an increase in its Untreated Water Facilities Demand Allocation and Houston does not then have capacity available in the Existing Untreated Water Facilities to serve such increase, the Utility Official shall send a written rejection of such Reservation request to the Authority within ninety (90) days of the Utility Official's receipt of such Reservation request, which rejection shall also advise the Authority of what New Untreated Water Facilities are necessary to serve the requested Reservation. If the Authority thereafter seeks to increase its Untreated Water Facilities Demand Allocation, it shall send written notice to the Utility Official of the Authority's need for New Untreated Water Facilities and the amount (in MGD) of its requested Reservation. After receipt of such Authority notice, Houston shall promptly construct or acquire New Untreated Water Facilities and the Authority shall owe Houston the Payment for Existing Untreated Water Facilities plus the Annual New Untreated Water Facilities Payment under this Section 3.02(c). Upon completion of the New Untreated Water Facilities necessary to serve the Authority's requested Reservation, the Authority's Reservation request shall be deemed approved by the Utility Official.

In the event Houston constructs or acquires New Untreated Water Facilities for any reason but the Authority does not desire capacity in the New Untreated Water Facilities and

accordingly does not make a Reservation request under this Section 3.02(c), the Authority shall owe Houston the Annual New Untreated Water Facilities Payment under Section 3.02(c)(2) (based on the Authority's then-current Untreated Water Facilities Demand Allocation), but the Authority shall not owe Houston the Payment for Existing Untreated Water Facilities under Section 3.02(c)(1).

The Payment for Existing Untreated Water Facilities, if due under this Section 3.02(c), and the Annual New Untreated Water Facilities Payment under this Section 3.02(c) shall be calculated based on the formula:

$$(A/B)C + (D/E)F$$

and shall be calculated as follows:

(1) Payment for Existing Untreated Water Facilities = $(A/B)C$

Where: "A" is the amount (in MGD) of the increase of the Authority's Untreated Water Facilities Demand Allocation pursuant to a Reservation under this Section 3.02(c).

"B" is the total amount of untreated surface water (in MGD) sold to Houston's water customers during Houston's fiscal year that precedes the fiscal year during which the Utility Official's written statement regarding lack of available capacity is issued, including such untreated surface water received at Houston's water treatment plants as well as billable quantity (including any take-or-pay amounts) taken by Houston's untreated surface water customers, but excluding untreated surface water loss by evaporation or leakage.

"C" is the Outstanding Debt for all Existing Untreated Water Facilities (such facilities being shown on Exhibit "A") as of the first day of Houston's fiscal year in which the Utility Official's written statement regarding lack of available capacity is issued.

(2) Annual New Untreated Water Facilities Payment = $(D/E)F$

Where: "D" is the then-current Untreated Water Facilities Demand Allocation, plus the amount, if any, (in MGD) that the Authority seeks to increase its Untreated Water Facilities Demand Allocation upon completion of the New Untreated Water Facilities, as identified in the applicable Authority Reservation request, if any, pursuant to this Section 3.02(c).

"E" is the total amount of untreated surface water (in MGD) sold to Houston's water customers during the Houston fiscal year that precedes the date Houston calculates the Annual New Untreated Water Facilities Payment, including such untreated surface water received at Houston's water treatment plants as well as

the billable quantity (including any take-or-pay amounts) taken by Houston's untreated surface water customers, but excluding untreated surface water loss by evaporation or leakage.

"F" is the Annual Outstanding Debt Service for all New Untreated Water Facilities as of the first day of the Houston fiscal year in which Houston calculates the Annual New Untreated Water Facilities Payment.

The Authority shall pay Houston the Payment for Existing Untreated Water Facilities, if due under this Section 3.02(c), no later than sixty (60) days after the Authority receives written certification from the Utility Official that construction of the New Untreated Water Facilities necessary to serve the Authority's requested Reservation is complete.

In the event the Authority, as indicated by a written notice from the Authority to Houston, seeks to pay Houston the Payment for Existing Untreated Water Facilities over a maximum period of fifteen (15) years (with interest) in lieu of a lump sum payment, the Authority and the Utility Official shall in good faith negotiate a separate written agreement providing for such payment terms. If the Authority and the Utility Official are unable to enter into a separate written agreement upon terms mutually agreeable to both parties, then the Authority shall be required to pay the Payment for Existing Untreated Water Facilities to Houston as a lump sum payment.

Within ninety (90) days after Houston's first issuance of bonds, notes, or other obligations to finance any New Untreated Water Facilities pursuant to this Section 3.02(c), Houston shall calculate the Annual New Untreated Water Facilities Payment according to the formula above and send written notice to the Authority of Houston's calculation and the amount of the payment due from the Authority for the fiscal year in which Houston issues such bonds, notes or other obligations. For each Houston fiscal year thereafter, Houston shall calculate the Annual New Untreated Water Facilities Payment according to the above formula and send written notice to the Authority of Houston's calculation and the amount of the payment due from the Authority within ninety (90) days of the last day of the previous Houston fiscal year. Each year, the Authority shall pay Houston the Annual Untreated Water Facilities Payment within sixty (60) days of its receipt of such notice from Houston. The Authority shall owe Houston the Annual Untreated Water Facilities Payment each year during the life of the Houston bonds, notes or other obligations used to finance the New Untreated Water Facilities or until this Contract is no longer in effect, whichever occurs first. To assist the Authority in its financial planning, Houston shall, prior to the last day of each Houston fiscal year, send a written statement to the

Authority of Houston's reasonable estimate of the Annual Outstanding Debt Service for the following three (3) Houston fiscal years.

Houston shall maintain each Annual New Untreated Water Facilities Payment in an interest-bearing account, which interest shall be credited to the account of the Authority. Houston shall use the Annual New Untreated Water Facilities Payments, and interest accrued thereon, only for the purpose of paying Annual Outstanding Debt Service. Within one hundred eighty (180) days of the last day of each Houston fiscal year, Houston shall prepare an accounting of the Annual Outstanding Debt Service actually paid by Houston on the New Untreated Water Facilities during such fiscal year. Houston shall engage an independent certified public accounting firm to audit such accounting. Houston and the Authority agree to "true-up" the Annual New Untreated Water Facilities Payment made by the Authority such that if the Authority has underpaid, taking into account interest accrued, it will pay Houston such shortfall within sixty (60) days of receiving the final audit, and Houston agrees to refund to the Authority any overpayment, taking into account interest accrued, within sixty (60) days of Houston receiving the final audit if the Authority overpaid.

In the event Houston intends to construct or acquire New Untreated Water Facilities for any reason, Houston shall send written notice to the Authority of such intent at least one hundred eighty (180) days before Houston's first issuance of bonds, notes or other obligations to finance such New Untreated Water Facilities. If the Authority desires to increase its Untreated Water Facilities Demand Allocation, it shall submit a Reservation request pursuant to this Section 3.02(c) within ninety (90) days after receipt of such notice of intent from Houston.

If the Authority's Untreated Water Facilities Demand Allocation is increased pursuant to a Reservation under this Section 3.02(c), then the payment for all subsequent Reservations of the Untreated Water Facilities Demand Allocation (regardless of whether or not they require construction of New Untreated Water Facilities) shall be calculated and made pursuant to the hereinbefore formulas of this Section 3.02(c) and not Sections 3.02(a) or (b). If within ten (10) years after Houston's first issuance of bonds, notes, or other obligations to finance New Untreated Water Facilities pursuant to this Section 3.02(c) (the "Ten Year Period"), the Authority submits a Reservation request that does not require the construction of New Untreated Water Facilities, the Authority shall pay Houston the "Payment for Untreated Water Facilities Costs Avoided." The Payment for Untreated Water Facilities Costs Avoided shall equal the total

dollar amount, without interest or penalty, of the Payment for Existing Untreated Water Facilities and the total accrued Annual New Untreated Water Facilities Payments which would have been paid by the Authority, according to the hereinbefore formulas of this Section 3.02(c), had the Authority made a Reservation request for such increase prior to Houston's first issuance of bonds, notes, or other obligations to finance the New Untreated Water Facilities. The Payment for Untreated Water Facilities Costs Avoided shall be made to Houston within one hundred twenty (120) days of the Authority's receipt of the Utility Official's approval of such later Reservation request. The Authority shall not owe Houston the Payment for Untreated Water Facilities Costs Avoided if: (i) the Authority submits a Reservation request within the Ten Year Period that requires the construction of New Untreated Water Facilities; or (ii) the Authority submits a Reservation request, regardless of whether or not it requires construction of New Untreated Water Facilities, after the Ten Year Period.

Section 3.03 Treated Water Capital Costs.

Treated Water Facilities Demand Allocation shall mean 18.25 MGD; provided, however, that in the event the Authority increases its Treated Water Facilities Demand Allocation pursuant to the terms of this Contract, then Treated Water Facilities Demand Allocation shall mean such total increased amount.

Except as provided elsewhere in this Section 3.03, the Authority shall pay Houston its pro-rata Treated Water Facilities Capital Contribution for the Plant Facilities and the Transmission Facilities (collectively, the "Treated Water Facilities") as follows: (i) for those Treated Water Facilities shown on Exhibits "B" and "D", upon the later of (A) ninety (90) days after the effective date of this Contract or (B) the date that the Authority's GRP is certified by the HGCSO, but in no event later than July 1, 2003; (ii) for Treated Water Facilities constructed prior to the date of the Utility Official's written consent of any Reservation request from the Authority, no later than sixty (60) days after the Authority receives the Utility Official's written consent for the Authority to increase its Treated Water Facilities Demand Allocation; and (iii) for Treated Water Facilities not constructed prior to the date of the Utility Official's written consent of any Reservation request from the Authority, sixty (60) days after receipt of the Utility Official's reasonable estimate of the Treated Water Facilities Capital Contribution.

The cost for any Reservation of Treated Water Facilities Demand Allocation shall be in accordance with the formulas set forth in this Section 3.03. Upon request from the Authority, Houston shall promptly provide the Authority with Houston's cost calculation, in accordance

with the cost formulas in this Section 3.03, for any Reservation of the Treated Water Facilities Demand Allocation, that at that time may be under consideration by the Authority. Any Authority written request for such a Reservation shall include Houston's cost calculation. The Utility Official shall either approve or reject, in writing, the Authority's Reservation request within ninety (90) days after receipt of such request. If the Utility Official fails to approve such request within such ninety (90)-day period, the Reservation request shall be deemed rejected. A Reservation for Treated Water Facilities not constructed prior to the date of the Reservation request must be approved by the Board of Directors for the Authority before Houston will commence design and construction of the designated Treated Water Facilities.

- (1) For Treated Water Facilities that are in service before the effective date of the Contract (which includes all Treated Water Facilities shown on Exhibits "B" and "D") or for Treated Water Facilities that are in service before the date of any Reservation request, the Authority's pro-rata Treated Water Facilities Capital Contribution is based on the formula:

$$\text{Treated Water Facilities Capital Contribution} = (A - B) \times (C/D)$$

- (2) For Treated Water Facilities that are not in service before the effective date of any Reservation request, the Authority's pro-rata Capital Contribution is based on the formula:

$$\text{Treated Water Facilities Capital Contribution} = A \times (C/D)$$

Where:

- "A" is the Treated Water Facilities Capital Costs of the Treated Water Facilities.
- "B" is the amount of depreciation calculated by applying the 50-year straight line depreciation method for the period of time running between the in-service date of the facilities and the effective date of the Contract, or for any Reservation made by the Authority, the date of such Reservation request (i.e. 2% of Treated Water Facilities Capital Costs per year).
- "C" is the Treated Water Facilities Demand Allocation in MGD to be purchased.
- "D" is the capacity in MGD of the particular facility. The capacity for transmission lines shall be calculated at a flow rate of 5 feet per second.

The Authority may defer payment of the Treated Water Facilities Capital Contribution for the 18.25 MGD Treated Water Facilities Demand Allocation for the period of time running from the date payment is due pursuant to this Section 3.03 to the date payment is made, but no later than commencement of the delivery of Water, by annually paying Houston an annual interest payment ("Annual Interest Payment"). The Annual Interest Payment shall be calculated by multiplying the Treated Water Facilities Capital Contribution times the Interest Rate. If the Authority does not pay Houston the Treated Water Facilities Capital Contribution on the date payment is due pursuant to this Section 3.03, then the Authority shall pay Houston the Annual Interest Payment on such date and, thereafter, on the anniversary date of such payment until the Authority has paid Houston the Treated Water Facilities Capital Contribution. Because the Annual Interest Payment constitutes the payment of annual interest in advance, in the event the Authority pays Houston the Treated Water Facilities Capital Contribution prior to the anniversary date of any Annual Interest Payment made by the Authority, Houston shall, within sixty (60) days of its receipt of the Treated Water Facilities Capital Contribution, refund to the Authority, with interest at the Interest Rate, the pro-rated portion of such Annual Interest Payment based on the amount of days remaining in such annual period. Houston shall not be required to deliver Water to the Authority until the Authority has paid Houston its Treated Water Facilities Capital Contribution for the Treated Water Facilities Demand Allocation of 18.25 MGD, plus any interest costs due from the Authority to Houston pursuant to this paragraph.

In the event there is no final design and construction for the Treated Water Facilities on the date that any Reservation request is submitted by the Authority to the Utility Official, the pro-rata Treated Water Facilities Capital Contribution shall be paid in two (2) increments:

(i) For the pro-rata Treated Water Facilities Capital Contribution for design engineering services, including surveys, soils boring and testing, as well as design services, the Utility Official must provide the Authority a reasonable estimate of the pro-rata Treated Water Facilities Capital Contribution for such services based on Houston's contract with the design engineer. The Authority shall deposit with Houston the amount of the Utility Official's reasonable estimate within sixty (60) days of its receipt of such estimate.

(ii) For the pro-rata Treated Water Facilities Capital Contribution for the cost of construction of the Treated Water Facilities, the Utility Official must provide the Authority a reasonable estimate of the pro-rata Treated Water Facilities Capital Contribution for the

construction based on the lowest responsible bid received plus estimated costs for construction management, engineering, testing services and a 15% contingency. The Authority shall deposit with Houston the amount of the Utility Official's reasonable estimate within sixty (60) days of its receipt of such estimate.

All Authority pro-rata Treated Water Facilities Capital Contribution deposits shall be kept by Houston in an account. Houston shall spend money from the account only for Treated Water Facilities Capital Costs and/or debt service.

Within ninety (90) days of the acceptance of the completed construction of the subject Treated Water Facilities, Houston shall cause an accounting to be made of the Treated Water Facilities Capital Costs. Houston shall engage an independent certified public accounting firm to audit its accounting. As soon as the firm has completed the audit, Houston shall submit the audited accounting to the Authority. The accounting shall state the difference between the estimated Treated Water Facilities Capital Costs that were paid by the Authority and the actual Treated Water Facilities Capital Costs.

If the actual Treated Water Facilities Capital Costs, as determined by the audited accounting, are less than the estimated Treated Water Facilities Capital Costs paid by the Authority, resulting in an overpayment by the Authority of its pro-rata share, Houston shall refund such difference with actual interest accrued, within ninety (90) days of the date of the receipt of the accounting by the Authority.

If the actual Treated Water Facilities Capital Costs, as determined by the accounting, are more than the estimated Treated Water Facilities Capital Costs paid by the Authority, resulting in an underpayment by the Authority of its pro-rata share, the Authority shall pay Houston, within ninety (90) days of the date of the receipt of the accounting by the Authority, such difference with interest calculated at the actual interest rate of the debt incurred by Houston in order to pay for such difference, running from the time Houston paid for the Authority's pro-rata share of Treated Water Facilities Capital Costs (resulting from such Authority underpayment) to the time such underpayment is paid to Houston by the Authority.

The Treated Water Facilities applicable to the Authority are shown on Exhibits "B" and "D" and the corresponding Treated Water Facilities Capital Contribution calculations for such Treated Water Facilities are shown on Exhibit "F."

ARTICLE IV

Operation and Maintenance Charges

Section 4.01 In General

It is expressly understood by the Authority that it shall directly reimburse Houston on a periodic basis for the expenses incurred in producing and treating the Water delivered to the Authority. The Authority pledges to enact rates and fees for its customers sufficient to pay the O&M Expenses.

Section 4.02 O&M Expenses Calculation

For the purposes of this Contract, the yearly O&M Expenses for the Authority are computed according to the following formula:

O&M Expenses =

$$\frac{(A \times C)}{B} + \frac{(A \times D)}{E} + F$$

Where:

"A" is the amount of Water (in millions of gallons) taken by the Authority at the Point(s) of Delivery, as measured by the measuring equipment pursuant to Article VII, during the given year.

"B" is the total amount (in millions of gallons) of Water produced by the Plant Facilities during the given year.

"C" means all costs and expenses incurred by Houston during the given year (whether incurred by Houston through its own staff or independent contractors) for the maintenance and operation of the Plant Facilities, including (i) chemicals, labor, power, testing, permits, insurance, and other related costs, necessary for the efficient maintenance and operation of the Plant Facilities in full compliance with this Contract and all applicable regulatory requirements and the preparation costs of the Annual Audit; (ii) necessary repairs and replacements to the Plant Facilities; and (iii) improvements and betterments to maintain the Plant Facilities in proper operation and to comply with this Contract and all applicable regulatory requirements. The above costs and expenses include a proportionate share of administrative costs for management and support, resource management, planning and operations, the Office of the Director of Public Works as well as other indirect costs in the allocation percentage included in Houston's most recent finalized independent rate study. (The portion of such study showing such allocation percentage is attached hereto as Exhibit "G.") At the time of execution of this Contract, this allocation is 26.84%. Except as provided herein, no cost of Houston's government not directly related to the maintenance and operation of the Plant Facilities shall be included in the factor "C."

"D" means all costs and expenses incurred by Houston during the given year (whether incurred by Houston through its own staff or by independent contractors) for the maintenance and operation of the Untreated Water Facilities,

including, (i) chemicals, labor, power, testing, permits, insurance, and other related costs, necessary for the efficient maintenance and operation of the Untreated Water Facilities in full compliance with this Contract and all applicable regulatory requirements and the preparation costs of the Annual Audit; (ii) necessary repairs and replacements to the Untreated Water Facilities; and (iii) improvements and betterments to maintain the Untreated Water Facilities in proper operation and to comply with this Contract and all applicable regulatory requirements. No cost of Houston's government not directly related to the maintenance and operation of the Untreated Water Facilities shall be included in the factor "D".

"E" is the total amount of untreated surface water (in millions of gallons) sold to Houston's water customers during the given year, including such untreated surface water received at Houston's water treatment plants as well as the billable quantity (including any take-or-pay amounts) taken by Houston's untreated surface water customers, but excluding untreated surface water loss by evaporation or leakage.

"F" is the Authority's pro rata share of the cost during the given year of (i) Major Rehabilitations and (ii) the repair and/or replacement of any portion of the Transmission Facilities. As used in this definition, the ratio for determining the share of the cost borne by the Authority is a fraction, the numerator of which is the Authority's then-current Treated Water Facilities Demand Allocation (in MGD) and the denominator of which is the total capacity (in MGD) of the entire facility subject to the Major Rehabilitation, repair, or replacement. The reasonable cost for such repairs, replacements and/or rehabilitations includes the same classes of costs identified in factor "C" above. Except as provided herein, no cost of Houston's government not directly related to the Major Rehabilitations or the repair and/or replacement of any portion of the Transmission Facilities shall be included in the factor "F." The capacities (in MGD) of the Plant Facilities and Transmission Facilities are shown in Exhibit "H."

Section 4.03 Annual O&M Budget

Ninety (90) days prior to the commencement of delivery of Water under this Contract, and ninety (90) days prior to the beginning of each Houston fiscal year thereafter, Houston shall provide the Authority for its review and comment the proposed Annual O&M Budget showing (i) an estimate of the Authority's O&M Expenses for the coming fiscal year, (ii) the proposed monthly payments to be paid by the Authority for the fiscal year (1/12 of the Annual O&M Budget), and (iii) the amount of the O&M Reserve. Houston will also include in the proposed and final Annual O&M Budget the estimated water production by the Plant Facilities and the Untreated Water Facilities as well as the anticipated amount of Water to be sold to the Authority.

The Authority will have sixty (60) days to review and comment on the proposed Annual O&M Budget, and Houston agrees to provide such records and cost documents in its possession as the Authority may reasonably require. At the end of the 60-day period Houston will consider

the Authority's comments and issue the final Annual O&M Budget ("Annual O&M Budget") and invoice.

Section 4.04 Payments of Authority O&M Expenses

Within thirty (30) days of its receipt of Houston's invoice and final Annual O&M Budget, the Authority shall pay Houston the O&M Reserve and the first monthly payment of O&M Expenses. Each month thereafter, the Authority shall make monthly payments to Houston in such equal amounts as required in the applicable Annual O&M Budget. Payments shall be due on the first of each month, and any payment more than thirty (30) days late shall bear interest at the rate applicable under Chapter 2251, Texas Government Code. Houston shall maintain the O&M Reserve in an interest-bearing account, which interest shall be credited to the account of the Authority. Any portion of a monthly O&M Expenses payment made by the Authority in excess of the actual monthly O&M Expenses incurred by Houston shall be credited to the account of the Authority in the O&M Reserve.

Houston may use funds from the O&M Reserve only for O&M Expenses. Houston will use the funds out of the O&M Reserve to pay O&M Expenses only if the monthly O&M Expenses payment made by the Authority is less than the actual monthly O&M Expenses incurred by Houston or if the payment of the monthly O&M Expenses is not timely made to Houston by the Authority. Houston may invoice the Authority for any shortfall in the O&M Reserve in order for the O&M Reserve to equal the amount established in the Annual O&M Budget, provided that any such invoice must include an accounting to justify the additional payment to the O&M Reserve. The Authority shall pay such invoices within sixty (60) days of its receipt of Houston's accounting and invoice for replenishment of the O&M Reserve.

Section 4.05 Major Rehabilitations

Houston shall perform such Major Rehabilitations as necessary for the operation and maintenance of the Plant Facilities and Transmission Facilities. Except for emergencies involving health or safety, Houston shall submit plans and specifications for such Major Rehabilitations to the Authority for review and comment at least sixty (60) days prior to Houston advertising the project for bids. Costs for Major Rehabilitations shall be paid by the Authority in the ratio of its Treated Water Facilities Demand Allocation to the capacity of the facility requiring the Major Rehabilitation, as applicable. Provided, however, the Authority shall never be required to pay for any portion of replacements, additions or improvements to facilities that provide capacity or Water solely to other customers.

Section 4.06 Annual Audit

Within one hundred eighty (180) days of the close of each Houston fiscal year, Houston shall prepare an accounting of the O&M Expenses ("Annual Audit"). Houston shall engage an independent certified public accounting firm to audit the accounting of costs of the O&M Expenses. As soon as the firm has completed the audit, Houston shall submit the audited accounting to the Authority. Houston and the Authority agree to "true-up" the previous payments made for O&M Expenses during the fiscal year such that if the Authority has underpaid it will make timely payment of all O&M Expenses owed in the next monthly billing following the audit, and Houston agrees to give credit to the Authority if it has overpaid O&M Expenses for the fiscal year, such credit, including any interest accrued in the O&M Reserve on such overpayments, shall be given on the next monthly billing(s) following the audit.

Houston agrees to provide both the independent auditor and the Authority all expenses, meter readings and cost data required for the audit. The audit must include an itemization for the Authority of all costs and meter recordings used to compute the O&M Expenses.

ARTICLE V

Term Provision

Section 5.01 Term.

This Contract shall be in force and effect from and after the execution hereof by the Houston Controller and shall expire at noon on the fortieth (40th) anniversary of the date of countersignature by Houston's Controller. To the extent authorized by law, as amended, Houston agrees, if requested in writing by the Authority, to execute a written extension of the term of this Contract for an additional twenty (20) years beyond such forty (40) year term. The Houston Mayor shall be authorized to execute such written extension. At such time as this Contract is no longer in force and effect, if requested in writing by the Authority, Houston agrees to continue to provide water services to the Authority upon the payment of reasonable rates and charges therefor which take into account the capital payments paid by the Authority to Houston pursuant to this Contract and subject to the availability of Water. The immediately preceding sentence shall survive the expiration or termination of this Contract.

ARTICLE VI

Performance by the Parties

Section 6.01 Construction and Maintenance of Certain Facilities between the Point(s) of Delivery and Point(s) of Measurement.

With respect to Water handling facilities, if any, located between the Point(s) of Delivery and the Point(s) of Measurement shown in Exhibit "C," the Authority and Houston specifically agree:

- (1) That all such facilities, other than the measurement equipment itself, shall be and remain the property of the Authority.
- (2) That the Authority shall take all responsible steps to maintain such facilities and to prevent leaks or discharges from such facilities and shall not suffer, permit, cause or allow any water to be taken or used from such facilities, except through the measuring equipment.
- (3) That the Authority shall repair any such leak or discharge at once upon receiving notice thereof and pay Houston the cost of any Water lost by reason of such a leak or discharge. The Authority shall make payment to Houston for such Water only by Houston including the amount of such Water in the factor "A" defined in Section 4.02. Calculation of the amount of Water lost by reason of such leak shall be estimated on a basis mutually agreed to between the Authority and the Utility Official.
- (4) That the Authority shall correct or repair any damage caused by any such leak or discharge.

Section 6.02 Tap and Meter.

The Authority shall construct, at its sole cost, water connection taps at the Point(s) of Delivery and set the water meter(s) at the Point(s) of Measurement under the mutual approval and inspection of the Utility Official and the Authority. The Authority also agrees to provide a telephone and electronic connection accessible at the Point(s) of Measurement and allow Houston to connect remote meter reading equipment to such telephone line.

Before any connection, the Authority System shall be chlorinated in accordance with requirements approved by the Utility Official.

Section 6.03 Delivery Limitations.

The Authority shall not be guaranteed any specific quantity or pressure of Water whenever Houston's water supply is limited or when Houston's equipment may become

inoperative due to unforeseen breakdown or scheduled maintenance and repairs. Should delivery of Water be limited as a result of scheduled maintenance or repairs, Houston shall provide written notification of such scheduled maintenance or repairs at least 30 days prior to same. Houston is in no case to be held to any liability for failure to furnish any specific amount or pressure of Water; provided, however, that Houston shall use reasonable efforts to deliver the Water required by this Contract and to maintain sufficient pressure at the Point(s) of Delivery in order for the Authority to receive the Water it is entitled to under this Contract. Notwithstanding the other provisions of this Section 6.03, Houston may reduce the supply of Water only in accordance with the laws of the State of Texas, particularly Section 11.039(a) of the Texas Water Code, as may be amended from time to time.

Section 6.04 Backflow Requirements.

On or before the commencement of delivery of Water to the Authority pursuant to this Contract, the Authority shall have installed an air gap or backflow prevention device, in accordance with the specifications approved by the Utility Official, at either: (i) at or near the Point of Delivery; or (ii) at each location where the Authority System connects to the water system of an Authority customer. The Authority and the Utility Official shall agree in writing as to the location of all air gaps or backflow prevention devices installed by the Authority.

Section 6.05 Water Conservation.

The Authority shall approve and implement a water conservation program as required by the Texas Commission on Environmental Quality pursuant to 30 T.A.C. § 288, as may be amended from time to time.

Section 6.06 Inspections.

The Authority agrees that Houston may conduct inspections from time to time to determine that no conditions exist in the Authority System and connections to its customers' premises which would or might adversely affect the Houston System. Houston shall notify the Authority should such condition exist. Such notification shall be provided in writing and shall be made within forty-eight (48) hours of discovering any such condition.

Section 6.07 Inspection of Records.

With reasonable notice, either party shall allow the other the opportunity to examine records from the other party for the purpose of evaluating the costs for which payments are requested or required hereunder.

Section 6.08 Payment.

In the event the Authority fails to timely tender payment of any amount within the periods established herein, and such failure continues for sixty (60) days after the notice to the Authority of such default, Houston may suspend delivery of Water, but the exercise of such right shall be in addition to any other remedy available to Houston.

Section 6.09 Title to and Responsibility for Water.

Title to, possession, and control of Water shall remain with Houston until it passes through the Point(s) of Delivery, where title to, possession, and control of the Water shall pass from Houston to the Authority.

ARTICLE VII

Measuring Equipment

Section 7.01 In General.

At the Authority's own cost and expense, the Authority shall provide for installation at the Point(s) of Measurement, measuring equipment, properly equipped with meters and devices of standard type for measuring accurately the quantity of Water delivered under this Contract, with ability to measure the quantity of Water delivered within the accuracy tolerance of two percent (2%). Such measuring equipment shall be approved by the Authority and the Utility Official, but shall become the property of Houston after installation.

Section 7.02 Access.

During any reasonable hours, Houston and the Authority shall have access to all measuring equipment. The Authority shall have access to all records pertinent to determining the measurement and quantity of Water actually delivered, but the reading of the meters for purposes of the calculation of any payment required from the Authority under this Contract shall be done by Houston.

Section 7.03 Testing of Meter.

Houston shall maintain the measuring equipment within the accuracy tolerance specified in Section 7.04 by periodic tests. Houston shall conduct such tests at least once every twelve (12) months and shall notify the Authority at least forty-eight (48) hours in advance of the time and location at which such tests are to be made. If the Authority requests an additional test within twelve (12) months, Houston shall charge the Authority an amount equal to Houston's cost to perform such test, unless the test reveals that the equipment registers greater than one hundred and two percent (102%) for a given flow rate. In addition, the Authority shall have the right to independently check, at its own cost, said measuring equipment at any time upon forty-

eight (48) hours written notification to the Utility Official, providing the opportunity for the Utility Official to witness such tests.

Section 7.04 Results of Tests.

Should the test of the measuring equipment in question show that the equipment registers either more than one hundred two percent (102%) or less than ninety-five percent (95%) of the Water delivered for a given flow rate, the total quantity of Water delivered to the Authority will be deemed to be the average daily consumption as measured by the measuring equipment when in working order, and the meter shall be calibrated to the manufacturer's specifications (in the case of Venturi meters) or the AWWA specifications (for all other types of meters) for the given rate of flow, or replaced by Houston with accurate measuring equipment that is tested before it is placed in service. This adjustment shall be for a period extending back to the time when the inaccuracy began, if such time is ascertainable; and if such time is not ascertainable, for a period extending back to the last test of the measuring equipment or one hundred twenty (120) days, whichever is shorter.

As used in this paragraph, the expression "given rate of flow" means one of the following selected by the Utility Official for each calibration or test:

- (1) the total quantity of Water delivered during the preceding period (usually a calendar month) as reflected by the totalizer, converted to gallons per minute;
- (2) high, low, and intermediate rates of flow in the flow range, as reflected by the flow recording devices; or
- (3) AWWA-specified test flow rates for that size and type of meter.

Section 7.05 Disputes as to Testing.

In the event of a dispute between Houston and the Authority as to the accuracy of the testing equipment used by Houston to conduct the accuracy test, an independent check may be mutually agreed upon between the Authority and the Utility Official to be conducted by an independent measuring equipment company suitable to both the Authority and the Utility Official. The cost of such test will be at the Authority's sole expense.

The Utility Official shall accept the test results of the independent measuring equipment company, provided that the calibration procedure and test equipment are mutually agreeable to the Authority and to the Utility Official.

Section 7.06 Check Meters.

The Authority may install, at its own cost and expense, such check meters in the Authority's pipeline; but Houston shall have the right of ingress and egress to such check meters

during all reasonable hours; provided, however, that billing computations shall be on the basis of the results of the measuring equipment set forth above.

ARTICLE VIII

Miscellaneous Provisions

Section 8.01 Quality of Water.

Houston shall provide Water meeting all applicable Texas and Federal regulations regarding water quality, including the Safe Drinking Water Act, as same may be amended from time to time.

EXCEPT AS PROVIDED IN SECTIONS 6.03 AND 8.01, HOUSTON MAKES NO WARRANTY, EXPRESSED OR IMPLIED, REGARDING THE QUALITY OR DELIVERY PRESSURE OF THE WATER, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

THE AUTHORITY HEREBY RELEASES AND DISCHARGES HOUSTON FROM ANY AND ALL FINES, DEMANDS, JUDGMENTS, LIABILITIES OR CLAIMS ARISING BY REASON OF OR IN CONNECTION WITH THE DELIVERY OF WATER WHICH MEETS THE REQUIREMENTS OF SECTIONS 6.03 AND 8.01.

Section 8.02 Ingress and Egress.

During the term of this Contract, and upon the giving of prior notification to the Authority, Houston shall have the right of ingress and egress in, upon, under and over any and all land, easements and rights-of-way of the Authority on which Houston, with the Authority's consent, constructs facilities to deliver Water to the Authority.

Section 8.03 Assignments.

This Contract shall bind and benefit the respective parties and their legal successors, but shall not otherwise be assignable, in whole or in part, by either party without first obtaining written consent of the other. "Assignment" as used herein means assignment in law or otherwise.

Section 8.04 Subject to Law.

This Contract shall be subject to all present and future valid laws, orders, rules and regulations of the United States of America, the State of Texas, any regulatory body having jurisdiction and the Charter and Ordinances (to the extent the Ordinances are not inconsistent with this Contract) of the City of Houston, Texas. In order to protect the Houston System it is specifically agreed that the Authority System shall be constructed and operated to comply with the rules promulgated by the Texas Commission on Environmental Quality, or any successor

agency, the Houston Plumbing Code, and the policy of requirements of the Utility Official regarding backflow prevention and cross connections. Should a condition in violation of these requirements be discovered, the Authority shall promptly cure same.

Section 8.05 No Additional Waiver Implied.

The failure of either party hereto to insist, in any one or more instances, upon performance of any of the terms, covenants or conditions of this Contract, shall not be construed as a waiver or relinquishment of the future performance of any such term, covenant or condition by the other party hereto, but the obligation of such other party with respect to such future performance shall continue in full force and effect.

Section 8.06 Merger.

This instrument and the Pumpage Fee and Pump Station Capacity Contract effective on or about the same date as this Contract contain all the agreements made between the parties regarding the matters addressed herein.

Section 8.07 Notices.

Until the Authority is otherwise notified in writing by Houston, the address of Houston is and shall remain as follows:

City of Houston
Utility Official of Public Works and Engineering Department
P.O. Box 1560
Houston, Texas 77251-1560

Until Houston is otherwise notified in writing by the Authority, the address of the Authority is and shall remain as follows:

West Harris County Regional Water Authority
c/o James A. Boone
Vinson & Elkins L.L.P.
1001 Fannin, Suite 2300
Houston, Texas 77002

All written notices, statements and payments required or permitted to be given under this Contract from one party to the other shall be deemed given by the deposit in a United States Postal Service mailbox or receptacle of certified or registered mail, with proper postage affixed thereto, addressed to the respective other party at the address set forth above or at such other address as the parties respectively shall designate by written notice.

Section 8.08 Authorship.

The parties agree that this Contract shall not be construed in favor of or against either party on the basis that the party did or did not authorize this Contract.

Section 8.09 Parties in Interest.

This Contract shall be for the sole and exclusive benefit of the parties hereto and shall not be construed to confer any rights upon any third party. Houston shall never be subject to any liability in damages to any customer of the Authority for any failure to perform under this Contract.

Section 8.10 Sale of Water Outside Boundaries.

In entering into this Contract the parties contemplate that the Authority will sell the Water to inhabitants and commercial customers within the Authority. Therefore, the Authority may sell Water purchased hereunder outside its boundaries only if such sale is approved in writing by the Utility Official. The Utility Official shall grant any such request if the area is outside Houston's city limits and is not then provided Water service by Houston.

Section 8.11 Captions.

The captions appearing at the first of each numbered section in this Contract are inserted and included solely for convenience and shall never be considered or given any effect in construing this Contract, or any provisions hereof, or in connection with the duties, obligations, or liabilities of the respective parties hereto or in ascertaining intent, if any questions of intent should arise.

Section 8.12 Enforcement.

The City Attorney or his or her designee shall have the right to enforce all legal rights and obligations under this Contract without further authorization.

Section 8.13 Approvals.

Unless otherwise provided for herein, any consent or approval of the parties shall be made by the governing body of each party.

Section 8.14 Force Majeure.

In the event either party is rendered unable, wholly or in part, by Force Majeure, to carry out any of its obligations under this Contract, it is agreed that upon such party's giving notice and full particulars of such Force Majeure in writing to the other party as soon as possible after the occurrence of the Force Majeure, the obligations of the party giving such notice, to the extent it is affected by Force Majeure and to the extent that due diligence is being used to resume performance, shall be suspended for the duration of the Force Majeure. Such cause shall, as far as possible, be remedied with all reasonable dispatch.

Section 8.15 Force Majeure Defined.

The term "Force Majeure," as used herein, shall include, but not be limited to, acts of God, strikes, lockouts or other industrial disturbances, acts of the public enemy, war, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, droughts, tornadoes, hurricanes, arrests and restraints of government and people, explosions, breakage or damage to machinery, pipelines or canals, and any other incapacities of either party, whether similar to those enumerated or otherwise, and not within the control of the party claiming such inability, which by the exercise of due diligence and care such party could not have avoided.

Section 8.16 Default and Remedies.

Default shall occur only in the event either party fails to adhere to its respective obligations hereunder. In such event, the non-defaulting party shall give the defaulting party: (i) written notice describing such default and the necessary cure therefor; and (ii) the opportunity to cure such default within no less than thirty (30) days of receipt of such notice. If the default is cured within the specified time period to the satisfaction of the non-defaulting party, then no further action shall be taken by the non-defaulting party. If the default is not cured within the specified time period to the satisfaction of the non-defaulting party, the non-defaulting party may pursue any available remedies existing at law or in equity. This Section 8.16 shall not be considered as specifying the exclusive remedy or procedure for remedy for any default, and all remedies existing at law and in equity are to be available to either party; provided, however, that the parties may submit their dispute in good faith to non-binding mediation, the costs of which will be shared equally by the parties, prior to either party filing suit for any default under this Contract.

Section 8.17 Advisory Committee.

Houston shall establish an Advisory Committee comprised of: (i) one (1) representative of Houston, selected by the Utility Official; (ii) one (1) representative of the Authority, selected by the Authority; and (iii) one (1) representative of the North Harris County Regional Water Authority. Such representatives may be members of the governing bodies of such entities or such other persons as such entities may designate. The function of the Advisory Committee shall be to inform and consult with Houston concerning: (i) Annual O&M Budget matters, (ii) surface water system operational issues, (iii) upcoming or ongoing surface water projects, (iv) long-term surface water planning issues, and (v) other surface water related issues. The Advisory Committee shall make reasonable efforts to meet at least once per calendar year.

Section 8.18 Responsibility for Groundwater Reduction Plan.

The Authority shall be responsible for adopting, obtaining HGCSO approval of and administering its Groundwater Reduction Plan (the "GRP"). Houston shall be responsible for adopting, obtaining HGCSO approval of and administering its GRP.

Section 8.19 Payment Dates.

If the Authority and the Utility Official mutually agree in writing, the due dates of any payments due under this Contract within any particular calendar year may be modified such that such payments become due on the same date within each calendar year.

Section 8.20 Severability.

The provisions of this Contract are severable, and if any provision or part of this Contract or the application thereof to any person or circumstance shall ever be held by any court of competent jurisdiction to be invalid or unconstitutional for any reason, the remainder of this Contract and the application of such provision or part of this Contract to other persons or circumstances shall not be affected thereby.

Section 8.21 Exhibits.

Exhibits "A" through "H" attached to this Contract are hereby incorporated herein for all purposes.

[EXECUTION PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have executed this Contract in multiple copies, each of which shall be deemed to be an original, effective on the date of countersignature indicated below.

"Houston"

CITY OF HOUSTON, TEXAS

By: Lee P. Brown
Mayor

Executed for and on behalf of City pursuant to authority granted by the City Council Ordinance No. 2003-242 passed March 26, 2003, a copy of which is attached hereto for reference.

ATTEST/SEAL

[Signature]
City Secretary

APPROVED:

[Signature]
Director, Department of Public Works and Engineering

APPROVED AS TO FORM:

[Signature]
Sr. Assistant City Attorney
L.D. File No. 80-99041-01

COUNTERSIGNED BY:

[Signature]
City Controller

DATE COUNTERSIGNED: 04/08/03

"Authority"

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

By: [Signature]
President, Board of Directors

ATTEST/SEAL

By: [Signature]
Secretary, Board of Directors

EXHIBITS

- Exhibit "A" - Existing Untreated Water Facilities
- Exhibit "B" - Plant Facilities
- Exhibit "C" - Point(s) of Delivery/Point(s) of Measurement
- Exhibit "D" - Transmission Facilities
- Exhibit "E" - Initial Untreated Water Facilities Demand Allocation, Outstanding Debt and Amount of Factor "B" for Payment for Existing Untreated Water Facilities under Section 3.02(a)
- Exhibit "F" - Capital Contribution Calculations for Treated Water Facilities applicable to the Authority
- Exhibit "G" - Houston's Most Recent Finalized Independent Rate Study
- Exhibit "H" - Capacities of the Plant Facilities and Transmission Facilities

EXHIBIT A: Houston's Existing Untreated Water Facilities

- 1 Coastal Water Authority
- 2 Trinity/Lynchburg Pump Stations
- 3 Conveyance System

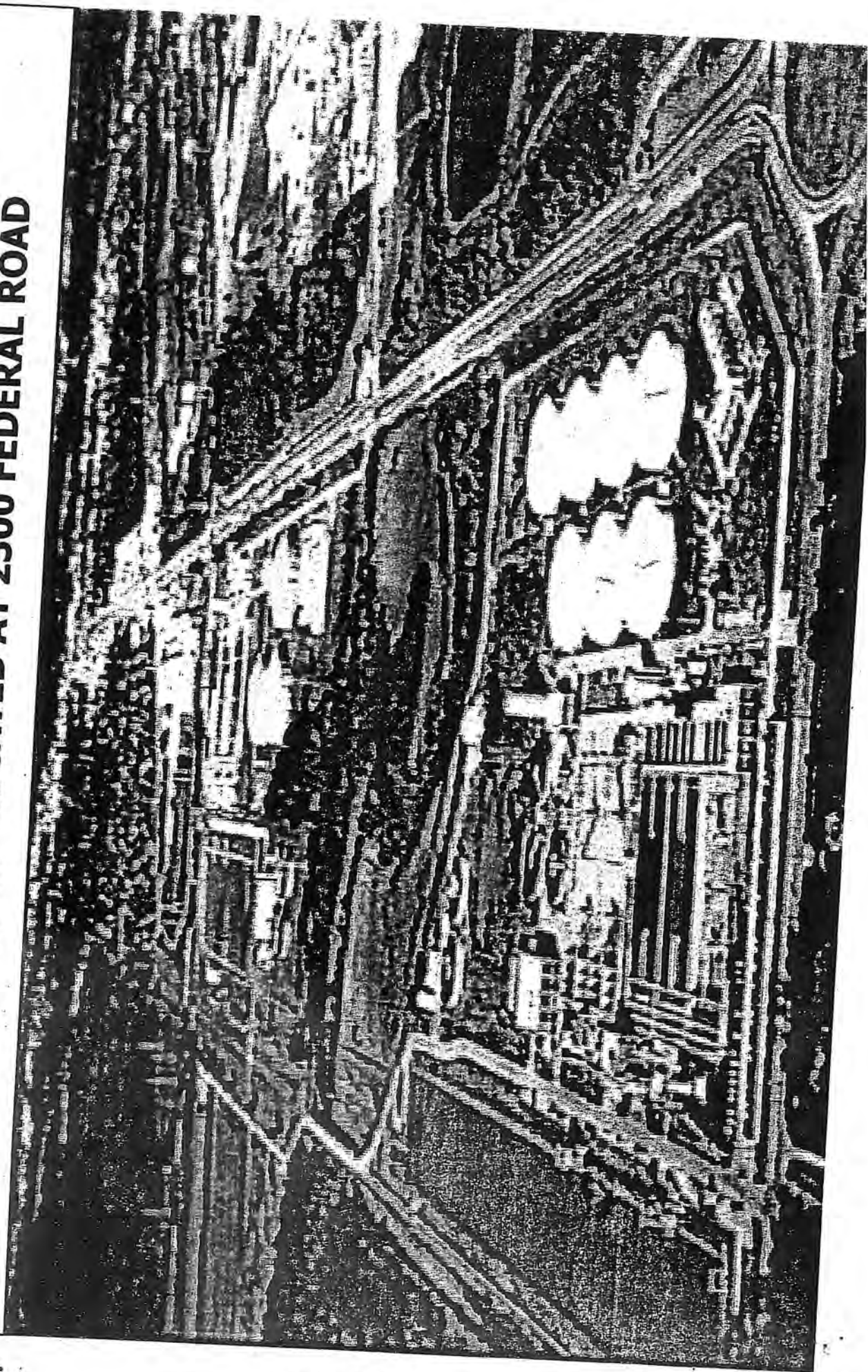
- 4 Trinity River Authority
- 5 Lake Livingston Improvements

- 6 Lake Houston Dam/Reservoir

- 7 Wallisville Lake Project
- 8 Dayton Canal
- 9 Allens Creek Reservoir Land Purchase

- 10 Water Rights

**EXHIBIT B : PLANT FACILITIES --
HOUSTON'S EAST WATER PURIFICATION
PLANT LOCATED AT 2300 FEDERAL ROAD**



**Temporary Point of Delivery
and Measurement**

**Permanent Point of Delivery
and Measurement**

FAIRVIEW

Jersey Village
Pump Station

HWY 290

48"

SPENCER

36"

36"

24"

MAYARD

LEGEND

HIGHWAY

EXISTING WATER LINES 24" AND GREATER

PROPOSED WATER LINES UNDER DESIGN OR CONSTRUCTION

EXISTING WATER LINES

GROUNDWATER PUMP STATION

Note: Pursuant to Section 6.04 of the Contract, the air gap in connection with the Authority's receipt of water through the Permanent Point of Delivery and Measurement may be located on the Authority's pump station site ("Authority Site") located near the Jersey Village Pump Station. The Authority will not allow any connections to the water line between the Point of Delivery and Measurement and the Authority Site.

**Exhibit C Point (s) of Delivery
and Point (s) of Measurement**

DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
PUBLIC UTILITIES DIVISION

EXHIBIT E: Initial Untreated Water Facilities Demand Allocation to be purchased by the Authority, The Outstanding Debt, and the total amount (in MGD) of Factor "B"

WHCRWA's Prorata Share of Houston's
Untreated Water Facilities Current
Outstanding Debt For Initial Demand
Allocation in year

	2004	(A/B)C = \$1,861,466
Where	2010	(A/B)C = \$11,727,234

Factor A = Portion of Initial Untreated Water Facilities Demand Allocation to be Purchased

	Year	Portion Purchased (MGD)
	2004	2.5
No later than	2010	15.75

Factor B = Surface Water - Average Daily Production (MGD):

Untreated Water Sold to Customers in fiscal year ending June 30, 2001 (MGD):	235.51
Water Production at SEWTP in fiscal year ending June 30, 2001 (MGD):	68.55
Water Production at EWTP in fiscal year ending June 30, 2001 (MGD):	215.92
Surface Water - Average Daily Production (MGD):	<u>519.98</u>

Factor C = Houston's Untreated Water Facilities Outstanding Debt

Facility Component	Outstanding Debt
1 Coastal Water Authority	\$254,187,160
2 Trinity River Authority	\$13,000,000
Total Contract Debt:	\$267,187,160
3 Coastal Water Authority (Proposed TRINITY/Lynchburg Pump Station Upgrade)	\$55,000,000
4 Trinity River Authority - Current Lake Livingston Improvements	\$15,481,000
5 Allens Creek Land Purchase:	\$16,754,709
6 Lake Houston Dam/Reservoir Improvements:	\$17,016,400
7 Wallisville Lake Project :	\$10,580,707
8 Dayton Canal	\$5,150,000
Total Outstanding Debt (Factor C):	<u>\$387,169,976</u>

Note: Items 1, 2, 7 and 8 represent actual " Outstanding Debt " as of June 30, 2001. Items 3 through 6 represent estimated " Outstanding Debt. " Factor "C" will be revised per "actual" Outstanding Debt of the Untreated Water Facilities shown above, as provided in Section 3.02 (a) of the Contract.

Exhibit F

Capital Contribution for Transmission Facilities

PAGE 2 OF 2

Surface Water Transmission Line Cost

SWTP* Contract No.	Total Cost	Year placed in Service	Net Book Value	Length (ft)	Size (in)	Full Flow @ 5 ft/sec (MGD)	Pro Rata Cost @ 2.5 MGD \$ (Thousand)	Pro Rata Cost @ 15.75 MGD \$ (Thousand)
1A	\$6,554,244	1987	\$4,456,886	9,761	90	143	\$78	\$491
1B	\$11,452,391	1987	\$7,787,626	19,181	84	124	\$157	\$989
2A	\$9,263,733	1996	\$7,966,810	8,577	84	124	\$161	\$1,012
2B1	\$7,865,650	1999	\$7,236,398	4,100	84	124	\$146	\$919
2B2	\$6,769,729	1999	\$6,228,151	4,700	84	124	\$126	\$791
2C	\$7,988,892	2002	\$7,829,115	9,400	84	124	\$158	\$994
6A	\$9,146,527	2002	\$8,963,596	3,130	84	124	\$94	\$594
54A-1	\$3,669,143	2002	\$3,595,760	6,800	60	64	\$140	\$885
54A-2	\$3,347,854	2002	\$3,280,897	5,750	60	64	\$128	\$807
54B-1	\$7,435,239	2002	\$7,286,535	12,000	54	51	\$357	\$2,250
54B-2	\$4,273,707	2002	\$4,188,232	7,750	54	51	\$205	\$1,293
56A	\$8,313,022	2003	\$8,313,022	16,400	54	51	\$408	\$2,567
56B	\$3,537,443	2003	\$3,537,443	10,300	48	41	\$216	\$1,359
19A	\$4,981,012	1995	\$4,184,050	21,800	36	23	\$455	\$2,865
19B	\$5,456,230	1995	\$4,583,233	20,941	36	23	\$498	\$3,139
19C	\$4,312,391	1996	\$3,708,656	17,707	36	23	\$403	\$2,540
19D	\$5,273,740	1996	\$4,535,417	13,695	36	23	\$493	\$3,106
Total Length				191,992				

Total Pro Rata Cost \$4,222.50

Total Pro Rata Cost \$26,601.73

30,824,230

* Surface Water Transmission Program

Exhibit F

Capital Contribution for Plant Facilities

PAGE 1 of 2

East Water Purification Plant (EWPP) Expansion Cost

FY00	S-0056-29 -2	\$5,437,400	EWPP Upgrade & Optimization
	S-0056-17 -3	\$66,800	EWPP Plant II Rehab
	S-0056-00 -3	\$512,475	Water Sedimentation Basins of EWPP
	S-0056-27 -3	\$10,252,000	EWPP Expansion and Improvements
	S-0056-Y9 -2	\$150,000	EWPP Design & implementation of pilot plant testing for water treatment
	S-0056-Y9 -2	\$75,900	EWPP Plant III Admin. Bldg Renovations
		\$16,494,575	
FY01	S-0056-29 -3	\$17,035,000	EWPP Upgrade & Optimization
	S-0056-WP -3	\$2,012,460	EWPP Miscellaneous Improvements
	S-0056-Y8 -2	\$1,622,000	EWPP Complex sludge facilities improvements & expansion
	S-0056-Y8 -3	\$2,234,000	EWPP Plant III Admin. Bldg Renovations
	S-0056-Y9 -3	\$766,000	EWPP Plant I Sedimentation Basins A&B
		\$23,669,460	
FY02	S-0056-34-03	\$26,214,000	EWPP Upgrade and optimization - Package 4
	S-0056-35-03	\$5,658,000	Switchgear replacement at East Water Plant - Package 4
	S-0056-29-02	\$2,477,000	Amendment #1 to EWPP design contract
	S-0056-Y8-02	\$819,000	Amendment #3 to PTI contract
		\$35,168,000	
FY03	S-0056-11-03	\$5,750,000	EWPP 1, 2&3 sludge improvements - Package 1B
	S-0056-12-03	\$8,625,000	EWPP 1, 2&3 sludge improvements - Package 2
	S-0056-32-03	\$5,175,000	EWPP Upgrade and Optimization - Package 2
	S-0056-33-03	\$5,520,000	EWPP Upgrade and optimization - Package 3
		\$25,070,000	
	Total Cost	\$100,402,035	
	Gallons/day	90,000,000	(Increase in Reliable Capacity)
	Cost/Gal	\$1.12	(Rounded to the nearest Hundredth)
	Pro-Rata Cost	\$2,788,945	2.5 MGD
	Pro-Rata Cost	\$17,570,356	15.75 MGD

20,359,301



CITY OF HOUSTON

Water and Sewer Rate Study

April 1999

BLACK & VEATCH

Exhibit G Page 2 of 3

Table W-9

Water Utility Allocation of Maintenance & Operation Expenses 2000 Test Year Thousands of Dollars

Line No.	Description	(1) M&O Expense	(2) Common to Surface Water		(3) Common to All Utility		(4) Common to Treated Water		(5) Common to Retail		(6) Base	(7) Extra Capacity Max Hour	(8) Base	(9) Extra Capacity Max Hour	(10) Base	(11) Direct SE Plant Participants
			Water	Water	Meters	Billing	Base	Max Day	Max Day	Max Hour						
1	Source of Supply - Surface Water															
2	Resource Management	42,080	37,766													4,315
3	Meter Maintenance	4,523	37,766													4,315
4	Other Customer Service	12,229		4,523												
5	Customer Service	16,752			12,229											
6	SE Plant Participants	4,315			12,229											
7	Ground Water	982														
8	Pumping	20,951														
9	Treatment	10,803														
10	Water Production	37,050														
11	Distribution Water Storage	2,673														
12	Water Pipe	8,280														
13	Transmission	8,046														
14	Distribution	207														
15	Water Services	122														
16	Water Meters	19,328														
17	Utilities Maintenance	6,912														
18	Management & Support	4,849														
19	Planning & Operations	715														
20	Office of the Director	3,655														
21	Inventory Support	16,365														
22	Resource Management	1,356														
23	Non-capitalized Equipment	33,857														
24	General & Administrative	149,062														
25	Total M&O Expense	159,992	54,551	6,826	17,204	36,792	13,604	11,067	5,512	2,037	3,770	8,629	8,629			

Exhibit G Page 3 of 3

Calculation of General and Administrative Cost per 1999 Black & Veatch Rate Study Water Utility

(1) General and Administrative	\$ 33,852
(2) Total M & O Cost of Service	\$ 159,992
(3) Total M & O excluding General & Administrative Cost	\$ 126,140
(4) % of General & Administrative to Total M & O excluding General & Administrative Cost	26.84%

Note: The following is an example of the application of the above 26.84% (which percentage may change depending upon Houston's then most recent finalized independent rate study) under factor "C" of Section 4.02 of the Contract:

If the total costs and expenses incurred by Houston during a given year for maintenance and operation of the Plant Facilities (not including any Houston administrative costs for management and support, resource management, planning and operations, or the Office of the Director of Public Works and Engineering, or other related indirect Houston costs) is \$1,000,000, then \$268,400 ($\$1,000,000 \times 26.84\%$) shall be added for such Houston administrative related costs, thereby causing factor "C" to equal a total of \$1,268,400 for such year.

Exhibit H Plant and Transmission Facility Capacities

Facilities		CAPACITY (MGD)			
East Water Purification Plants		350			
Transmission Line	Year placed in Service	Length (ft)	Size (in)	Full Flow @ 5 ft/sec (MGD)	
1A	1987	9,761	90	143	
1B	1987	19,181	84	124	
2A	1996	8,577	84	124	
2B1	1999	4,100	84	124	
2B2	1999	4,700	84	124	
2C	2002	9,400	84	124	
6A	2002	3,130	84	124	
54A-1	2002	6,800	60	64	
54A-2	2002	5,750	60	64	
54B-1	2002	12,000	54	51	
54B-2	2002	7,750	54	51	
56A	2003	16,400	54	51	
56B	2003	10,300	48	41	
19A	1995	21,800	36	23	
19B	1995	20,941	36	23	
19C	1996	17,707	36	23	
19D	1996	13,695	36	23	
Total Length		191,992		23	

C76190
2015-0140

**SECOND SUPPLEMENT TO WATER SUPPLY CONTRACT
BETWEEN THE CITY OF HOUSTON, TEXAS AND THE
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY**

FOR THE NORTHEAST WATER PURIFICATION PLANT EXPANSION

THIS SECOND SUPPLEMENT TO WATER SUPPLY CONTRACT (this “Second Supplement”) is by and between the **CITY OF HOUSTON** (“Houston”) and **WEST HARRIS COUNTY REGIONAL WATER AUTHORITY** (the “Authority”), and is for the purpose of providing for the expansion of the Northeast Water Purification Plant located at 12121 North Sam Houston Parkway East, Humble, Texas 77396 (“NEWPP”). This Second Supplement is effective on the date of countersignature hereof by the Houston Controller (“Second Supplement Effective Date”). For and in consideration of the premises and the mutual covenants and agreements herein contained, the parties hereto do mutually agree as follows:

TABLE OF CONTENTS

I. RECITALS.....2

II. DEFINITIONS.....3

III. COST SHARING & FUNDING.....11

IV. WORK & SCHEDULE.....23

V. PROJECT DELIVERY.....25

VI. CONSENSUS PROCESS.....28

VII. NON-PAYMENT.....31

VIII. ACCOUNTING & FINAL STATEMENT.....33

IX. TERM.....36

X. MISCELLANEOUS.....37

XI. EFFECT ON AND AMENDMENTS TO THE ORIGINAL CONTRACT.....40

XII. SIGNATURES.....42

EXHIBITS

- “A” PARTICIPATION TABLE**
- “B” BUDGET**
- “C” SCHEDULE**
- “D” ESCROW AGREEMENT**
- “E” CASH CALL NO. 1**
- “F” POINT OF DELIVERY AND POINT OF MEASUREMENT FOR EXPANSION PROJECT**
- “G” FORM OF EASEMENT**

ARTICLE I

RECITALS

- Section 1.1 Houston and the Authority entered into a Water Supply Contract effective as of April 8, 2003 (the "Original Contract"), under which Houston provides treated water to the Authority and the Authority pays costs for treatment and conveyance of the water by certain treated and untreated water facilities necessary to provide water to the Authority.
- Section 1.2 Pursuant to Ordinance 2009-0052 (January 28, 2009), Houston executed a First Supplement to Water Supply Contract with the Authority ("First Supplement") to provide for the permitting, engineering, surveying, construction, and right-of-way and site acquisition necessary for the Luce Bayou Interbasin Transfer Project ("Luce Bayou") to convey untreated water from the Trinity River to Lake Houston.
- Section 1.3 Houston and the Authority, along with the Other Authorities, further amended the Original Contract through a First Amendment to the First Supplement ("First Amendment") adopted pursuant to Ordinance 2013-0046 and effective as of January 22, 2013, in order to clarify certain funding for Luce Bayou.
- Section 1.4 Houston has entered into agreements with North Harris County Regional Water Authority, North Fort Bend Water Authority, and Central Harris County Regional Water Authority ("Other Authorities") that are substantially similar to the Original Contract, First Supplement, and First Amendment.
- Section 1.5 The Authority and each of the Other Authorities seek to increase their Treated Water Facilities Demand Allocation and Houston does not currently have sufficient capacity available in the Existing Treated Water Facilities to serve such increases, and Houston seeks to increase its own treated water capacity.
- Section 1.6 Houston and the Authority now desire to clarify and agree to terms for sharing the cost of the Expansion Project in order to provide additional treated water capacity from the NEWPP of 320 million gallons per day ("MGD") and to potentially provide certain oversizing of facilities.
- Section 1.7 Houston and the Authority believe that using design/build as the method of delivery of the Expansion Project, in accordance with Texas Government Code Chapter 2269, Subchapter H, is appropriate given the priorities of the Parties.
- Section 1.8 This Second Supplement provides for all Costs and Work associated with the Expansion Project. This Second Supplement does not include any work associated with rehabilitation or repair of the NEWPP's existing facilities, and

this Second Supplement does not create any obligation for the Authority to pay for rehabilitation or repair of the NEWPP's existing facilities.

Section 1.9 Contingent upon the Project Parties timely satisfying their Cash Calls required by the Second Supplement and the Other Second Supplements, Houston and the Authority intend for Houston to cause the Expansion Project to be substantially complete as described in this Second Supplement in two phases with one delivery date not later than August 31, 2021 for 80 MGD of treated water capacity ("Phase 1") and another delivery date not later than June 30, 2024 for 240 MGD of treated water capacity ("Phase 2").

Section 1.10 Houston shall use good faith efforts to timely complete Phase 1 and Phase 2; provided, however, Houston's undertaking to administer and oversee the Work shall not be deemed or construed as a guarantee of the cost of the Work or of the timely or successful completion of the Work.

ARTICLE II

DEFINITIONS

Section 2.1 Unless otherwise defined in this Second Supplement, the capitalized terms used in this Second Supplement have the meaning provided in the Contract. In addition to the terms defined elsewhere in this Second Supplement, the following terms have the definitions provided below.

Section 2.2 *Acquisition Costs* means the portion of the Costs associated with acquiring the Expansion Project Property, if any, whether by purchase or condemnation, including all reasonable costs related to title examination and title policies, due diligence, property surveying, payments to property owners, closing costs, environmental mitigation, litigation and court costs, permitting necessary for acquisition or environmental mitigation, court costs, and any other related costs arising out of the acquisition of the Expansion Project Property.

Section 2.3 *Agreed Upon Procedures Report or AUP Report* means a report and associated findings produced by an independent accounting firm engaged by Houston under an Agreed-Upon Procedures Engagement conducted in accordance with (i) Section 8.6 of this Second Supplement, and (ii) the Statements on Standards for Attestation Engagements published by the American Institute of Certified Public Accountants.

Section 2.4 *Annual Financial Report* is defined in Section 8.2.

Section 2.5 *Appropriate(d) Houston Funds or Appropriation of Houston Funds* means when both of the following have occurred with respect to Houston's funds (as opposed to funds from the Authority or Other Authorities): (i)

Houston's City Controller has certified that a certain dollar amount of Cash or Cash Equivalent is available for the Expansion Project, and (ii) Houston's City Council has approved appropriating such dollar amount for the Expansion Project.

Section 2.6 *Authority Fund* means a segregated fund established and controlled by Houston for the receipt and disbursement of the funds of the Authority and the Other Authorities, and used by Houston to pay for the pro-rata share of the Costs of the Authority and the Other Authorities, as set forth herein.

Section 2.7 *Authority Meeting* is defined in Section 6.4.1.

Section 2.8 *Authorized Investments* means investment pool(s): (i) that comply with the requirements of Houston's investment policy and Texas Government Code Chapter 2256, and (ii) in which Houston's funds (in addition to funds from the Authority) are invested.

Section 2.9 *Budget* means the chart attached as Exhibit "B", which (a) reflects the estimated Costs for each Work Item and cumulative total thereof, and (b) will be revised in accordance with this Second Supplement to reflect the updated estimated Costs and the actual Costs for each Work Item and cumulative total thereof.

Section 2.10 *Cash* means currency of the United States of America which, on the date of payment, is legal tender for the payment of debts due the United States of America.

Section 2.11 *Cash Call* means one of a series of demands for funds from the Project Parties sent by the Project Director to pay for Costs in accordance with the requirements set forth in Section 3.7 of this Second Supplement.

Section 2.12 *Cash Call Due Date* means the date specified in a Cash Call that either Cash or Cash Equivalent, at the option of each Project Party, is required from the Project Parties.

Section 2.13 *Cash Equivalent* means one or more line(s) of credit or letter(s) of credit obtained by a Party from one or more financial institution(s). For Houston, in addition to line of credit and letter of credit, Cash Equivalent shall also include, as certified in writing by Houston's Controller, capacity in Houston's commercial paper program that is available for payment of Houston's pro-rata share of Costs, based on Houston's applicable Cost Share, and that is not committed for other use. The Project Director and the Representatives may collectively agree in writing to add to the items included in the term *Cash Equivalent*.

- Section 2.14 *Consensus Item* is defined in Section 6.3.
- Section 2.15 *Consensus Process* is defined in Section 6.1.
- Section 2.16 *Consensus Vote* is defined in Section 6.2.
- Section 2.17 *Construction Costs* means the costs associated with the construction of the Expansion Project, including all reasonable costs for labor, equipment, materials, electricity, fuel, and Consultant(s) (including construction management, inspection, and materials testing).
- Section 2.18 *Consultant(s)* means professional or legal service provider(s), whether a firm or an individual, engaged by Houston to assist in the planning, design, acquisition, and other Work.
- Section 2.19 *Contract* means the Original Contract, as supplemented by the First Supplement, and as amended by the First Amendment.
- Section 2.20 *Contract Price* means all or any portion of the Costs that Houston is obligated to pay: (i) to the Design/Builder, Contractor(s), or Consultant(s), including any guaranteed maximum prices, lump sum amount, maximum contract prices, and (ii) for the Acquisition Costs. No Costs shall be included in Contract Price unless the Costs have been approved in accordance with Section 6.3.
- Section 2.21 *Contract Non-Oversized Price* is defined in Section 3.14.4.
- Section 2.22 *Contract Oversized Price* means a dollar amount equal to the Costs included in a Contract Price for any and all Work Items for the Oversized Facilities to produce the Oversized Facilities Design Capacity and/or to meet Houston's seasonal demands for peaking.
- Section 2.23 *Contractor* means the Design/Builder; provided, however, in the event a delivery method other than design/build, pursuant to Texas Government Code Chapter 2269, Subchapter H, is employed by Houston, in accordance with this Second Supplement, Contractor shall instead mean the prime contractor for the Expansion Project.
- Section 2.24 *Cost Recovery Amounts* means the portion of the costs of Houston's employees' salaries, associated benefits, overhead, and itemized costs paid from the cost recovery fund (Houston's Fund 1001), that are allocated and attributable to the Expansion Project for the period beginning on December 1, 2014, and concluding as of the date of the Final Accounting, calculated in accordance with Section 3.13.

- Section 2.25 *Cost Share* means each Project Party's pro-rata share of the Costs for Phase 1, Phase 2, and Multi-Phase Work, which the Parties agree are set forth in the Participation Table, and may be adjusted in accordance with Section 3.2.
- Section 2.26 *Costs* means all or any portion of the costs for the Work, including the Engineering Costs, Construction Costs, Acquisition Costs, Cost Recovery Amounts, and any other costs the Parties are obligated to pay in accordance with this Second Supplement.
- Section 2.27 *Day* means calendar day, unless otherwise noted.
- Section 2.28 *Design/Builder* means the firm or firms selected pursuant to this Second Supplement to design and build the Expansion Project, in accordance with Texas Government Code Chapter 2269, Subchapter H.
- Section 2.29 *Direct Employee* shall have the meaning assigned in Section 3.13.
- Section 2.30 *Director* means Houston's Director of Public Works and Engineering.
- Section 2.31 *Downsizing Costs* is defined in Section 7.2.2.
- Section 2.32 *Engineering Costs* means the costs for engineering Work associated with the Expansion Project, including all reasonable costs for the planning, management, oversight, inspection, basis of design, engineering design, geotechnical investigations, surveys, estimates, pilot plant testing, materials testing, plans, specifications, investigations, and necessary permitting.
- Section 2.33 *Escrow Account* means an escrow account held by the Escrow Agent for the receipt of Cash or Cash Equivalent from the Authority to satisfy Cash Call(s) and for the distribution of funds to Houston out of such account, for payment of the Authority's pro-rata share of Costs, based on the Authority's applicable Cost Share, all as set forth in this Second Supplement.
- Section 2.34 *Escrow Agent* means an authorized financial institution of the Authority's choice, which may be changed from time to time, in accordance with good money management practices, to transfer funds from one financial institution to another, provided the funds are not released to the Authority until the conditions stated in the Escrow Agreement are met.
- Section 2.35 *Escrow Agreement* means the escrow & pay agent agreement, in the form substantially similar to the form attached hereto as Exhibit "D," executed by the Authority, the Project Director (on behalf of Houston) and the Escrow Agent; provided, however, the Project Director, the Authority, and the Other

Authorities may collectively agree in writing to modifications of the Escrow Agreement.

Section 2.36 *Estimated Non-Oversized Price* is defined in Section 3.14.

Section 2.37 *Estimated Oversized Price* is defined in Section 3.14.

Section 2.38 *Exempt Item* is defined in Section 6.5.

Section 2.39 *Expansion Project* means the undertaking that is the subject of this Second Supplement to be overseen by Houston in two Phases to design, permit, and construct the additional Treated Water Facilities to add 320 MGD of treated water capacity to the NEWPP. Provided, however, the Oversized Facilities may be oversized as described herein. Expansion Project does not include any rehabilitation or repair of the NEWPP's existing facilities.

Section 2.40 *Expansion Project Property* is defined in Section 5.4.

Section 2.41 *Expansion Project Reservation* means the Phase 1 Expansion Project Reservation and the Phase 2 Expansion Project Reservation.

Section 2.42 *Expansion Project Team* means the Project Director and other Houston employees and agents, authorized to manage the Work performed by Contractor and Consultant(s).

Section 2.43 *Final Accounting* is defined in Section 8.7.

Section 2.44 *Final Non-Oversized Price* is defined in Section 3.14.5.

Section 2.45 *Final Oversized Price* is defined in Section 3.14.5.

Section 2.46 *Material* shall have the meaning of such word as used under federal securities laws.

Section 2.47 *MSRB* is defined in Section 10.16.

Section 2.48 *Multi-Phase Work* means Work Items that benefit both Phase 1 and Phase 2, including without limitation, the new intake structure with pumping and conveyance facilities to provide untreated water from Lake Houston, the electrical substation, the high service pump station, Consultants' services, clearing and grubbing, drainage, any separate operation facility for the Expansion Project, permitting, environmental Work, Expansion Project Property (if any), fencing, security facilities, SCADA (supervisory control and data acquisition) system, access roads and/or paving, ground storage tanks, on-site conveyance facilities, office/control building, chemical facilities, sludge

dewatering facilities, yard lighting, yard piping, maintenance or shop building, any rail spur, backwash facilities, and related appurtenances.

- Section 2.49 *Non-Payment Default* means any default described in Sections 3.9.4 or 3.9.5.
- Section 2.50 *Notice of Upcoming Cash Call* is defined in Section 3.7.1.
- Section 2.51 *Original Contract* is defined in Section 1.1.
- Section 2.52 *Other Authorities* is defined in Section 1.4.
- Section 2.53 *Other Representatives* means the individuals authorized under Other Second Supplements to act as on behalf of the Other Authorities regarding the Expansion Project.
- Section 2.54 *Other Second Supplements* means written agreements between Houston and the Other Authorities that are substantially similar to this Second Supplement.
- Section 2.55 *Overhead* is defined in Section 3.13.
- Section 2.56 *Overhead Factor* is defined in Section 3.13.2.
- Section 2.57 *Oversized Facilities* means certain Multi-Phase Work items that, pursuant to Section 3.14, may be oversized so that such facilities are capable of producing the Oversized Facilities Design Capacity and/or meeting Houston's seasonal demands for peaking. Oversized Facilities include, without limitation: the new intake structure with pumping and conveyance facilities to provide untreated water from Lake Houston, the electrical substation, and the high service pump station. The Project Director and the Representatives may collectively agree in writing to revise the definition of Oversized Facilities.
- Section 2.58 *Oversized Facilities Contribution* is defined in Section 3.15.1.
- Section 2.59 *Oversized Facilities Design Capacity* means the amount of treated water, measured in MGD, that the Project Director reasonably determines that the Oversized Facilities are able to produce based on the Contractor's or a Consultant's analysis and Houston's available water rights that may be diverted from Lake Houston. The Oversized Facilities Design Capacity shall be an MGD amount that exceeds 320 MGD.
- Section 2.60 *Oversized Facilities Option* means the Authority's unrestricted right to an Oversized Facilities Reservation of 20 MGD, which is further described in Section 3.15. The sum of the Oversized Facilities Option of the Authority plus the Oversized Facilities Options of the Other Authorities (under Other Second Supplements) equals 43 MGD.

- Section 2.61 *Oversized Facilities Reservation* means a Reservation in the Treated Water Demand Allocation limited to the Oversized Facilities, which the Authority may obtain as provided in Section 3.15.
- Section 2.62 *Oversizing Costs* means a dollar amount equal to the Costs included in the “ $(W^B - W^A)$ ” portion of the formula in Section 3.7.3, as revised by Section 3.7.4.
- Section 2.63 *Participation Table* means the table attached as Exhibit “A”, detailing the Expansion Project Reservation and Cost Share of the Authority, the Expansion Project Reservations and Cost Shares of the Other Authorities, Houston’s capacity and Cost Share in the Expansion Project, and the Oversized Facilities Design Capacity. The Participation Table may be revised in accordance with this Second Supplement.
- Section 2.64 *Party* or *Parties* means all or any of the following entities, as applicable: Houston and the Authority.
- Section 2.65 *Phase(s)* means Phase 1, Phase 2, or both.
- Section 2.66 *Phase 1 Expansion Project Reservation* is defined in Section 3.1.
- Section 2.67 *Phase 2 Expansion Project Reservation* is defined in Section 3.1.
- Section 2.68 *Phase AUP Report* is defined in Section 8.6.1.
- Section 2.69 *Phase Financial Report* is defined in Section 8.3.
- Section 2.70 *Presentation* is defined in Section 6.3.1.
- Section 2.71 *Project Director* means an individual designated by the Director and authorized to act on behalf of Houston in the manner described in this Second Supplement, which individual may be changed by the Director from time to time.
- Section 2.72 *Project Party* or *Project Parties* means all or any of the following entities, as applicable: Houston, the Authority, and the Other Authorities.
- Section 2.73 *Proposed Solution* is defined in Section 6.4.
- Section 2.74 *Representation* is defined in Section 3.6.
- Section 2.75 *Representative* means the individual authorized in writing by the Authority to act on behalf of an Authority in the manner described in this Second

Supplement, or an alternate individual approved by the Authority, which individuals may be changed by the Authority from time to time.

Section 2.76 *Representatives* mean the Representative and the Other Representatives.

Section 2.77 *Representatives Issue* is defined in Section 6.4.

Section 2.78 *Rule* is defined in Section 10.16.

Section 2.79 *Schedule* means a chart attached as Exhibit "C," accurately reflecting the estimated and actual timing of Work Items, Cash Calls, and projected Substantial Completion Dates, which Schedule will be revised in accordance with this Second Supplement.

Section 2.80 *Selection Reviewer* means an individual designated in writing by the Authority who is responsible to perform the functions of Selection Reviewer under Section 5.2 and who has provided the Project Parties with a written certification that he or she is not an employee or paid consultant of a firm involved in the submission of a proposal to Houston to serve as the Contractor.

Section 2.81 *Substantial Completion* means the stage in the progress of the Work when the Work, or designated portion thereof, is sufficiently complete in accordance with the contract between Houston and the Contractor so Houston can occupy and utilize the Work for its intended use, as evidenced by a certificate of Substantial Completion issued by Houston.

Section 2.82 *Substantial Completion Date* means, for each Phase, the date of Substantial Completion shown on the certificate of Substantial Completion issued by Houston.

Section 2.83 *True-Up* means the process described in Section 8.8.

Section 2.84 *True-Up Statement* is defined in Section 8.8.

Section 2.85 *TWDB* is defined in Section 3.12.

Section 2.86 *TWDB Expansion Funding* is defined in Section 3.12.

Section 2.87 *Unpaid Reservation* is defined in Section 7.2.1.

Section 2.88 *Unpaid Capacity* is defined in Section 7.4.1.

Section 2.89 *Weighted Vote* is defined in Section 6.2.

- Section 2.90 *Withdrawal Request and Certificate* means, as further described in the Escrow Agreement, a written instrument that is signed by the Project Director and addressed to the Escrow Agent, for the purpose of withdrawing funds from the Escrow Account to pay the Authority's pro-rata share of Costs, based on the Authority's applicable Cost Share, pursuant to this Second Supplement.
- Section 2.91 *Work* means any of the labor, materials, equipment, administration, and other similar efforts and items necessary for the completion of the Expansion Project.
- Section 2.92 *Work Management System* means a remotely-accessible system or systems Houston uses to share information with the Expansion Project Team and Representatives, as further described in Section 4.4.
- Section 2.93 *Work Item* means a discrete portion of the Work that is attributable to Phase(s) of the Expansion Project and included in a Contract Price.

ARTICLE III

COST SHARING & FUNDING

Section 3.1. *Cost Sharing and Reservation.* The Authority seeks to increase its Treated Water Facilities Demand Allocation from 28.25 MGD to 110.67 MGD. Accordingly, the Authority hereby makes a Reservation request for 17.03 MGD in Phase 1 of the Expansion Project (the "Phase 1 Expansion Project Reservation") and 65.39 MGD in Phase 2 of the Expansion Project (the "Phase 2 Expansion Project Reservation"). For Phase 1, the Authority's Phase 1 Expansion Project Reservation shall be deemed approved on the Substantial Completion Date of Phase 1 if the Authority is not then in Non-Payment Default. For Phase 2, the Authority's Phase 2 Expansion Project Reservation shall be deemed approved on the Substantial Completion Date of Phase 2 if the Authority is not then in Non-Payment Default.

Section 3.2. *The Participation Table & Cost Share.* The Participation Table shall show (i) the Expansion Project Reservation and Cost Share of the Authority, the Expansion Project Reservations and Cost Shares of the Other Authorities, and Houston's capacity and Cost Share in the Expansion Project, and (ii) the Oversized Facilities Design Capacity.

3.2.1 The Participation Table and Costs Shares shall not change, unless (i) one or more of the Project Parties fails to timely satisfy any of its Cash Call obligations and any of the remedies in Sections 7.2, 7.3, or 7.4 are initiated, or (ii) one or more of the Project Parties assigns, in writing, a portion of its Expansion Project Reservation to another of the Project Parties.

3.2.2 Without the need for consent from any Project Party, any Project Party may assign to another Project Party, in writing, any portion of its Expansion Project

Reservation, provided the assignee agrees in writing that the assignee assumes all of assignor's outstanding and future rights and obligations related to same. The price for such assignment may be as mutually agreed upon by the seller and buyer.

3.2.3 In the event the Costs Shares change pursuant to Section 3.2.1 or 3.2.2, and when the Oversized Facilities Design Capacity is determined as provided in Section 3.14, the Project Director shall cause the (i) prompt preparation of an updated Participation Table and posting of same on the Work Management System, and (ii) concurrent provision of an email (or other written notice) to the Representative notifying the Representative that the updated Participation Table has been posted to the Work Management System.

Section 3.3 *The Budget.* The Budget shall itemize the Cost of each Work Item and aggregate Costs for each Phase, for Multi-Phase Work, and for the Oversized Facilities. The Project Director shall cause the: (i) prompt preparation and maintenance of an accurate Budget and posting of same on the Work Management System, and (ii) concurrent provision of an email (or other written notice) to the Representative notifying the Representative when an updated Budget has been posted to the Work Management System.

Section 3.4 *Houston's Previously Incurred Costs.* The Parties acknowledge that Houston has incurred Costs for the Expansion Project prior to the Second Supplement Effective Date. As a pre-condition to entering this Second Supplement, the Authority hereby agrees to pay for its pro-rata share of the Costs, based on its applicable Cost Share, incurred by Houston prior to December 1, 2014, which the Parties hereby agree is estimated to be \$471,010.98, subject to the provisions of Article VIII. The Authority agrees to pay Houston such \$471,010.98 within ninety (90) days of the Second Supplement Effective Date. All Costs incurred by Houston on or after December 1, 2014, shall be included in a Cash Call pursuant to Section 3.7 or 3.8. Subject to the provisions of Article VIII, the Authority is not responsible for any Costs incurred by Houston prior to December 1, 2014, other than such \$471,010.98, which amount includes the Cost Recovery Amounts incurred prior to December 1, 2014.

Section 3.5 *Rates.* Each Party represents and certifies that it will have on hand and lawfully available sufficient funds to make its payments due hereunder. Each Party recognizes its duty to, and covenants and agrees, that at all times it will establish and maintain, and from time to time adjust, the rates, fees, and charges for the services it provides to its customers to the end that the revenue therefrom, together with funds received from any other lawful source will be sufficient at all times to pay all of its obligations under this Second Supplement.

Section 3.6 *The Representative.* The Representative shall have the right to participate in the day-to-day Expansion Project activities and shall enjoy the same privileges of access as a

member of the Expansion Project Team, including access to the Work Management System, Expansion Project-related activities, equipment, and workspace ("Representation").

- 3.6.1 No individual shall be qualified to serve as the Representative if he or she (i) is performing Work on the Expansion Project in his or her individual capacity or (ii) is an employee or owner of an entity that is performing Work on the Expansion Project.
- 3.6.2 Prior to or contemporaneous with the Authority authorizing an individual to serve as the Representative, the individual shall be required to provide the Project Parties with a written certification that confirms that the individual is in compliance with Section 3.6.1 and that the individual will remain in compliance with same during the period of time that the individual remains the Representative.
- 3.6.3 The Authority shall pay for the Representative's equipment and workspace to the extent such equipment and workspace is requested by the Representative and provided for the exclusive use of the Representative. The Project Director and the Representative may agree to purchase or lease terms for such equipment and/or work space as part of the Contract Price(s).
- 3.6.4 Notwithstanding the provisions above and consistent with this Second Supplement, the Project Director and the Representatives may further collectively agree on the manner in which they collaborate on Work, the Schedule, and the Budget.

Section 3.7 *Cash Calls in General.* The Project Director shall send Cash Calls to the Project Parties from time to time as necessary to fund the Expansion Project, and shall send each individual Cash Call to all the Project Parties on the same date; provided, however, no Cash Call shall be sent to the Project Parties after the date of the Final Accounting.

- 3.7.1 The Project Director shall provide all Project Parties with written notice ("Notice of Upcoming Cash Call") of: (i) the estimated Costs and Work Items to be paid with proceeds of the upcoming Cash Call, (ii) the estimated dollar amount due from each Project Party pursuant to the upcoming Cash Call and the calculation thereof, and (iii) the estimated Cash Call Due Date (which shall be no earlier than 180 days after the date the Project Director sends the Notice of Upcoming Cash Call to the Project Parties), all as reasonably estimated by the Project Director. Each Notice of Upcoming Cash Call shall include a certification that the Project Director reasonably expects to spend all of the proceeds of the Cash Call within 3 years of the Authority's Cash Call Due Date. The phrase "3 years" in the preceding sentence shall be changed to "5 years" for that Cash Call if the

Project Director provides the Representatives a written certification from a licensed engineer that a period of at least 5 years is necessary to complete the Work included in the Cash Call.

3.7.2 Except as may be agreed to in writing otherwise by the Project Director, the Authority, and the Other Authorities, collectively, each Cash Call Due Date shall be (i) for the Authority, no earlier than the later of (A) 60 days after the date the Authority receives that particular Cash Call or (B) the estimated Cash Call Due Date provided in the Notice of Upcoming Cash Call, and (ii) for Houston, 30 days after the Authority's Cash Call Due Date. In no event shall a Cash Call Due Date be any later than 18 months after the date the Project Director sends the Notice of Upcoming Cash Call to the Project Parties.

3.7.3 Unless and until Houston, as set forth in Section 3.14.3, chooses to design and construct the Oversized Facilities to produce the Oversized Facilities Design Capacity and/or to meet Houston's seasonal demands for peaking, the Project Director shall use the formulas below to calculate each Project Party's Cash Call amount, the amount of the Authority's funds to be drawn from the Escrow Account, the amount of the Authority's funds to be drawn out of the Authority Fund, and the amount of Houston's funds to be drawn out of the Appropriation of Houston Funds:

For the Authority and the Other Authorities:

$$C = (P^1 * W^1) + (P^2 * W^2) + (P^M * W^M) + Z$$

For Houston:

$$C = (P^1 * W^1) + (P^2 * W^2) + (P^M * W^M) + Z$$

Where:

- C = Dollar amount of Cash (or for Cash Calls, the dollar amount of Cash or Cash Equivalent) due from the Project Party.
- P = The Project Party's Cost Share for the applicable Work as listed in the Participation Table, where: P¹ = Phase 1 Cost Share; P² = Phase 2 Cost Share; P^M = Multi-Phase Work Cost Share.
- W = The Costs to be paid, where: W¹ = dollar amount of Costs for Phase 1; W² = dollar amount of Costs for Phase 2; W^M = dollar amount of Costs for Multi-Phase Work.
- Z = Costs that a Project Party is obligated to pay at 100% pursuant to Section 3.6.3 of this Second Supplement or of Other Second Supplements.

3.7.4 If, as set forth in Section 3.14.3, Houston chooses to design and construct the Oversized Facilities to produce the Oversized Facilities Design Capacity and/or to meet Houston's seasonal demands for peaking, then the formulas in Section 3.7.3 above shall be revised as follows: (i) " W^M " shall be revised to mean the dollar amount of Costs for Multi-Phase Work excluding all Costs of the Oversized Facilities, (ii) the Authority's formula above shall be modified to add after " Z ", " $+ (P^M * W^A)$ ", (iii) Houston's formula above shall be modified to add after " Z ", " $+ (P^M * W^A)$ " and " $+ (W^B - W^A)$," and (iv) W^A shall be the dollar amount of Costs for the approved Contract Non-Oversized Price and W^B shall be the dollar amount of Costs for the approved Contract Oversized Price. (In item "(iv)" of the preceding sentence, the term "approved" means approved in accordance with Section 6.3.). If the formulas are revised as described in the first sentence of this paragraph, then such revisions shall occur as of the effective date of the notice to proceed issued by Houston for the final design of the Oversized Facilities, which Houston shall issue in order to commence final design. Any reference to Section 3.7.3 in this Second Supplement shall be interpreted to include, if applicable, the revisions provided in this Section 3.7.4.

3.7.5 Each Cash Call shall include a written statement providing: (i) the actual dollar amount due from each Project Party pursuant to the Cash Call, but this actual dollar amount (A) shall not exceed the estimated dollar amount for that Project Party provided in the Notice of Upcoming Cash Call and (B) shall only be for Costs that have been approved in accordance with Section 6.3, for Exempt Item(s), or for Cost Recovery Amounts; (ii) the calculation of the amount of each Project Party's portion of the Cash Call; (iii) the Cash Call Due Date; (iv) the Costs and Work Items to be paid with the proceeds of the Cash Call; and (v) each Project Party's amount of surplus from previous Cash Calls, if any, as reasonably determined by the Project Director. At the time of sending a Cash Call to any Project Party, the Project Director shall provide a copy of that Cash Call to the other Project Parties via the Work Management System.

3.8 *Cash Call No. 1.* By the Parties' execution of this Second Supplement, Houston will be deemed to have issued to the Project Parties Cash Call No. 1 in the amount of \$6,975,173, as described in the attached Exhibit "E." Notwithstanding the provisions of Section 3.7 and Section 6.3: (i) the Authority's Cash Call Due Date for Cash Call No. 1 shall be 120 days after the Second Supplement Effective Date, and (ii) the Costs of such \$6,975,173 are deemed to be included in a Contract Price and are deemed to have obtained a Consensus Vote. Houston represents that it has already performed an Appropriation of Houston Funds in an amount equal to or greater than Houston's pro-rata share of Costs, based on Houston's applicable Cost Share for such Cash Call.

3.9 *Paying Cash Calls.* Houston shall pay Cash Calls in accordance with this Second Supplement, and the Authority shall pay Cash Calls in accordance with this Second Supplement and the Escrow Agreement.

- 3.9.1** In paying a Cash Call, and in accordance with the Escrow Agreement, the Authority shall, by its Cash Call Due Date, provide the Escrow Agent with Cash or Cash Equivalent, at the option of the Authority, in the amount of the funds required from the Authority by such Cash Call, which at the Authority's option may include the application of any or all of the surplus identified in the Cash Call. In paying a Cash Call, Houston shall Appropriate Houston Funds by its Cash Call Due Date in the amount of the funds required from Houston by such Cash Call, which at Houston's option may include the application of any or all of the surplus identified in the Cash Call.
- 3.9.2** If the Authority satisfies a Cash Call with Cash, then the Authority shall be in default if any loss in investments made with such Cash in the Escrow Account causes insufficient Cash or Cash Equivalent to be available such that Houston is unable to timely draw the undrawn portion of the Cash Call that was satisfied with Cash. Provided, however, if the Authority promptly provides additional Cash or Cash Equivalent to replace such loss so that Houston is able to timely draw the undrawn portion of the Cash Call that was satisfied with Cash, then the Authority is deemed to not have been in default. If Houston presents a Withdrawal Request and Certificate to the Escrow Agent and Houston is unable to draw funds from the Escrow Account because of default described above in this Section 3.9.2, then the Authority shall pay Houston interest on the amount that Houston was unable to draw. Such interest shall be calculated at the interest rate described in Section 7.5 and shall accrue from the date Houston presents the Withdrawal Request and Certificate to the Escrow Agent until the date the Authority makes the funds available to Houston.
- 3.9.3** If an Appropriation of Houston Funds is comprised of Cash and if any loss in investments made with such Cash causes a reduction in such Cash so that Houston is unable to timely draw the undrawn portion of the Cash Call that was satisfied with Cash, then Houston shall promptly seek to Appropriate Houston Funds to replace such loss. If Houston fails to Appropriate Houston Funds to replace such loss, then Houston shall be in default, and Houston shall replace such loss prior to spending Cash from the Authority Fund.
- 3.9.4** If the Authority fails to provide Cash or Cash Equivalent or Houston fails to Appropriate Houston Funds by any Cash Call Due Date, as required by Section 3.9.1, then that Party shall be in default. In satisfying some or all of any Cash Call, if the Authority provides the Escrow Agent with Cash Equivalent or if Houston's Appropriation of Houston Funds is derived from Cash Equivalent,

then the Authority or Houston, as applicable, shall be in default if it fails to both: (i) maintain the Cash Equivalent in place such that Houston is unable to timely draw the undrawn portion of the Cash Call that was satisfied with Cash Equivalent, and (ii) re-establish the Cash Equivalent (within 10 business days of receiving written notice) such that Houston is able to timely draw the undrawn portion of the Cash Call that was satisfied with the Cash Equivalent. (The phrase "written notice" in the preceding sentence means a written notice (a) stating that the Cash Equivalent was not maintained, and (b) that is issued by the Project Director (if the notice is to the Authority) or issued by the Project Director or the Authority (if the notice is to Houston).) If Houston fails to spend funds out of the Appropriation of Houston Funds as required by Section 3.11.1, then Houston shall be in default. As described in Section 2.49, default under this Section 3.9.4 shall be considered Non-Payment Default.

3.9.5 Cash Equivalent that is in the form of a line of credit may only be obtained from a financial institution which at the time of obtaining the Cash Equivalent has long term credit ratings in one of the three highest generic rating categories from at least two nationally recognized rating services. If at any time after the date a Party obtains a line of credit, the financial institution fails to meet the credit ratings requirement of the preceding sentence, then the Party shall (within 60 days after the date the financial institution failed to meet the credit ratings requirement) either replace the line of credit with: (i) Cash Equivalent that satisfies the credit ratings requirement, or (ii) Cash. After the expiration of such 60 days, a Party shall be in default if it fails (within 10 business days after receiving written notice from the Project Director or Authority (if the Party is Houston) or from the Project Director (if the Party is the Authority)) to replace the line of credit as described in the preceding sentence. As described in Section 2.49, default under this Section 3.9.5 shall be considered Non-Payment Default.

3.9.6 Cash or Cash Equivalent provided for any particular Cash Call shall only be used to pay for the Cash Call for which it was provided, unless it is determined to be surplus as provided in Section 3.7.5.

3.10 *The Escrow Account; Withdrawal of Funds.* Requests for disbursements from the Escrow Account shall be made in accordance with this Second Supplement and the Escrow Agreement. At such times as the Project Director reasonably determines that payments will be due to pay for the Work pursuant to this Second Supplement and Other Second Supplements, the Project Director shall provide to the Authority a written notice of its intent to draw from the Escrow Account along with a calculation of how each Project Party's draw amount has been calculated under Section 3.7.3.

3.10.1 No earlier than 5 days after providing such notice to the Authority, Houston, through the Project Director, shall deliver to the Escrow Agent a

Withdrawal Request and Certificate that complies with the requirements of the Escrow Agreement (with a copy contemporaneously sent to Houston's Controller and the Representatives) in order to draw Cash from the Escrow Account.

3.10.2 Through the Work Management System, the Project Director shall notify the Project Parties of the following: (A) with respect to the Project Parties (other than Houston) the amount of Cash that Houston (via the Project Director) withdraws out of a Project Party's Escrow Account and the date of such withdrawals; and (B) with respect to Houston: (i) each date when Houston has Appropriated Houston Funds and the dollar amount of same, (ii) the dollar amount of all funds that Houston (via the Project Director) withdraws out of the Appropriation of Houston Funds and the date of such withdrawals.

3.10.3 The Authority shall maintain an Escrow Account meeting the requirements of this Section 3.10 until (i) the Authority receives a True-Up Statement calculated pursuant to Section 8.8 which indicates that the Authority no longer owes Houston any amounts related to the Expansion Project, or (ii) the Authority pays Houston the amount, if any, due from the Authority under such True-Up Statement.

3.11 *The Authority Fund.* All Authority funds withdrawn from the Escrow Account shall be immediately deposited into the Authority Fund and held in the Authority Fund until payment is made for the Costs. All Authority funds held in the Authority Fund shall be held by Houston in trust for the benefit of the Authority.

3.11.1 Houston, through the Project Director, shall spend funds in the Authority Fund only for (i) Costs that have been approved in accordance with Section 6.3 (or for Exempt Item(s)) for which Houston's Controller certified the availability of funds, and (ii) Cost Recovery Amounts. For each and every payment made by Houston out of the Authority Fund, Houston shall: (i) with respect to the Authority's funds held in the Authority Fund, withdraw an amount equal to the Authority's pro-rata share of the Costs to be paid for same, which shall be determined in accordance with the formula applicable to the Authority stated in Section 3.7.3; and (ii) contemporaneous with Houston's withdrawal of Authority funds for the payment, Houston shall spend funds out of the Appropriation of Houston Funds in an amount equal to Houston's pro-rata share of the Costs to be paid for same, which shall be determined in accordance with the formula applicable to Houston stated in Section 3.7.3.

3.11.2 For the pro-rata benefit of the Authority and Other Authorities, Houston's Controller shall invest the funds on hand in the Authority Fund in the Authorized Investments. All earnings and interest that are attributable to the

Authority's funds on deposit in the Authority Fund shall inure to the benefit of the Authority.

3.11.3 The Project Director shall calculate the accrued interest and earnings in the Authority Fund and distribute the remaining proceeds from such interest and earnings as part of the True-Up. Provided, however, if requested in writing by the Representative, the Project Director shall reduce the size of subsequent draw(s) from the Escrow Account by the amount of such interest and earnings.

3.12 *TWDB Funding.* The Project Parties shall endeavor to work in good faith to file applications with the Texas Water Development Board ("TWDB") for financing assistance for the Expansion Project on terms acceptable to each Project Party ("TWDB Expansion Funding").

3.12.1 The Director and the Authority's Board President shall be authorized to sign an amendment to this Second Supplement for the specific and limited purpose of accommodating TWDB Expansion Funding, without further approval from the governing bodies.

3.12.2 Nothing in this Second Supplement shall be construed to limit the Authority's right or Houston's right to independently seek TWDB funding for projects other than the Expansion Project.

3.12.3 No Project Party shall request funding for any portion of the Expansion Project from any TWDB funding program that would impose more stringent requirements on the Expansion Project than the requirements applicable to the State Water Implementation Fund, without first obtaining a Consensus Vote in favor of such requested funding. In connection with, and prior to, such Consensus Vote, the requesting Project Party shall provide each of the Project Parties with the draft funding application to be submitted to the TWDB.

3.13 *Cost Recovery Amounts.* Cost Recovery Amounts shall include a portion of the salary and associated benefits for each of Houston's employees who track their hours worked on Houston's construction projects (each a "Direct Employee"), plus a portion of the costs in Houston's Fund 1001 that are not associated with salaries and benefits for Direct Employees ("Overhead"), both of which shall be calculated in the manner described below.

3.13.1 Cost Recovery Amounts for Direct Employees shall be determined by multiplying (i) the cost to Houston of the salary and benefits of each Direct Employee, expressed as an hourly rate, by (ii) the hours each Direct Employee recorded as spent working on the Expansion Project.

3.13.2 The Cost Recovery Amounts for Overhead shall be calculated by multiplying (i) the percentage that Cost Recovery Amounts for Direct Employees (calculated pursuant to 3.13.1) bears to Houston's total cost of salaries and benefits for all Direct Employees (the "Overhead Factor"), by (ii) the costs in Houston's Fund 1001 that are not associated with the salary and benefits for Direct Employees.

3.14 *Oversized Facilities Determination & Administration.* Prior to commencement of final design of the Oversized Facilities, the Project Director shall (a) reasonably determine the amount (in MGD) of the Oversized Facilities Design Capacity; and (b) obtain from the Contractor: (i) an estimate of the dollar amount of the cost to design and construct the Oversized Facilities to produce 320 MGD of treated water ("Estimated Non-Oversized Price"), and (ii) an estimate of the dollar amount of the cost to design and construct the Oversized Facilities to produce the Oversized Facilities Design Capacity and/or to meet Houston's seasonal demands for peaking ("Estimated Oversized Price").

3.14.1 Within 5 days of the Project Director receiving the Estimated Non-Oversized Price and the Estimated Oversized Price, the Project Director shall (i) post the Estimated Non-Oversized Price and the Estimated Oversized Price, and all related documents, including the technical specifications and estimated price for all Work Items on the Work Management System, and (ii) concurrently provide an email (or other written notice) to the Representative of such posting.

3.14.2 The Project Director shall present the Estimated Non-Oversized Price and the Estimated Oversized Price as Consensus Items in accordance with Section 6.3. The Project Director shall include in such presentation the technical specifications and estimated price of all Work Items that are included in the Oversized Facilities in both the Estimated Non-Oversized Price and the Estimated Oversized Price.

3.14.3 Houston may choose to construct the Oversized Facilities to produce the Oversized Facilities Design Capacity and/or to meet Houston's seasonal demands for peaking only if (a) the Estimated Non-Oversized Price and Estimated Oversized Price are approved by Consensus Vote; and (b) the Project Director revises the Cash Call Formula as provided in Section 3.7.4.

3.14.4 If Houston chooses to design and construct the Oversized Facilities to provide the Oversized Facilities Design Capacity and/or to meet Houston's seasonal demands for peaking, then the Project Director shall also be required, as part of the applicable presentation for the Costs to be included in a Contract Price for such Work Items, to adjust the Estimated Non-Oversized Price for each Work Item ("Contract Non-Oversized Price") by multiplying (a) the Estimated Non-Oversized Price of the Work Item by (b)

the quotient of the Contract Oversized Price (numerator) and the Estimated Oversized Price (denominator) of the same Work Item.

3.14.5 If Houston has constructed the Oversized Facilities to provide the Oversized Facilities Design Capacity and/or to meet Houston's seasonal demands for peaking, then the Project Director will update the Budget to reflect all actual and final Costs for each Work Item included in a Contract Oversized Price ("Final Oversized Price"). Subject to True-Up, the Project Director shall also update the Budget to show an adjustment to the Contract Non-Oversized Price ("Final Non-Oversized Price"), which is the result of multiplying (a) the Contract Non-Oversized Price of the Work Item by (b) the quotient of the Final Oversized Price (numerator) and the Contract Oversized Price (denominator) of the same Work Item. If the Contract Non-Oversized Price exceeds the Final Non-Oversized Price, then as documented in an Annual Financial Report, the excess shall be deemed surplus for purposes of Section 3.7.5. The Final Oversized Price and the Final Non-Oversized Price are subject to True-Up under Article VIII.

3.15 *Oversized Facilities Options & Reservations.* This Section 3.15 shall be applicable only if Houston chooses to design and construct the Oversized Facilities to produce the Oversized Facilities Design Capacity. After the last Phase AUP Report is prepared pursuant to Article VIII, and at any time prior to December 31, 2045, the Authority shall have the unrestricted right to an Oversized Facilities Reservation up to the Authority's Oversized Facilities Option. Houston shall be obligated to approve such Oversized Facilities Reservation within 60 days of receipt of (a) the Authority's request for the Oversized Facilities Reservation; and (b) the cost due from the Authority for the Oversized Facilities Contribution, in accordance with the formula below (instead of the cost-sharing formula for Treated Water Facilities Capital Contribution set forth in Section 3.03 of the Contract).

3.15.1 Within 60 days after receiving a request from the Authority for a calculation of the cost that may be due under the formula below ("Oversized Facilities Contribution"), Houston shall provide such calculation to the Authority.

[(Oversizing Costs as reflected in the Final Accounting + Houston's related borrowing costs)/Oversized Facilities Design Capacity in MGD] * the Authority's Oversized Facilities Reservation in MGD. In the formula above, the phrase "Houston's related borrowing costs" shall mean the portion of Houston's actual interest and issuance costs then-incurred by Houston on its bonds and other financial instruments to the extent they are attributable to the Oversizing Costs, after taking into account any actual savings from any refundings or defeasances of such bonds or other financial instruments.

For each issue of Houston's bonds and other financial instruments described above, Houston shall include in the Final Accounting: (i) the name and principal amount issued, (ii) a summary of costs of the projects financed, including issuance costs, (iii) the calculation of "Houston's related borrowing costs" (as of the Final Accounting) as described in the preceding paragraph, and (iv) a debt service schedule showing all interest and principal payments due from Houston. At the time of calculation of any payment pursuant to the formula in the preceding paragraph, the items listed in the preceding sentence will be updated to take into account any actual savings from any refundings or defeasances of such bonds or other financial instruments.

3.15.2 If the Authority has not requested an Oversized Facilities Reservation in amounts up to its Oversized Facilities Option, then starting on December 31, 2045 and continuing through the term of this Second Supplement, Houston shall not sell, use, or transfer capacity in the amount remaining in the Authority's Oversized Facilities Option such that the Authority would be unable to obtain its remaining Oversized Facility Option unless Houston first provides the Authority with written notice of same and a 90 day opportunity to make an Oversized Facilities Reservation for an amount up to the Authority's remaining Oversized Facilities Option. Houston shall be obligated to approve such Oversized Facilities Reservation within 60 days of receipt of (a) the Authority's request for the Oversized Facilities Reservation; and (b) the cost due from the Authority's Oversized Facilities Contribution.

3.15.3 After the last Phase AUP Report is prepared pursuant to Article VIII, and at any time prior to December 31, 2045, the Authority shall have the unrestricted right to increase its Untreated Water Facilities Demand Allocation by an amount up to its Oversized Facilities Option, by submitting a request for a Reservation to Houston for such increase. Houston shall be obligated to approve such Reservation within 60 days of receipt of the Authority's request. Thereafter, the Authority shall hereby be obligated to make all payments for such increase in Untreated Water Facilities Demand Allocation in accordance with the due dates and calculations set forth in the provisions of the Contract. Within 60 days after receiving a request from the Authority for a calculation of the payments due for an increase in Untreated Water Facilities Demand Allocation, Houston shall provide such calculation to the Authority. The Authority may only obtain an Untreated Water Facilities Demand Allocation under this paragraph in an amount of MGD that does not exceed the Oversized Facilities Reservation that it previously or concurrently obtained; provided, however, this sentence shall not be construed to limit the Authority's right to increase its Untreated Water Facilities Demand Allocation under the terms of the Contract.

3.15.4 If, prior to December 31, 2045, the Authority has not increased its Untreated Water Facilities Demand Allocation by the entire Oversized Facilities Option, then starting on December 31, 2045 and continuing through the term of this Second Supplement, Houston shall not sell, use, or transfer untreated water such that the Authority would be unable to obtain its remaining Oversized Facilities Option unless Houston first provides the Authority with written notice of same and a 90 day opportunity to make a request for a Reservation for such increase. Houston shall be obligated to approve such Reservation within 60 days of receipt of the Authority's request. Thereafter, the Authority shall hereby be obligated to make all payments for such increase in Untreated Water Facilities Demand Allocation in accordance with the due dates and calculations set forth in the provisions of the Contract.

3.15.5 After completion of the Expansion Project, the Authority may utilize any portion of its Oversized Facilities Reservation (for which it has paid its Oversized Facilities Contribution) at such time as the Authority increases (by an equal amount of MGD) its Untreated Water Facilities Demand Allocation and Treated Water Facilities Demand Allocation in the NEWPP (but no additional payment will be required for Oversized Facilities).

3.15.6 Any Project Party may in whole or in part assign, in the same manner as provided in Section 3.2.2 for Expansion Project Reservations, the Oversized Facilities Reservation and any Reservation that increases its Untreated Water Facilities Demand Allocation under this Section 3.15.

ARTICLE IV

WORK & SCHEDULE

Section 4.1 *Control of the Work.* Houston, through the Project Director, shall manage the Work, including design, acquisition of the Expansion Project Property, and construction of the Expansion Project, in accordance with the Budget, Schedule, applicable laws and regulations, and this Second Supplement. Subject to the terms of this Second Supplement, Houston shall control and supervise the detailed manner or method of execution of all Work items and be responsible for the management and compensation of all personnel performing the Work. Houston's control of the Work and the Representative's involvement in the Work described under this Second Supplement shall not change the nature of the relationship established in contracts between Houston and the Contractor or Consultants.

Section 4.2 *The Schedule.* The Project Director shall cause the prompt: (i) preparation and maintenance of an accurate Schedule and posting of same on the Work Management System, and (ii) concurrent provision of an email (or other written notice) to the

Representative notifying the Representative when an updated Schedule has been posted to the Work Management System.

Section 4.3 *Bonds, Indemnity, and Insurance.* In order to meet applicable legal requirements and protect the Parties from reasonably foreseeable risks associated with the Work, Houston shall require: (i) any Contractor to provide adequate insurance coverage and payment and performance bonds, and (ii) any Consultant providing engineering services (and any other Consultant as reasonably determined by Houston) to provide adequate insurance coverage. Houston shall require any written contract with a Contractor and each Consultant engaged by Houston after the Second Supplement Effective Date to name the Authority: (a) as an additional insured (including waivers of subrogation by insurance carriers) to the extent permitted by law and to the extent that such Contractor or Consultant provides same in favor of Houston, and (b) as a party included under indemnity, hold harmless, release, and defense provisions to the extent permitted by law and to the extent that such Contractor or Consultant provides same in favor of Houston. With respect to Consultants providing Engineering Services contracted with Houston prior to the Second Supplement Effective Date, Houston shall accomplish the provisions of the previous sentence no later than 30 days after the Second Supplement Effective Date. The Project Director shall post copies of all such contracts and applicable insurance policies on the Work Management System. The Project Director and the Representatives collectively may agree to revisions to this paragraph.

4.3.1 The Project Director shall reasonably determine whether to make a claim under any first party insurance policy (such as a property insurance policy) or bond in connection with the Expansion Project. If the Project Director makes such a claim, the Project Director shall promptly distribute proceeds from the claim or bond in proportion to the Authority's applicable Cost Share related to the subject of the claim as follows: (i) to the Authority Fund for the benefit of the Authority, or (ii) to the Authority if the Project Director reasonably determines that such proceeds are surplus. In the event a Party makes a claim on an insurance policy or Houston makes a claim on a bond, such Party shall provide written notice to all Project Parties.

Section 4.4 *Work Management System.* To the fullest extent practicable, Houston shall cause all information and documents related to the Expansion Project to be accessible to the Expansion Project Team and the Representative through the Work Management System.

4.4.1 In order to protect information and documents in the Work Management System, the Project Director may require the Representative to agree to reasonable access conditions and non-disclosure terms.

4.4.2 The Project Director and Representative may agree on additional or different accessibility and contents of the Work Management System in order to facilitate collaboration and timely completion of the Work.

4.4.3 The Authority does not by way of this Second Supplement acquire any title, ownership interest, copyright or any other ownership right, to any information, document, or intellectual property, of any kind, stored or visible on the Work Management System. To the extent that any information, document, or intellectual property is not produced for the exclusive use of the Authority, the Authority shall not claim ownership of any intellectual property, or other ownership interest in the Work Management System, or related services, information, documents, charts, diagrams, specifications, and other tangible or intangible material of any nature whatsoever contained on the Work Management System. All patents, copyrights, and other proprietary rights related to the Work Management System and its components, shall be the sole and exclusive property of Houston, Contractor or Consultant(s). However, the Authority shall be entitled to use the Work Management System and all of its contents in order to achieve the purposes provided for in this Second Supplement.

ARTICLE V

PROJECT DELIVERY

Section 5.1 *Procurement Generally.* In accordance with this Second Supplement, Houston shall develop all documents and forms, such as solicitations and contracts, for procurement of all Work, Expansion Project Property, equipment, and materials necessary or desirable for completion of the Expansion Project. The Project Director shall place such documents and forms on the Work Management System prior to any public use of these documents.

Section 5.2 *Selection of Contractor.* In accordance with applicable law, Houston shall prepare and publish the request for qualifications of the Contractor. After Houston receives statements of qualifications from firms interested in submitting proposals for the Expansion Project, Houston shall provide said statements to the Selection Reviewer if the Selection Reviewer has agreed in writing to reasonable non-disclosure terms provided by the Project Director. No firm shall be qualified for final selection under Section 2269.359(c), Texas Government Code, unless Houston and at least two of the Selection Reviewers of the following four governmental entities agree in writing that such firm is qualified: Central Harris County Regional Water Authority, North Fort Bend Water Authority, North Harris County Regional Water Authority, and West Harris County Regional Water Authority.

5.2.1 Thereafter, Houston shall provide a draft of the request for proposals, including a draft of the contract to be entered into between Houston and the Contractor, to the public, including qualified firms and the Selection Reviewer, for comments. After considering the comments provided and publishing to the public the comments and how they were addressed, Houston

shall, in accordance with applicable law, publish the final request for proposals. The Project Director and the Selection Reviewer of all Project Parties (other than Houston) may collectively agree in writing to modifications of this paragraph.

- 5.2.2 In accordance with applicable law, including Texas Government Code Chapter 2269, Subchapter H, Houston shall (i) decide the firm with which it will negotiate a contract and provide notice to the Selection Reviewer of its decision; and (ii) after successful negotiations between Houston and a firm and after receipt of a Consensus Vote in favor of the final contract to be entered into between Houston and the firm, enter into a contract with the firm. In connection with, and prior to, such Consensus Vote, Houston shall provide the Selection Reviewer with the technical proposal and cost proposal that such firm provided to Houston, subject to the Selection Reviewer agreeing to reasonable non-disclosure terms provided by the Project Director.
- 5.2.3 If the Representative does not meet the eligibility qualifications required of the Selection Reviewer, as provided in Section 2.80, then the Selection Reviewer shall (i) assume all of the Representative's responsibilities related to the Consensus Vote described in Sections 5.2.2(ii) and 6.3(5), and (ii) provide written notice of such assumption to the Project Parties prior to such assumption occurring.
- 5.2.4 Pursuant to Section 2269.053, Texas Government Code, and only to the extent of the terms and conditions of this Section 5.2 and Section 6.3, Houston hereby delegates certain of its authority under Texas Government Code Chapter 2269 to the Selection Reviewers of the following four governmental entities: Central Harris County Regional Water Authority, North Fort Bend Water Authority, North Harris County Regional Water Authority, and West Harris County Regional Water Authority. Houston shall provide notice of this delegation as required by Section 2269.053(b), Texas Government Code.

Section 5.3 *Design.* After entering into a contract with the Contractor, the Project Director shall cause the Contractor to promptly proceed with the design of the Expansion Project.

Section 5.4 *Expansion Project Property.* This Section shall not be effective unless the Project Director (i) reasonably determines that rights of way and other interests in real property adjacent to or in the immediate vicinity of the existing NEWPP site are necessary for the Expansion Project ("Expansion Project Property"), and (ii) provides written notice to the Representative of the Expansion Project Property to be acquired. In accordance with the Schedule and Consensus Process, Houston shall acquire the Expansion Project Property for a Contract Price. The Project Director shall reasonably determine the method and form that Houston uses to acquire the Expansion Project Property and may hire Consultants to acquire

or assist in acquisition of the Expansion Project Property on Houston's behalf. Payments made by the Authority pursuant to this Second Supplement do not give the Authority an ownership interest in the Expansion Project Property.

Section 5.5 *Engineering and Construction Contract Price.* In accordance with the Schedule, Consensus Process, and other terms of this Second Supplement, the Project Director shall negotiate, on behalf of the Project Parties, Contract Prices for the Work associated with the Engineering Costs and Construction Costs.

Section 5.6 *Construction.* After obtaining the necessary design for the applicable portion of the Expansion Project, necessary permits and approvals, and a Contract Price for all or part of the Work, Houston shall cause the performance of the Work related to such Contract Price in accordance with the terms of this Second Supplement.

Section 5.7 *Contractor Schedule.* Houston shall include in the final request for proposals and in any contract with the Contractor a requirement that the Contractor achieve substantial completion of Phase 1 no later than August 31, 2021 and Phase 2 no later than June 30, 2024, subject to Houston's customary terms and provisions within such contracts regarding extension of time. The Project Director and the Representatives may collectively agree in writing to modifications of this paragraph.

Section 5.8 *Dispute Arising from the Work.* In the event that Houston is in a dispute with the Contractor or Consultants regarding the Work that results in settlement, litigation or other formal or informal dispute resolution, then the reasonable costs of same (including, without limitation, legal fees, court costs, expert witness fees, filing fees, and judgment payments or settlement payments paid to the Contractor or Consultants) shall be treated as a Cost such that each Project Party will be responsible for its applicable Cost Share related to the subject of the payment.

5.8.1 Any settlement agreement related to such a dispute shall be treated as a Consensus Item subject to the Consensus Process, and the settlement agreement shall also be subject to approval by Houston's City Council if required by law. Any judgment payments or settlement payments received by Houston shall inure to the benefit of the Project Parties in proportion to each Project Party's applicable Cost Share related to the subject of the payment.

5.8.2 Notwithstanding any provision of this Second Supplement and to the fullest extent permitted by law, including Houston's Charter and Code of Ordinances (to the extent the Ordinances are not inconsistent with this Second Supplement), any Project Parties that collectively comprise more than 63% of the Multi-Phase Cost Shares, as provided in the Participation Table, shall have the right by written instrument delivered to Houston, to direct the method and manner of conducting all proceedings related to such litigation or other dispute resolution or for any remedy available to Houston under the contracts with the Contractor or Consultants;

provided, however, that such direction shall not be contrary to law or the provisions of this Second Supplement.

Section 5.9 *Miscellaneous Services*. As part of a Contract Price, Houston may engage various Consultants to provide miscellaneous Work.

ARTICLE VI

CONSENSUS PROCESS

Section 6.1 *Consensus Process*. Notwithstanding any other provision of this Second Supplement, the Project Parties shall use and be bound to the process provided in Sections 6.2 through 6.6 below for Work-related items and issues that may arise during the Expansion Project under Article III through VI of this Second Supplement (“Consensus Process”). The Project Parties shall endeavor to work in good faith to attempt to resolve issues without resorting to the process described in Section 6.4.

Section 6.2 *Weighted Vote; Consensus Vote*. The Project Director, Representative, and the Other Representatives shall each have a vote on a Consensus Item or a Representatives’ Issue, as such terms are defined below, weighted equal to the respective Project Party’s Multi-Phase Cost Share provided in the Participation Table (“Weighted Vote”). Any total Weighted Vote of the Project Parties that exceeds 63% in favor of a particular option voted upon (“Consensus Vote”) shall be binding on all Project Parties to the fullest extent permitted by law.

Section 6.3 *Consensus Items*. At any time during the Expansion Project, a Consensus Vote shall be required to approve the following items (each, a “Consensus Item”): (1) the Costs that Houston proposes to include in the Contract Price(s), plus any related contingency costs; (2) the Estimated Non-Oversized Price, Contract Non-Oversized Price, Estimated Oversized Price and Contract Oversized Price; (3) any change(s) to the contract with a Contractor that change either date reflected in Section 5.7 by more than 60 cumulative days; (4) any emergency purchase order under Section 6.6; and (5) the final contract to be entered into between Houston and the firm described in Section 5.2.2(ii).

- 6.3.1 The Project Director shall present Consensus Items to the Representative and the Other Representatives via the Work Management System (the “Presentation”); provided, however, the Presentation for an emergency purchase order under Section 6.6 shall also be provided directly to the Representative. The Presentation shall provide the Representative with: (i) a technical overview, cost breakdown, action required by the Project Parties, and the alternatives considered for the Consensus Item, as applicable, and (ii) for Consensus Items involving Contract Price(s), an updated Budget.

6.3.2 The Representative shall provide to the Project Director in writing the official vote on behalf of the Authority within seven (7) business days of the date the Presentation is posted to the Work Management System (or, for any emergency purchase order under Section 6.6, within two (2) business days of the date the Presentation is posted to the Work Management System), otherwise the Authority shall be deemed to have voted in favor of the Consensus Item. (For purposes of the preceding sentence, “the date the Presentation is posted to the Work Management System” shall be the later of: (i) the date the Presentation is placed on the Work Management System, or (ii) the date an email (or other written notice) is received by the Representative from the Project Director notifying the Representative that the Presentation has been placed on the Work Management System.) The Representative shall include with any vote against a Consensus Item a brief summary of the reasons the Authority does not support the Consensus Item. If the vote fails to result in a Consensus Vote in favor of the Consensus Item, then the Consensus Item is not approved. Provided, however, if the failed vote relates to Costs that Houston proposed to include in a Contract Price (or relates to Estimated Non-Oversized Price, Contract Non-Oversized Price, Estimated Oversized Price, or Contract Oversized Price), then the Project Director shall continue thereafter, with all due haste, to provide the Project Parties with modified proposal(s) regarding such items in order to attempt to obtain a Consensus Vote. Absent a written statement to the contrary by the Project Director provided to the Representatives prior to the vote, the Project Director is deemed to cast Houston’s vote in favor of the Consensus Item.

Section 6.4 *Representatives’ Issues.* At any time during the Expansion Project, two or more Representatives may submit a written request to the Project Director with a copy to the Project Parties to require additional discussion of an issue concerning Representation, or design, construction, progress, or manner of execution of the Expansion Project (“Representatives’ Issue(s)”) if: (1) The requesting Representatives have previously notified the Project Director of the issue and a proposed solution or alternative course of action (collectively, “Proposed Solution(s)”); and (2) The written request includes a summary of the Representatives’ Issue and the Proposed Solution, and is sent not later than five (5) business days after a decision by the Project Director on the subject matter of the Representatives’ Issue is posted to the Work Management System. (Item (2) of the preceding sentence shall not be construed to preclude a Representative Issue from being sent prior to the decision being posted to the Work Management System.)

6.4.1 Within five (5) business days of receiving written notice of the Representatives’ Issue, the Project Director shall convene a meeting (“Authority Meeting”) with the Representative and the Other Representatives to discuss the Representatives’ Issue and the Proposed Solution unless the Representatives’ Issue is withdrawn in writing prior to the Authority Meeting.

- 6.4.2 If by 11:59 p.m. on the day of the Authority Meeting, any Representative requests a Weighted Vote regarding the Proposed Solution, then the Project Director, the Representative, and the Other Representatives shall provide to the Project Parties in writing the official vote on behalf of each respective Project Party within five (5) business days of the Authority Meeting. If the Representative fails to cast its vote timely, the Representative shall be deemed to have voted the same way as the Project Director. If the Proposed Solution receives a Consensus Vote, then such vote shall be binding on the Project Parties to the fullest extent permitted by law. As set forth in Section 6.5 below, no Consensus Vote shall occur on Exempt Items, but Exempt Items may become Representatives' Issues and may be the subject of an Authority Meeting, as set forth in this Section.
- 6.4.3 If a vote on the Proposed Solution fails to result in a Consensus Vote in favor of the Proposed Solution, one or more Representative(s) comprising at least 20% of the Weighted Vote may appeal to the Director by sending written notice of appeal to the Project Parties and the Director within 3 business days of such vote. Within 5 business days of receiving notice of an appeal, the Director may choose to change the vote cast on behalf of Houston. If the Director chooses to change Houston's vote, and such change results in a Consensus Vote in favor of the Proposed Solution, then that Consensus Vote shall be binding on the Project Parties to the fullest extent permitted by law. If (i) a notice of appeal is not sent, (ii) the Director does not change Houston's vote within 5 business days, or (iii) any such change does not result in a Consensus Vote, then the decision by the Project Director on the subject matter of the Representatives' Issue (referred to in Section 6.4) shall be binding on the Project Parties to the fullest extent permitted by law.
- 6.4.4 The process set forth in this Section 6.4 is not intended to cause an amendment to the express provisions of this Second Supplement without a written instrument being executed by the governing bodies of Houston and the Authority pursuant to Section 10.4; provided, however, such process is intended to cause implementation of any Proposed Solutions that receive Consensus Vote.

Section 6.5 *Exempt Items.* The Project Parties agree that any items shall not be subject to a Consensus Vote if the Director, in his or her reasonable discretion, determines the items are necessary to comply with any applicable regulatory requirements related to workplace safety, public safety, operations, or regulatory compliance, including environmental compliance, related to the Expansion Project or the existing NEWPP (collectively, the "Exempt Item(s)"). If the Director determines, in his or her reasonable discretion, that a matter constitutes an Exempt Item, then the Director shall (i) provide the Authority with written notice of such determination, and (ii) in good faith consider any comments or input provided by the Authority related to the Exempt Item(s).

Section 6.6 *Emergency Purchase Order.* The Project Director may reasonably determine that a Houston emergency purchase order is necessary for the continuation of the Expansion Project if (i) due to an emergency, (a) the Project Director reasonably determines that immediate Work is needed to prevent unanticipated damage to the property that comprises the Expansion Project (as opposed to property that comprises the existing NEWPP) and (b) the requirements for emergency purchase orders under State law and Houston's written manuals and procedures are met, and (ii) Appropriated Houston Funds do not have adequate contingency funds available to pay for the immediate Work. In that event, the Project Director shall provide the Representative, as soon as practicable, with written notice (i) including a copy of the emergency purchase order and a description of the emergency and damage to be prevented, and (ii) an estimate of the portion of funds from the emergency purchase order directly benefiting the Expansion Project and the Authority's pro-rata share, based on the Authority's applicable Cost Share, of such estimate. If the emergency purchase order is an Exempt Item or receives a Consensus Vote, then the Authority shall pay Houston its applicable Cost Share of the emergency purchase order within 60 days of receiving an invoice for same from Houston.

ARTICLE VII

NON-PAYMENT

Section 7.1. *Non-Payment Default Generally.* The Project Director shall promptly provide written notice (such as email or other written notice) to all Project Parties of any Non-Payment Default by the Authority or Houston.

Section 7.2. *Authority's Non-Payment Default.* If it is the Authority that is in Non-Payment Default, then, beginning on the 16th and ending on the 45th day after the date the Authority receives written notice of the Authority's Non-Payment Default from the Project Director, Houston shall have the remedies set forth in this Section 7.2. If the Authority cures the Non-Payment Default prior to the 16th day described in the preceding sentence, then the remedies set forth in this Section 7.2 shall not apply.

7.2.1 Houston may assume some or all of the portion (in MGD) of the Expansion Project Reservation for which the Authority has not already provided Cash or provided and maintained Cash Equivalent ("Unpaid Reservation"). Any such assumption by Houston shall be accomplished by Houston providing written notice to all Project Parties that Houston has assumed all of the Authority's outstanding and future rights and obligations in and to the Unpaid Reservation. Thereafter, Houston may retain or sell all or a portion of the Unpaid Reservation;

7.2.2 Houston may modify the Expansion Project to reduce the capacity of the Expansion Project to eliminate some or all of the Unpaid Reservation. The additional Costs resulting therefrom that are incurred by the other Project

Parties, including, without limitation, Engineering Costs for re-design Work, (collectively “Downsizing Costs”) shall be due from the Authority, as described below. Any Project Party not then in Non-Payment Default may demand payment of the Downsizing Costs, which payment shall be made within 90 days thereafter by the Authority, pro-rata, to the other Project Parties;

7.2.3 Houston may assign some or all of the Unpaid Reservation to one or more of the Other Authorities in accordance with Section 3.2.2 if the one or more Other Authority(ies) to whom it is assigned agree, in writing, to the assignment; and

7.2.4 Houston may refuse any requests for Reservations from the Authority received by Houston prior to December 31, 2025.

Section 7.3. *Remaining Unpaid Reservation.* In the event some portion of Unpaid Reservation is remaining after Houston exercises its options pursuant to Section 7.2, or if the 45-day period described in Section 7.2 expires and any portion of the Unpaid Reservation is still remaining, then the Authority that is in Non-Payment Default shall be deemed to have assigned to the Project Parties that are not then in Non-Payment Default (and such Project Parties are deemed to have assumed), pro-rata, the outstanding and future rights and obligations in and to the Unpaid Reservation.

Section 7.4. *Houston’s Non-Payment Default.* If it is Houston that is in Non-Payment Default, then the Authority shall have the remedies set forth in this Section 7.4, beginning on the 16th and ending on the 45th day after the earlier of: (i) the date the Authority receives written notice of Houston’s Non-Payment Default from the Project Director, or (ii) the date Houston receives written notice of Houston’s Non-Payment Default from the Authority. If the Authority provides notice to Houston pursuant to the preceding sentence, the Authority, contemporaneous with its sending such notice to Houston, shall provide a copy of same to the other Project Parties. If Houston cures the Non-Payment Default prior to the 16th day described in the first sentence of this paragraph, then the remedies set forth in this Section 7.4 shall not apply.

7.4.1 Pursuant to Section 7.4, the Authority and the Other Authorities (if they are not then in Non-Payment Default) may agree among themselves to assume all of the portion (in MGD) of Houston’s capacity in the Expansion Project for which Houston has not already Appropriated Houston Funds (“Unpaid Capacity”). Any such assumption by the Authority and such Other Authorities shall be accomplished by the Authority and such Other Authorities providing written notice to all Project Parties that they have assumed all of Houston’s outstanding and future rights and obligations in and to the Unpaid Capacity.

7.4.2 In the event the 45-day period described in this Section 7.4 expires and any portion of the Unpaid Capacity is still remaining, then Houston shall be deemed to have assigned to the Project Parties (other than Houston) that are not then in Non-Payment Default (and such Project Parties are deemed to have assumed), pro-rata, the outstanding and future rights and obligations in and to the Unpaid Capacity.

7.4.3 In the event of Houston's Non-Payment Default, Houston shall continue with its obligations under this Second Supplement to complete the Expansion Project.

Section 7.5. *Late Interest.* For the first 45 days following the date a Party enters into Non-Payment Default or following the date that a Party is delinquent in paying Downsizing Costs pursuant to Section 7.2.2, late interest shall accrue on the delinquent amount at an interest rate equal to (i) one percent, plus (ii) the prime rate as published in the Wall Street Journal on the first business day of July of the preceding calendar year. Any Project Party not then in Non-Payment Default may demand payment of such late interest, which payment shall be made within 60 days thereafter by the Party in Non-Payment Default, pro-rata, to the other Project Parties. Thereafter, any interest shall accrue as may be required by law.

Section 7.6. *Preservation of Remedies.* Exercise of the options and remedies set forth in this Article VII does not waive any other remedies (including, without limitation, remedies for damages) that may be available at law or in equity against the Project Party that is in Non-Payment Default.

Section 7.7. *Modification of Time Periods.* The Project Director, the Authority, and the Other Authorities may collectively agree in writing to modify any of the time-periods set forth in this Article VII.

Section 7.8. *Agreement Not Required if in Non-Payment Default.* Certain provisions of this Second Supplement allow for revisions to this Second Supplement if the Project Director, the Authority, and the Other Authorities (or the Project Director and the Representatives) collectively agree in writing. In the event a Project Party is then in Non-Payment Default, agreement from such Project Party shall not be required for the other Project Parties to be able revise the Second Supplement as described in the preceding sentence.

ARTICLE VIII

ACCOUNTING & FINAL STATEMENT

Section 8.1. *Payment for Work.* As the Project Director receives invoices for the Work and Acquisition Costs, the Project Director shall review and approve or disapprove such invoices and shall pay for same as provided herein. The Project Director shall post this payment

information and the other documents described in this Article to the Work Management System.

Section 8.2. *Annual Financial Report.* Each year until the Final Accounting and by no later than October 1 of each year, the Project Director shall post to the Work Management System an interim, unaudited financial report (“Annual Financial Report”) of the (i) funds credited to and debited from the Escrow Account, (ii) sources and uses of funds credited to and debited from (and the dates of such credits and debits) the Authority Fund, (iii) the amount(s) of funds paid (and date(s) paid) by Houston out of the Appropriation of Houston Funds, (iv) earnings and interest accrued in the Authority Fund for the benefit of the Authority and Other Authorities, (v) the Cost Recovery Amounts and calculation thereof, and (vi) for the initial Annual Financial Report, the Costs incurred by Houston prior to December 1, 2014, in accordance with Section 3.4. The reporting period for Annual Financial Reports shall include all transactions from July 1 of the previous calendar year through June 30 of the current year.

Section 8.3. *Phase Financial Report.* Within 90 days of completion of the Work for any Phase, the Multi-Phase Work, or the Oversized Facilities, the Project Director shall post to the Work Management System a final, unaudited financial report of all Costs for that Phase, Multi-Phase Work, or Oversized Facilities (“Phase Financial Report”). The Phase Financial Report shall provide the same type of information and formatting as the Annual Financial Report and shall identify the remaining Cash and Cash Equivalent in the Escrow Account and the Cash in the Authority Fund and anticipated refunds and shortfalls, based upon the most-current Budget and Participation Table.

Section 8.4. *Semi-Annual Cost Recovery Amounts Report.* Semi-Annually, Houston shall provide to the Authority a report showing all Cost Recovery Amounts Houston charged to the Expansion Project during the period from January 1st to June 30th and from July 1st to December 31st of each year. Reports for the period ending December 31st shall be due by the following February 28th and reports for the period ending on June 30th shall be due by August 31st. Notwithstanding the foregoing, the first report shall cover the period from December 1, 2014 to June 30, 2015 and be due by August 31, 2015.

Each report shall include for the applicable period: (i) for each Direct Employee recording hours worked on the Expansion Project (a) the total cost to Houston for the employee’s salary and associated benefits, expressed as an annual amount and as an hourly rate, (b) the total hours worked, and (c) the totals hours worked on the Expansion Project; (ii) the total of all amounts determined pursuant to (i); (iii) the total costs of salaries and associated benefits for all Direct Employees, whether each employee recorded hours worked on the Expansion Project or not; (iv) the Overhead Factor; (v) an itemized list and backup for all costs included as Overhead; (vi) the total Cost Recovery Amount.

Section 8.5. *Review and Comment.* The Representative shall have the opportunity to review and comment on Annual Financial Reports, Phase Financial Reports, Final

Accounting, and the True-Up Statement within 30 days of the later of: (i) the date the applicable document is posted to the Work Management System, or (ii) the date an email (or other written notice) is received by the Representative from the Project Director notifying the Representative that the applicable document has been posted to the Work Management System. The Project Director shall address any of the Representative's comments within 30 days of receiving the comment(s). The Project Director and Representative may agree in writing to a longer period for comments and to address such comments.

Section 8.6. *Agreed Upon Procedures.* No later than the first anniversary of the Second Supplement Effective Date, Project Parties that collectively comprise more than 63% of the Multi-Phase Cost Shares, as provided in the Participation Table, shall agree on standard procedures and questions for AUP Reports. The cost incurred by Houston to obtain each AUP Report shall be considered a Work Item shared by the Project Parties according to their respective Cost Shares for Multi-Phase Work.

8.6.1 Within 90 days after the end of the time-period for the Representative to provide comments to a Phase Financial Report under Section 8.5, the Project Director shall cause an AUP Report to be prepared and posted on the Work Management System ("Phase AUP Report"). A Phase AUP Report shall review, test, and verify the associated Phase Financial Report.

8.6.2 The Representative shall have the opportunity to review the Phase AUP Report and provide comments to the Project Director for 30 days following the later of: (i) the date the Phase AUP is posted to the Work Management System, or (ii) the date an email (or other written notice) is received by the Representative from the Project Director notifying the Representative that the Phase AUP has been posted to the Work Management System. The Project Director shall consider and respond to said comments and may provide an addendum to the Phase AUP Report.

Section 8.7. *Final Accounting.* The last Phase AUP Report shall include a final accounting for all Phases, Multi-Phase Work, and Oversized Facilities ("Final Accounting") that includes (a) a list of all Costs paid from the Authority Fund and from Appropriations of Houston Funds; (b) the cumulative amount of Cash withdrawn by Houston from the Escrow Account and from escrow accounts created under the Other Second Supplements; (c) the earnings and interest earned on the Authority's funds and the Other Authorities' funds in the Authority Fund; (d) the amount of funds, if any, remaining in the Authority Fund after all Costs have been paid; (e) the Authority's and the Other Authorities' pro-rata share shown as a percentage and dollar amount, based on the applicable Cost Share, of any remaining funds described in (d) above; (f) the amount of funds, if any, the Authority owes for the Work, Cost Recovery Amounts, and Acquisition Costs based on its applicable Cost Share that was not already paid by the Authority pursuant to this Second Supplement; and (g) the Costs incurred by Houston prior to December 1, 2014, in accordance with Section 3.4. In accordance with this Second Supplement, the Final Accounting shall state for each

Project Party the amounts, if any, due or owing to or from such Project Party for the items calculated using items (a) through (g) above. The Final Accounting shall also include (i) the Oversizing Costs based on the Final Oversized Price and the Final Non-Oversized Price of each applicable Work Item pursuant to Section 3.14 and (ii) the items listed in the third paragraph of Section 3.15.1.

Section 8.8. *True-Up.* Consistent with the Final Accounting, and within 60 days after the Final Accounting has been posted to the Work Management System, the Project Director shall prepare a True-Up Statement (the "True-Up Statement") reflecting the amount, if any, due to or owed from the Authority pursuant to this Second Supplement, and shall post same on the Work Management System. After the comment period provided for in Section 8.5, the Project Director shall issue the Authority the True-Up Statement, including any revisions made by the Project Director based on comments received. If the True-Up Statement provides that the Authority owes Houston a payment, the Authority shall pay any such amount to Houston within 180 days of the date the True-Up Statement is received by the Authority and the Authority shall be in default if it fails to do so. If the True-Up Statement provides that Houston owes the Authority a payment, Houston shall pay any such amount to the Authority within 90 days of the date the True-Up Statement is issued and Houston shall be in default if it fails to do so. Nothing in this Section prohibits a Party from challenging the calculation of the Annual Financial Reports, Phase Financial Reports, Final Accounting, or the True-Up Statement, as not being in compliance with this Second Supplement.

ARTICLE IX

TERM

Section 9.1 *Term.* Section 15 of the First Supplement is amended to read as follows:

"The Contract and the Second Supplement shall expire at noon on January 1, 2080. At such time as the Contract and the Second Supplement are no longer in force and effect, if requested in writing by the Authority, Houston agrees to continue to provide water services to the Authority upon the payment of reasonable rates and charges therefor which take into account the capital payments paid by the Authority to Houston pursuant to the Contract (and any supplements, including the Second Supplement, or amendments thereto) and the Authority's equitable interest described below. Upon the date that the Contract and the Second Supplement are no longer in force and effect, the Authority will own the right to use the capacity of the Untreated Water Facilities and Treated Water Facilities proportionate to the amount of its Water Demand Allocation as it existed immediately prior to such date. The immediately preceding two (2) sentences shall survive the expiration or termination of the Contract and the Second Supplement."

The term "Contract" in the above paragraph, and throughout this Second Supplement, has the meaning given in Section 2.19 of this Second Supplement.

ARTICLE X
MISCELLANEOUS

Section 10.1 *Time; Force Majeure.* Time is of the essence with respect to performance of all obligations set forth in this Second Supplement. The Force Majeure provisions of the Original Contract apply to this Second Supplement; provided, however, Force Majeure does not excuse a failure to timely satisfy Cash Call obligations.

Section 10.2 *Severability.* If any part of this Second Supplement is for any reason found to be unenforceable, all other parts remain enforceable.

Section 10.3 *Recitals.* The recitals contained in Article I are true and correct, accurately represent the understandings and intent of the parties, and are incorporated into this Second Supplement by reference.

Section 10.4 *Written Amendment.* Unless otherwise specified elsewhere in this Second Supplement, this Second Supplement may be amended only by written instrument executed by the governing bodies of Houston and the Authority and, if the amendment is to a provision in Article III through VIII, then the written consent of all Project Parties shall be required.

Section 10.5 *Applicable Laws.* This Second Supplement is subject to the laws of the State of Texas, the Houston's Charter and Ordinances (to the extent the Ordinances are not inconsistent with this Second Supplement), the laws of the federal government of the United States, and all rules and regulations of any regulatory body or officer having jurisdiction. Venue for any litigation relating to this Second Supplement is Harris County, Texas.

Section 10.6 *Notices.* All notices required or permitted by this Second Supplement must be in writing and are deemed delivered on the earlier of the date actually received or the third day following: (a) deposit in a United State Postal Service post office or receptacle; (b) with proper postage (certified mail, return receipt requested); and (c) addressed to Houston at the address provided in the Original Contract, and addressed to the Authority at the following address: West Harris County Regional Water Authority, c/o Alex Garcia, Allen Boone Humphries Robinson LLP, 3200 Southwest Freeway, Suite 2600, Houston, Texas 77027. The address for the Authority set forth in the Original Contract is hereby amended to be the address for the Authority set forth above.

Section 10.7 *Captions.* Captions contained in this Second Supplement are for reference only, and therefore, have no effect in construing this Second Supplement. The captions are not restrictive of the subject matter of any section in this Second Supplement.

Section 10.8 *Non-Waiver.* If any Party fails to require another Party to perform a term of this Second Supplement, that failure does not prevent the Party from later enforcing that term

and all other terms. If any Party waives another Party's breach of a term, that waiver does not waive a later breach of this Second Supplement.

Section 10.9 *Enforcement*. The City Attorney, or his or her designee, may enforce all of Houston's legal rights and obligations under this Second Supplement without further authorization.

Section 10.10 *Ambiguities*. If any term of this Second Supplement is ambiguous, it shall not be construed for or against any Party on the basis that the Party did or did not write it.

Section 10.11 *Remedies Cumulative*. Unless otherwise specified elsewhere in this Second Supplement, the rights and remedies contained in this Second Supplement are not exclusive, but are cumulative of all rights and remedies that exist now or in the future at law or in equity (including, without limitation, specific performance, mandamus, and injunctive relief). No Party may terminate its duties under this Second Supplement except as may be specifically provided for in this Second Supplement.

Section 10.12 *Third Party Beneficiaries*. The terms of this Second Supplement will be binding upon, and inure to the benefit of, the Parties hereto and their permitted successors and assigns. The Parties hereby expressly acknowledge and stipulate their intent that each of the Project Parties not included within the definition of the Parties shall be a third party beneficiary of this Second Supplement, and shall have the right and legal standing to enforce the respective obligations of the Parties hereunder to the full extent allowed at law or in equity; provided, however, that in no event shall the Project Parties have the right to bring suit for money damages against any Party to this Second Supplement in any case or cause of action in which a direct Party to this Second Supplement would have no right to bring suit for money damages under the terms of this Second Supplement. Except as described in the preceding sentence, this Second Supplement shall be for the sole and exclusive benefit of the Parties and shall not be construed to confer any rights upon any third party.

Section 10.13 *Waiver of Immunity*. The Project Parties expressly acknowledge and agree that this Second Supplement constitutes a contract by which each Project Party is providing goods and/or services to all other Project Parties and that this Second Supplement is subject to the provisions of Subchapter I, Chapter 271, of the Texas Local Government Code.

Section 10.14 *Service to Authority Contract GRP Districts*. The Authority hereby requests approval to sell Water that it acquires from Houston pursuant to the Contract (as supplemented by this Second Supplement) to any of the following: Harris County Municipal Utility District Nos. 46, 106, 132, 151, 152, and Trail of the Lakes Municipal Utility District. Houston hereby approves such request. No further approvals are required under Section 8.10 of the Contract. This paragraph is not intended to remove any obligation that any of the above-listed municipal utility districts may have under state law (and/or under previously executed Houston consent ordinances) to obtain Houston's consent for annexations of land.

Section 10.15 *Assignability*. Unless otherwise specified elsewhere in this Second Supplement, this Second Supplement shall not be assignable by either Party without the prior written consent of the other Project Parties.

Section 10.16 *Additional Information*. The provisions of this Section shall terminate 180 days after the Authority receives a True-Up Statement calculated pursuant to Section 8.8. The Authority shall provide the Project Director with the following documents no later than the time the Authority submits such documents to the Municipal Securities Rulemaking Board (“MSRB”) via the Electronic Municipal Market Access system established by the MSRB: (i) the Authority’s annual audited financial statements, and (ii) notice of these specified events with respect to outstanding Authority bonds:

- A. Principal and interest payment delinquencies;
- B. Non-payment related defaults, if Material;
- C. Unscheduled draws on debt service reserves reflecting financial difficulties;
- D. Unscheduled draws on credit enhancements reflecting financial difficulties;
- E. Substitution of credit or liquidity providers, or their failure to perform;
- F. Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax-exempt status of the Authority’s outstanding bonds, or other Material events affecting the tax-exempt status of the Authority’s outstanding bonds;
- G. Modifications to rights of holders of the Authority’s outstanding bonds, if Material;
- H. Release, substitution, or sale of property securing repayment of the Authority’s outstanding bonds, if Material;
- I. Rating downgrades (other than bond insurance company rating downgrades);
- J. Bankruptcy, insolvency, receivership or similar event of the Authority or other obligated person within the meaning of the United States Securities and Exchange Commission Rule 15c2-12, as amended from time to time (the “Rule”); and
- K. Consummation of a merger, consolidation, or acquisition involving the Authority or other obligated person within the meaning of the Rule, or the sale of all or substantially all of the assets of the Authority or other obligated person within the meaning of the Rule, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if Material.

Upon discovery of an event of default under any agreement by which the Authority obtained a line of credit or letter of credit (if any) as Cash Equivalent under this Second Supplement, the Authority shall deliver to the Project Parties (via the Work Management System or other

means of delivery) a certificate specifying the nature of such event of default, the period of existence of such default, and the action that the Authority has taken and will take to remedy such default.

ARTICLE XI

EFFECT ON AND AMENDMENTS TO THE ORIGINAL CONTRACT

Section 11.1 *Entire Agreement.* This Second Supplement merges the prior negotiations and understandings of the Parties and embodies the entire agreement of the Parties in relation to the Expansion Project, the Work, the Costs, the Expansion Project Reservation, and the Oversized Facilities Option. No other agreements, assurances, conditions, covenants (express or implied), or other terms of any kind, exist between the Parties regarding the Expansion Project, the Work, the Costs, the Expansion Project Reservation, and the Oversized Facilities Option contemplated in this Second Supplement.

Section 11.2 *Authority's Payment of O&M Expenses* The Parties' rights and obligations under Section 4.02 of the Contract shall be amended as provided in this Section 11.2.

11.2.1 With respect to Houston's East Water Purification Plant and the Transmission Facilities, as defined in the Contract, in which the Authority has its Treated Water Demand Allocation as of the Second Supplement Effective Date, the calculation of the yearly O&M Expenses, as defined in the Contract, shall continue to be done pursuant to the formula set forth in Section 4.02 of the Contract with (i) the "Point(s) of Delivery" being the Point of Delivery under the Contract as of the Second Supplement Effective Date, (ii) "Plant Facilities" being Houston's East Water Purification Plant, and (iii) "Transmission Facilities" being those Transmission Facilities in which the Authority has its Treated Water Demand Allocation as of the Second Supplement Effective Date.

11.2.2 With respect to the Expansion Project and any Transmission Facilities used by the Authority to obtain Water out of the Expansion Project, after the Authority begins receiving Water from the Expansion Project, the calculation of the yearly O&M Expenses shall be done by a separate calculation using the same formula set forth in Section 4.02 of the Contract, except that: (i) the "Point(s) of Delivery" shall be that Point of Delivery shown on Exhibit "F" of this Second Supplement as revised pursuant to Section 11.3 (as opposed to the Point of Delivery under the Contract as of the Second Supplement Effective Date), (ii) "Plant Facilities" shall be the Expansion Project (as opposed to the NEWPP's existing facilities or Houston's East Water Purification Plant), and (iii) "Transmission Facilities" shall be any Transmission Facilities used by the Authority to obtain Water out of the Expansion Project (as opposed to the

Transmission Facilities in which the Authority has its Treated Water Demand Allocation as of the Second Supplement Effective Date).

11.2.3 The term "Plant Facilities" is currently defined in the Contract as Houston's East Water Purification Plant. For all purposes under the Contract, after the Authority begins receiving Water from the Expansion Project, the term "Plant Facilities" shall be expanded to also mean the Expansion Project (but not the NEWPP's existing facilities).

11.2.4 The second sentence of item "F" in Section 4.02 of the Contract is amended to read as follows: "As used in this definition, the ratio for determining the share of the cost borne by the Authority is a fraction, the numerator of which is the Authority's then-current Treated Water Facilities Demand Allocation (in MGD) in the applicable facility and the denominator of which is the total capacity (in MGD) of the ~~entire~~ applicable facility subject to the Major Rehabilitation, repair, or replacement."

Section 11.3 *Additional Points of Delivery & Measurement.* With respect to Water received from the Expansion Project, the two options for the general location of the "Point of Delivery" and "Point of Measurement" are identified on Exhibit "F" of this Second Supplement (which is in addition to the existing Point of Delivery and Point of Measurement set forth in the Contract). The West Harris County Regional Water Authority may (on behalf of itself and the North Fort Bend Water Authority), at its option, identify which of the two general locations it has determined to utilize and the specific portion of land within such general location (estimated to be up to approximately 4 acres) on which it desires to purchase an easement (the "Easement Tract"). The West Harris County Regional Water Authority may (on behalf of itself and the North Fort Bend Water Authority) request in writing that Houston convey an easement on the Easement Tract (in the form attached hereto as Exhibit "G") to the West Harris County Regional Water Authority, and Houston will convey such easement to it within 90 days after receiving such request, so that the Authority may install water meters and associated water lines thereon, in accordance with any then current Houston design and permitting requirements applicable to the Easement Tract. Contemporaneously with Houston's conveyance of the easement for the Easement Tract, the Project Director shall (i) revise Exhibit "F" to reflect the final Easement Tract, upon which the "Point of Delivery" and "Point of Measurement" are to be located, (ii) post the revised Exhibit "F" on the Work Management System, and (iii) concurrently provide an email (or other written notice) to the Representative notifying the Representative that the revised Exhibit "F" has been posted to the Work Management System. The Project Director, the West Harris County Regional Water Authority, and the North Fort Bend Water Authority may collectively agree to modifications of this paragraph and Exhibits "F" and "G".

In consideration for receiving said easement, the West Harris County Regional Water Authority shall be responsible to pay to Houston the fair market value of said easement, which value shall be established by an appraisal report prepared by an independent appraiser

(mutually selected by Houston and the West Harris County Regional Water Authority). The West Harris County Regional Water Authority shall be responsible to pay the fees for such appraiser.

Section 11.4 *Conflicts*. This Second Supplement shall control over the Contract with respect to the matters addressed in this Second Supplement, including, without limitation: (i) the Expansion Project and all payments from the Authority related to the same, (ii) the Phase 1 Expansion Project Reservation, Phase 2 Expansion Project Reservation, Oversized Facilities Option, and all payments related to the same, and (iii) calculation of O&M Expenses with respect to the Expansion Project. Except to the extent inconsistent with this Second Supplement, all terms of the Contract remain in full force and effect.

ARTICLE XII


SIGNATURES

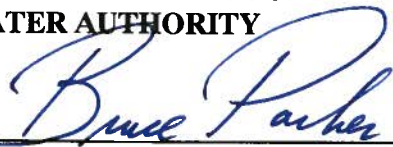
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IN WITNESS WHEREOF, Participants have executed this Second Supplement in multiple copies, each of which shall be deemed to be an original, as of the date of countersignature by the City Controller of Houston.

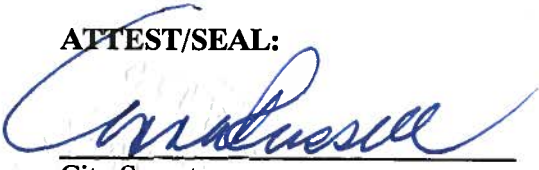
WITNESS:

**WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY**

By: 
Name: Douglas C. Postle
Title: Secretary

By: 
Name: Bruce Parker
Title: President

ATTEST/SEAL:



City Secretary

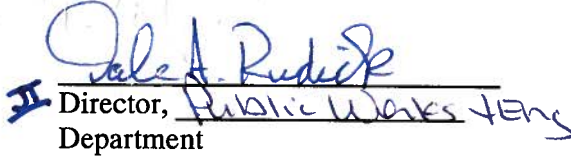
CITY OF HOUSTON, TEXAS

Signed by:




Mayor

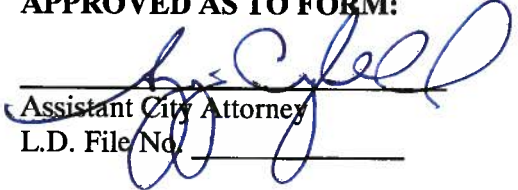
APPROVED:


II Director, Public Works Department

COUNTERSIGNED BY:


City Controller General

APPROVED AS TO FORM:


Assistant City Attorney
L.D. File No. _____

DATE COUNTERSIGNED:

2-25-15

(“Second Supplement Countersignature Date”)

EXHIBIT "A"

PARTICIPATION TABLE

Exhibit A: Participation Table

NEWPP Expansion Project Reservation in Million Gallons per Day (MGD)			
	Total	Phase 1	Phase 2
NHCRWA	113.00	51.05	61.95
CHCRWA	4.88	0.46	4.42
NFBWA	68.50	11.46	57.04
WHCRWA	82.42	17.03	65.39
COH*	51.20	0.00	51.20
TOTAL	320.00	80.00	240.00

NEWPP Expansion Project – Cost Share			
	Multi-Phase (%)	Phase 1 (%)	Phase 2 (%)
NHCRWA	35.313%	63.813%	25.813%
CHCRWA	1.525%	0.575%	1.842%
NFBWA	21.406%	14.325%	23.767%
WHCRWA	25.756%	21.288%	27.246%
COH	16.000%	0.000%	21.333%
TOTAL	100.00%	100.000%	100.000%

* Represents Houston's additional capacity in the Expansion Project, as Houston does not have an Expansion Project Reservation.

** Exhibit A shall be updated to reflect that the Over-Sized Facilities Design Capacity is ___ MGD, to be determined in accordance with Section 3.14 of the Second Supplement.

EXHIBIT "B"

BUDGET

CITY OF HOUSTON - Department of Public Works and Engineering - Combined Utility System

EXHIBIT B

NEWPP EXPANSION PROJECT ONLY ESTIMATED PROJECT COST

COH Fiscal Year (FY): July 1 - June 30

ESTIMATED PROJECT COST ALLOCATED TO PARTICIPANTS *

NOTE: TOTAL PROJECT COST DOES NOT BREAK OUT POSSIBLE PROJECT OVERSIZING DOLLAR AMOUNTS

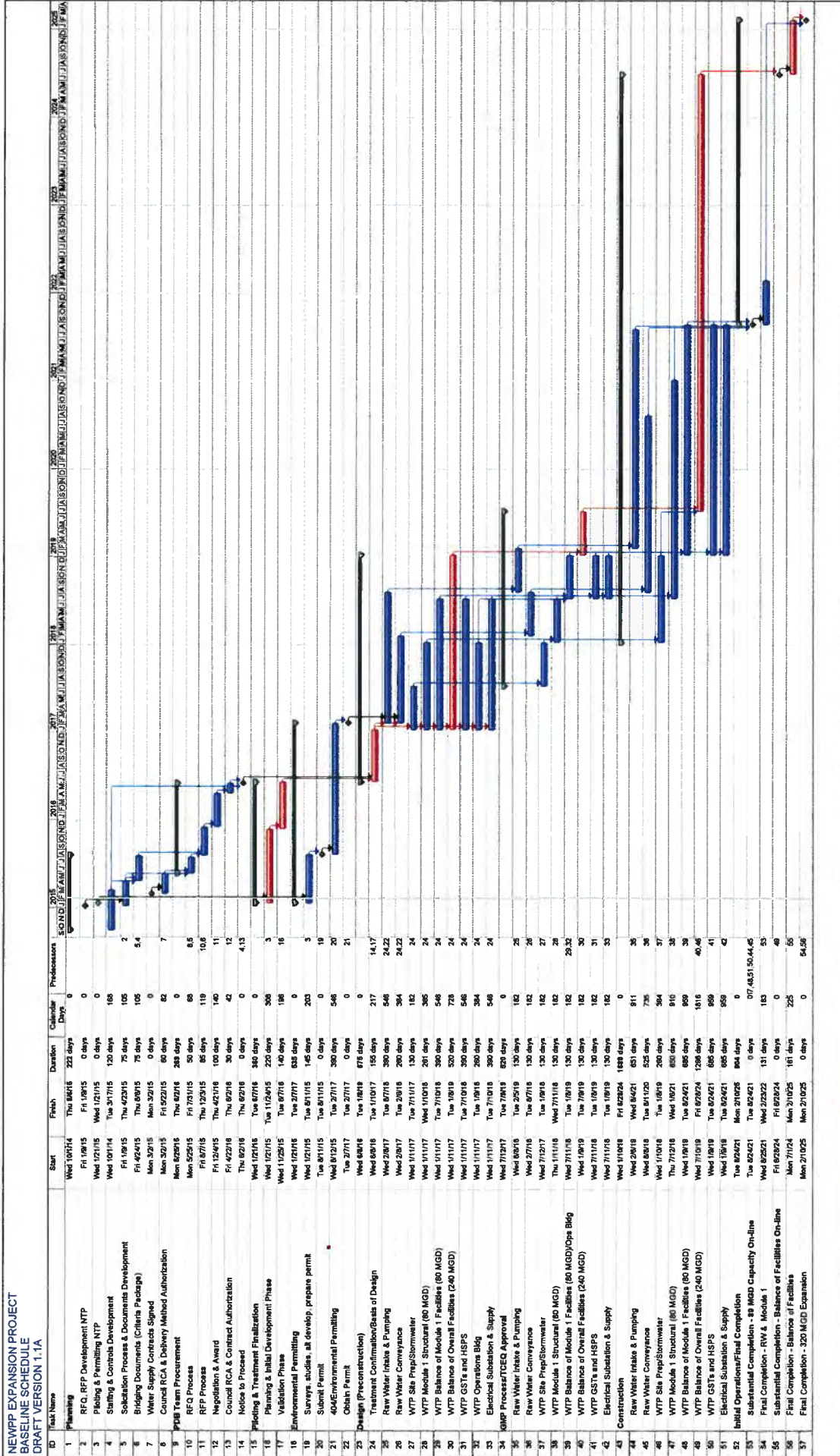
COH ESTIMATED APPROPRIATION DATES

Project Mgmt.: Planning, Administration, Management, & Legal	Before											TOTAL	
	FY2015	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024		FY2025
NHCRWA 35.313%	\$ 2,703,898	\$ 6,100,000	\$ 9,342,000	\$ 12,456,000	\$ 7,786,000	\$ 10,320,000	\$ 10,321,000	\$ 10,321,000	\$ 10,321,000	\$ 10,321,000	\$ 14,681,000	\$ 7,785,000	\$ 112,457,898
CHCRWA 1.525%	954,814	2,154,063	3,298,894	4,398,525	2,749,431	3,644,250	3,644,603	3,644,603	3,644,603	3,644,603	5,184,228	2,749,078	39,711,695
NFBWA 21.406%	41,234	99,025	142,466	189,954	118,737	157,380	157,395	157,395	157,395	157,395	223,885	118,721	1,714,983
WHCRWA 25.756%	578,803	1,305,781	1,999,772	2,666,363	1,666,691	2,209,125	2,209,339	2,209,339	2,209,339	2,209,339	3,142,652	1,666,477	24,073,019
COH 16.000%	696,423	1,571,131	2,406,149	3,208,199	2,005,382	2,658,045	2,658,303	2,658,303	2,658,303	2,658,303	3,781,275	2,005,124	28,964,937
	432,624	976,000	1,494,720	1,992,960	1,245,760	1,651,200	1,651,360	1,651,360	1,651,360	1,651,360	2,348,960	1,245,600	17,993,264
Engineering, Design, GMPs, & Construction Services	\$ -	\$ -	\$ 960,000	\$ 90,667,000	\$ 24,038,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 115,665,000
NHCRWA 35.313%	-	-	339,000	32,016,784	8,488,419	-	-	-	-	-	-	-	40,844,203
CHCRWA 1.525%	-	-	14,640	1,382,672	366,580	-	-	-	-	-	-	-	1,763,891
NFBWA 21.406%	-	-	205,500	19,408,405	5,145,634	-	-	-	-	-	-	-	24,759,539
WHCRWA 25.756%	-	-	247,260	23,352,419	6,191,287	-	-	-	-	-	-	-	29,790,967
COH 16.000%	-	-	153,600	14,506,720	3,846,080	-	-	-	-	-	-	-	18,506,400
Construction Water supply intake & piping, plumbing, mechanical & electrical	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 107,664,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 107,664,000
NHCRWA 35.313%	-	-	-	-	-	38,018,850	-	-	-	-	-	-	38,018,850
CHCRWA 1.525%	-	-	-	-	-	1,641,876	-	-	-	-	-	-	1,641,876
NFBWA 21.406%	-	-	-	-	-	23,046,825	-	-	-	-	-	-	23,046,825
WHCRWA 25.756%	-	-	-	-	-	27,730,209	-	-	-	-	-	-	27,730,209
COH 16.000%	-	-	-	-	-	17,226,240	-	-	-	-	-	-	17,226,240
Construction Electrical	\$ -	\$ -	\$ -	\$ -	\$ 56,740,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 56,740,000
Substation Improvements (Electrical Supply)	-	-	-	-	20,036,313	-	-	-	-	-	-	-	20,036,313
NHCRWA 35.313%	-	-	-	-	865,285	-	-	-	-	-	-	-	865,285
CHCRWA 1.525%	-	-	-	-	12,145,906	-	-	-	-	-	-	-	12,145,906
NFBWA 21.406%	-	-	-	-	14,614,096	-	-	-	-	-	-	-	14,614,096
WHCRWA 25.756%	-	-	-	-	9,078,400	-	-	-	-	-	-	-	9,078,400
COH 16.000%	-	-	-	-	-	-	-	-	-	-	-	-	-

Demand Allocation for Project

EXHIBIT "C"

SCHEDULE



Project: NEWPP Expansion
 Date: Mon 2/28/15

Summary: Project Summary

Progress: Milestone

Task: Spk

Critical Spk

External Milestone

External Task

Roll-Up Critical

Roll-Up Milestone

Deadline

NOTE: Schedule based on a progressive design-build approach using 5 day work weeks.

EXHIBIT "D"
ESCROW AGREEMENT

ESCROW & PAY AGENT AGREEMENT

This Escrow & Pay Agent Agreement (the "Escrow Agreement") is entered into as of _____, 20__, by and between _____ Water Authority, a conservation and reclamation district organized and operating under the provisions of _____ (the "Authority"), _____ (the "Escrow Agent"), and _____, as beneficiary under this Escrow Agreement, the City of Houston ("Houston").

The Authority entered into that certain Second Supplement to Water Supply Contract (the "Second Supplement"), effective as of _____.

The Second Supplement, attached as **Exhibit A**, contains provisions regarding the Authority's and Houston's respective responsibilities and obligations related to the funding of the design and construction of the Expansion Project, which involves the expansion of the Northeast Water Purification Plant located at 12121 North Sam Houston Parkway East, Humble, Texas 77396 (the "NEWPP").

Pursuant to the Second Supplement and this Escrow Agreement, the Authority shall deposit into the Escrow Account (as defined below) Cash or Cash Equivalent (as defined in the Second Supplement), representing the Authority's pro-rata share of a portion of the costs of the Expansion Project.

Pursuant to the terms of this Escrow Agreement, the Escrow Agent has agreed to hold such Cash or Cash Equivalent in a separately segregated trust account ("Escrow Account") and disburse funds from the Escrow Account, as set forth this Escrow Agreement.

Pursuant to, and subject to the terms and conditions of, the Second Supplement and this Escrow Agreement, Houston shall draw funds from the Escrow Account to be used to pay for the Authority's pro-rata share of a portion of the costs of the Expansion Project; Now, Therefore,

FOR AND IN CONSIDERATION OF THE PREMISES AND THE MUTUAL COVENANTS AND AGREEMENTS HEREIN CONTAINED, the Authority, Houston, and Escrow Agent do mutually agree as follows:

Section 1: The recitals above are true and correct and are incorporated into this Escrow Agreement by reference. All capitalized terms used in this Escrow Agreement not otherwise defined herein shall have the meanings assigned to such terms in the Second Supplement.

Section 2: The Parties hereby appoint Escrow Agent to serve as Escrow Agent as set forth herein, and the Escrow Agent hereby accepts and agrees to perform its obligations hereunder.

Section 3: Pursuant to the Second Supplement, and for each Cash Call issued to the Authority by Houston, the Authority shall deposit Cash into the Escrow Account from time to time in the amounts, and within the time-periods, required by the Second Supplement. The Escrow Agent shall separately account for the Cash deposited by the Authority for each of the

Cash Calls. Notwithstanding the other provisions of this paragraph, pursuant to the Second Supplement, in lieu of Cash, the Authority may provide the Escrow Agent with Cash Equivalent(s) that satisfy individual or multiple Cash Calls. Each Cash Equivalent will be payable to the Escrow Agent for the benefit of the Escrow Account. The Authority may at any time replace Cash Equivalent with Cash. Each time the Authority provides Cash or Cash Equivalent to the Escrow Agent, the Authority shall provide a written notice to the Escrow Agent (with a contemporaneous copy to all Project Parties) that identifies the particular Cash Call to which the Cash or Cash Equivalent applies.

Section 4: The Cash and Cash Equivalent provided by the Authority hereunder to the Escrow Agent are owned by the Authority. Subject to the terms of this Escrow Agreement, and once Houston's City Controller has certified in writing to the Escrow Agent that the Cash or Cash Equivalent has been appropriated by Houston's City Council for a Cash Call, such Cash and Cash Equivalent shall be held by the Escrow Agent until the Termination Date (defined below). The Project Director shall from time to time submit to the Escrow Agent Withdrawal Request and Certificates, substantially in the form attached hereto as **Exhibit B**, which describe the Project Director's request for funds, identify from which Cash Call funds are being withdrawn, and certify the following: (i) that the request for funds is solely to pay for the Authority's pro-rata share of Costs, based on the Authority's applicable Cost Share, funded by the Cash Call that the Project Director has identified in the Withdrawal Request and Certificate; (ii) that, for Costs that are for Engineering Costs or Construction Costs, the Project Director has reasonably determined that a certain amount of funds are needed to pay for such Costs and that such Costs are reasonably estimated by the Project Director to be due from Houston to pay Consultants or the Contractor within 90 calendar days after the date the Project Director signs the Withdrawal Request and Certificate, and (iii) that, for Costs that are for Cost Recovery Amounts, Houston has already paid such amounts, or reasonably expects to pay such amounts within 90 calendar days after the Project Director signs the Withdrawal Request and Certificate, and has documented or will document such amounts in a Semi-Annual Cost Recovery Amounts Report. All earnings and interest attributable to Cash and Cash Equivalent in the Escrow Account are owned by the Authority, and, upon written request from the Authority, shall be released by the Escrow Agent to the Authority or allocated by the Escrow Agent to a particular Cash Call.

Section 5: The Escrow Agent shall pay Houston the funds that are requested by the Project Director in the Withdrawal Request and Certificate within 5 business days of the date the Escrow Agent receives the Withdrawal Request and Certificate. The Escrow Agent shall make each of such payments according to the following procedure: (i) first, it shall draw funds from any Cash that has been deposited for that particular Cash Call, and (ii) second, if there is no such Cash attributable to that Cash Call, then the Escrow Agent shall draw upon the Cash Equivalent attributable to that Cash Call to the extent necessary to pay the funds requested by the applicable Withdrawal Request and Certificate.

Section 6: The Escrow Agent shall deposit all Cash, and hold any Cash Equivalent, received from the Authority in the Escrow Account to be held by the Escrow Agent in a fiduciary capacity for the benefit of the Project Parties for the Expansion Project in accordance with the terms and conditions of the Second Supplement. All moneys in the Escrow Account may only be invested in permitted investments under Chapter 2256 of the Texas Government

Code or deposited in accounts collateralized as required by Chapter 2257 of the Texas Government Code, all as shall be directed in writing by the Authority in compliance with the Authority's investment policy.

Section 7: The Escrow Agent shall (i) within 2 business days of the Authority providing to the Escrow Agent Cash or Cash Equivalent (or the renewal or extension of a Cash Equivalent), provide written notice to the Project Parties of the dollar amount of same with a copy of any Cash Equivalent provided, (ii) send monthly statements to all Project Parties of the Authority's current balance stating any deposits into or disbursements from the Escrow Account, and (iii) in the event the Escrow Agent draws funds from Cash Equivalent, the Escrow Agent shall notify all Project Parties (within 2 business days of the draw) of the balance remaining and available for such Cash Equivalent. Notifications and submittals to all Project Parties must be in writing and are deemed delivered on the earlier of the date actually received or the third business day following (a) deposit in a United States Postal Service post office or receptacle; (b) with proper postage (certified mail, return receipt requested); and (c) addressed to the applicable Project Party at the address set forth below. In addition, upon request from any of the Project Parties to send notices through other methods (including electronic mail), the Escrow Agent shall also send notice through such methods.

North Fort Bend Water Authority:

North Fort Bend Water Authority
c/o Allen Boone Humphries Robinson, LLP
Attn: David Oliver
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

With a copy to:
North Fort Bend Water Authority
c/o AVANTA Services
Attn: Pamela Logsdon
5635 Northwest Central Dr., Suite 104E
Houston, Texas 77092

The City of Houston:

City of Houston
City Controller
c/o Ronald Green
901 Bagby, 6th Floor
Houston, Texas 77002

With a copy to:
City of Houston
Resource Management Division
c/o Susan Bandy

611 Walker, 25th Floor
Houston, Texas 77002

West Harris County Regional Water Authority:

West Harris County Regional Water Authority
c/o Allen Boone Humphries Robinson, LLP
Attn: Alex Garcia
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

With a copy to:

West Harris County Regional Water Authority
c/o Myrtle Cruz, Inc.
Attn: Mary Jarmon
3401 Louisiana Street, Suite 400
Houston, Texas 77002

Central Harris County Regional Water Authority:

Central Harris County Regional Water Authority
c/o Schwartz, Page & Harding, LLP
Attn: Abraham Rubinsky
1300 Post Oak Blvd., Suite 1400
Houston, Texas 77056

With a copy to:

Central Harris County Regional Water Authority
F. Matuska Inc.
Attn: Fran Matuska
4600 Highway 6 North, Suite 315
Houston, Texas 77084

North Harris County Regional Water Authority:

North Harris County Regional Water Authority
Attn: General Manager
3648 Cypress Creek Parkway, Suite 110
Houston, Texas 77068

With a copy to:

North Harris County Regional Water Authority
c/o Radcliffe Bobbitt Adams Polley PLLC
Attn: Robin S. Bobbitt
1001 McKinney, Suite 1000
Houston, Texas 77002

Section 8. In addition to Section 7, above, the Escrow Agent will provide the Project Parties reports upon request, which reports will describe in reasonable detail all transactions pertaining to the Escrow Account. The Project Parties may also inspect and make copies of the information in the books and records of the Escrow Agent pertaining to the Escrow Account at any time the Escrow Agent is customarily open for business, provided that reasonable time is allowed the Escrow Agent to provide an up-to-date listing or to convert the information into written form.

Section 9. Escrow Agent hereby agrees to hold the Cash and Cash Equivalent in accordance with the terms of this Escrow Agreement and to disburse funds from the Escrow Account in strict accordance with the terms of this Escrow Agreement.

Section 10. As compensation for the Escrow Agent's services as Escrow Agent, the Authority shall be responsible to pay the Escrow Agent the fees set forth in the Escrow Agent's fee schedule attached as **Exhibit C** hereto.

Section 11: This Escrow Agreement shall terminate and any remaining Cash and Cash Equivalent (and earnings and interest attributable to the Cash and Cash Equivalent) shall be released and returned to the Authority within 5 business days after the earlier to occur of (such date, the "Termination Date") (a) January 1, 2027, or (b) the date on which Houston notifies the Escrow Agent in writing that Houston has provided the True-Up Statement to the Authority. Houston shall so notify the Escrow Agent (with a contemporaneous copy to the Authority) at the same time that Houston provides the True-Up Statement to the Authority.

Section 12. The Authority shall have the right to terminate this Escrow Agreement prior to the Termination Date determined in accordance with Section 11 above, with or without cause, upon 30 calendar days prior written notice to all parties hereto; provided, however, that no such termination shall be effective until a successor escrow agent has been appointed and has accepted the duties of the Escrow Agent hereunder. If this Escrow Agreement is terminated prior to the Termination Date, then (a) the Authority shall promptly designate a substitute escrow agent, and (b) the Escrow Agent shall deliver to the successor escrow agent all remaining Cash and Cash Equivalent (and earnings and interest attributable to the Cash and Cash Equivalent) held by the Escrow Agent, and all books and records pertaining to the Escrow Agent's role as Escrow Agent hereunder.

Section 13. Escrow Agent shall have the right to resign at any time by giving 30 calendar days' advance written notice of such resignation to the other parties hereto, specifying the effective date of such resignation. Within fifteen (15) calendar days after the Authority receives such notice, the Authority shall appoint a successor escrow agent to which the Escrow Agent shall turn over the remaining Cash and Cash Equivalent. If a successor escrow agent has not been appointed and has not accepted such appointment by the end of such 30-day period, Escrow Agent may either (a) interplead the Cash and Cash Equivalent in the Escrow Account with a court of competent jurisdiction in Harris County, Texas for the appointment of a successor escrow agent; or (b) appoint a successor escrow agent of its own choice. Subject to the

Authority's termination rights under Section 12, any such appointment of a successor escrow agent shall be binding upon the parties. No such appointed successor escrow agent shall be deemed to be an agent of Escrow Agent.

Section 14. The Escrow Agent shall have only the rights, powers, privileges and duties expressly set forth in this Escrow Agreement, together with those rights, powers and privileges reasonably incident thereto.

Section 15. This Escrow Agreement may be executed in counterparts and by facsimile, portable document format (PDF), and other electronic means, each of which shall be deemed an original and which together shall constitute one and the same agreement.

Section 16. This Escrow Agreement shall not be assignable without the consent of all parties hereto.

Section 17. The terms and provisions of this Escrow Agreement shall be binding upon and inure to the benefit of each of the parties hereto and their permitted successors and assigns. The parties hereto hereby expressly acknowledge and stipulate their intent that each of the Project Parties not executing this Escrow Agreement shall be a third party beneficiary of this Escrow Agreement, and shall have the right and legal standing to enforce the respective obligations of the parties hereto hereunder to the full extent allowed at law or in equity; provided, however, that in no event shall any of the Project Parties have the right to bring suit for money damages against any party hereto in any case or cause of action in which a direct party to this Escrow Agreement would have no right to bring suit for money damages under the terms of this Escrow Agreement.

Section 18. No amendment or changes to this Escrow Agreement shall become effective unless in writing and signed by the Escrow Agent and all of the Project Parties.

Section 19. Houston only has the right to access the Authority's funds that have been deposited in the Escrow Account in accordance with this Escrow Agreement. Funds, if any, that the Authority currently or hereafter deposits or invests with the Escrow Agent in the Escrow Agent's capacity outside of this Escrow Agreement (for example, without limitation, in connection with water projects other than the Expansion Project or bond proceeds related to the Expansion Project that have not yet been deposited in the Escrow Account) shall not be subject to the terms and conditions of this Escrow Agreement.

Section 20. This Escrow Agreement shall be governed by and construed in accordance with the laws of the State of Texas.

IN WITNESS WHEREOF the parties have executed this Escrow Agreement as of the date and year first written in this Escrow Agreement.

[_____ WATER AUTHORITY]

President, Board of Directors

ATTEST:

Secretary, Board of Directors

(SEAL)

ESCROW AGENT:

By: _____
Name: _____
Title: _____

CITY OF HOUSTON (AS BENEFICIARY)

APPROVED:

Director, _____
Department

APPROVED AS TO FORM:

Assistant City Attorney
L.D. File No. _____

EXHIBIT A
SECOND SUPPLEMENT

**EXHIBIT B
WITHDRAWAL REQUEST AND CERTIFICATE**

Withdrawal Request and Certificate No. ____

Date: _____

To: _____, Escrow Agent

Pursuant to the Second Supplement to Water Supply Contract that is referenced in the Escrow & Pay Agent Agreement, I, _____, the Project Director, request to withdraw \$x from the Authority's [fill in applicable water authority name] Escrow Account, in accordance with Cash Call No. ____, attached hereto.

I certify the following: (i) that the request for funds is solely to pay for the Authority's pro-rata share of Costs, based on the Authority's applicable Cost Share, funded by the Cash Call attached hereto ; (ii) that, for Costs that are for Engineering Costs or Construction Costs, I have reasonably determined that the funds being withdrawn hereby are needed to pay for such Costs and that such Costs are reasonably estimated to be due from Houston to pay Consultants or the Contractor within 90 calendar days after the date of this Withdrawal Request and Certificate, and (iii) that, for Costs that are for Cost Recovery Amounts, Houston has already paid such amounts, or reasonably expects to pay such amounts within 90 calendar days after the Project Director signs the Withdrawal Request and Certificate, and has documented or will document such amounts in a Semi-Annual Cost Recovery Amounts Report.

Capitalized terms used herein shall have the same meaning given to such terms in the Second Supplement to Water Supply Contract that is referenced in the Escrow & Pay Agent Agreement.

AGREED TO AND CERTIFIED BY, AS OF THE DATE SET FORTH ABOVE:

Project Director

EXHIBIT C
ESCROW AGENT'S FEE SCHEDULE

EXHIBIT "E"
CASH CALL NO. 1



Cash Call Due #1

City of Houston

Public Works & Engineering
 Combined Utility System
 611 Walker
 Houston, Texas 77002

DATE: FEBRUARY 12, 2015
 CASH CALL #1

TO Mary Jarmon
 West Harris County Regional Water Authority
 3401 Louisiana, Suite 400
 Houston, Texas 77002
 713-759-1368
 Customer ID 7099-3022-1011

PAYMENT BY CASH OR CASH EQUIVALENT SHOULD BE REMITTED TO ESCROW AGENT FOR ESCROW ACCOUNT	PAYMENT TERMS AND DUE DATE
	120 Days after Second Supplement Effective Date

Description	Dollar Amount	Cost Share Percentage	Line Total
Multi-Phase Project Cost (including contingency)	\$ 1,635,265.00	25.756%	\$ 1,635,265.00
Multi-Phase PWE Cost Recovery	\$ 161,278.00	25.756%	\$ 161,278.00
Phase 1 Project Cost (including contingency)			\$ -
Phase 1 PWE Cost Recovery			\$ -
Phase 2 Project Cost (including contingency)			\$ -
Phase 2 PWE Cost Recovery			\$ -
Over-sized Project Cost (including contingency)			\$ -
Over-sized PWE Cost Recovery			\$ -
Full Cost Obligation		100%	\$ -
Total Cash Call Due			\$ 1,796,543.00

Surplus from Previous Cash Calls	\$ -
---	------

CERTIFICATION PER § 3.7.5 IS INCLUDED ON THE FOLLOWING PAGE

ATTACHMENTS:
 CERTIFICATION PER § 3.7.5
 CALCULATION OF AMOUNT DUE

Cash Call Due #1

CASH CALL CERTIFICATION PER § 3.7.5

1. The dollar amount due from each Project Party pursuant to this Cash Call does not exceed the estimated dollar amount provided in the Notice of Upcoming Cash Call related to this Cash Call and is only for costs that have been approved pursuant to Article 6.
2. The calculation of the amount due shown on page 1 of this Cash Call is included on the next page of this document.
3. The Cash Call Due Date is 120 days after Second Supplement Effective Date.
4. The costs and work items to be paid with the proceeds of this Cash Call are as follows:

Ordinance 2012-121 Original Carollo Engineering Contract, First Amendment 2013-155
& Second Amendment 2014-160

- 1) Project Framework Development
- 2) NEWPP Treatment Concepts
- 3) Scenario & Delivery Alternative Development
- 4) Alternative Assessment
- 5) Project Controls
- 6) Project Delivery Alternatives Report

Ordinance 2014-962 - Carollo Engineering Contract

- 1) Perform raw water system planning and permitting assistance
- 2) Perform US Corp 404 and environmental permitting
- 3) Perform pilot operations
- 4) Perform Texas Commission on Environmental Quality coordination and reporting
- 5) Perform special testing and monitoring
- 6) Provide project administrative, permitting, communications and scheduling support
- 7) Conduct supporting and special studies as necessary to support project management decision-making

Ordinance 2014-1183 Legal Services Hawkins Delafield & Wood LLP

- 1) Project definition and plan
- 2) RFQ Preparation, Issuance and Evaluation
- 3) Preparation and Issuance of RFP and DRAFTY PDB Agreement
- 4) Proposal Development and Submittal
- 5) Proposal Evaluation
- 6) Negotiation and Award
- 7) Post-Execution and Establishment of Final Pricing

5. The City of Houston reasonably expects to spend all of the proceeds of the Cash Call within three (3) years of the Cash Call due date.

NOTE: Any surplus from previous Cash Calls is listed on the first page of this Cash Call.

Project Director

City of Houston
 Department of Public Works & Engineering
 Combined Utility System



NE Plant Expansion Project Tracking - Cash Call #1
 Contracts

COH Ord No.		Date	Appropriated & Authorized		
			Appropriated \$s	Contract	Cost Recovery
Remaining \$s from 3 Ordinances authorized and not spent		N/A	\$ 875,173	\$ 749,004	\$ 126,169
2012-0121, 2013-155 & 2014-0160					
2014-0962 Carollo Engineering		10/14/2014	\$ 5,500,000	\$ 5,000,000	\$ 500,000
2014-1183 Legal Services		12/16/2014	\$ 600,000	\$ 600,000	N/A
TOTAL			\$ 6,975,173	\$ 6,349,004	\$ 626,169

By Regional Authorities EXPANSION ONLY

Appropriation Allocation to Participants		
Participants	%	Appropriated \$s
TOTAL		\$ 6,975,173
NHCRWA	35.313%	2,463,108
CHCRWA	1.525%	106,371
NFBWA	21.406%	1,493,123
WHCRWA	25.756%	1,796,543
COH	16.000%	1,116,028
Total	100.000%	\$ 6,975,173

Appropriation Allocation to Participants		
Participants	Contract	Cost Recovery
TOTAL	\$ 6,349,004	\$ 626,169
NHCRWA	\$ 2,241,992	\$ 221,116
CHCRWA	\$ 96,822	\$ 9,549
NFBWA	\$ 1,359,084	\$ 134,039
WHCRWA	\$ 1,635,265	\$ 161,278
COH	\$ 1,015,841	\$ 100,187
Total	\$ 6,349,004	\$ 626,169

EXHIBIT "F"

**POINT OF DELIVERY AND POINT OF MEASUREMENT
FOR EXPANSION PROJECT**

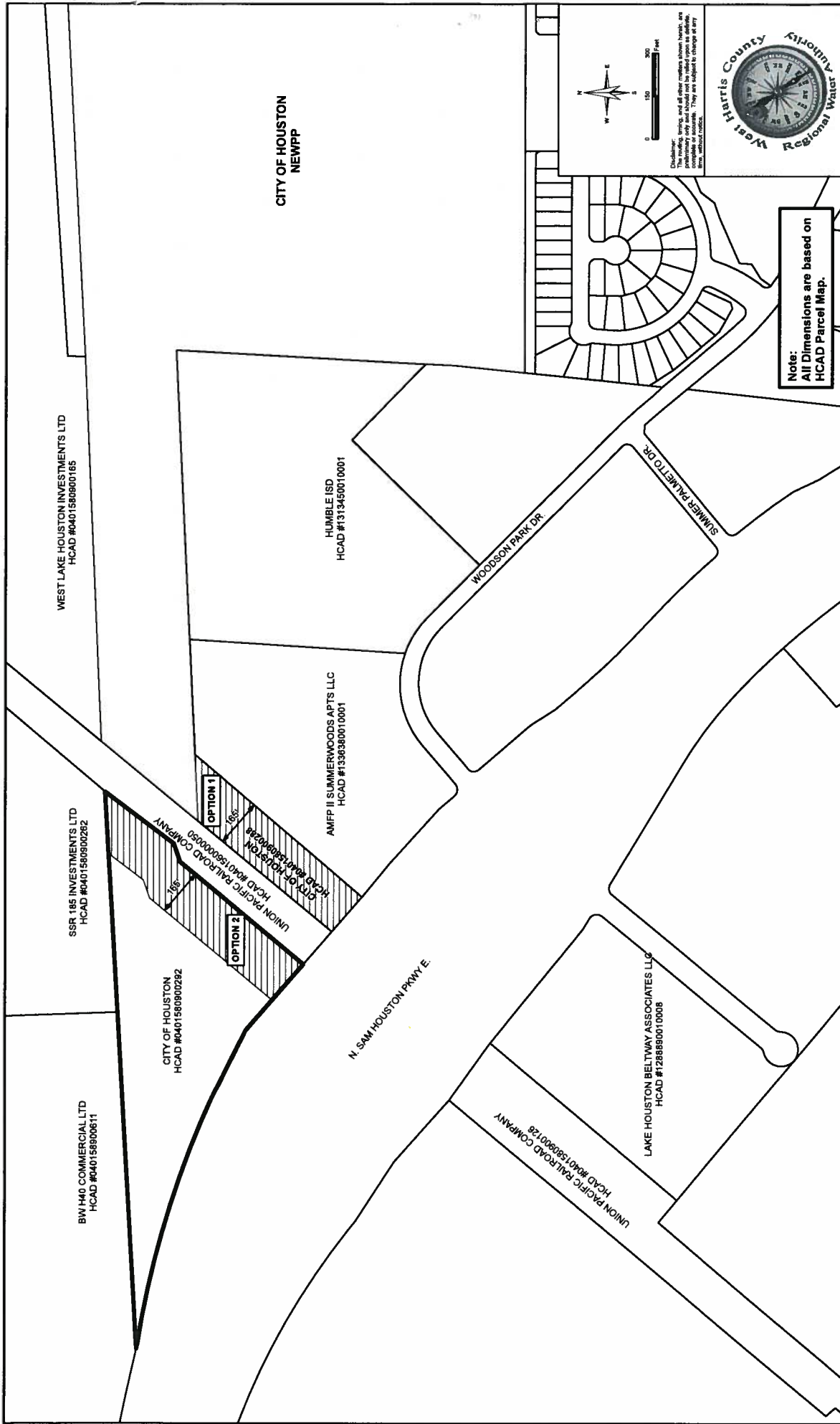


Exhibit F Point of Delivery and Point of Measurement for WHCRWA & NFBWA
 (at Beltway 8 and the City of Houston NEWPP)



Disclaimer: This map, survey, and all other matters shown herein, are preliminary only and should not be relied upon as definite, true, without notice. They are subject to change at any time.

EXHIBIT "G"

FORM OF EASEMENT

EASEMENT CONVEYANCE

THE STATE OF TEXAS §
COUNTY OF HARRIS §

GRANTOR:

THE CITY OF HOUSTON, a municipal corporation situated in Harris, Fort Bend and Montgomery Counties, Texas

GRANTOR'S MAILING ADDRESS:

P. O. Box 1562
Houston, TX 77251

GRANTEE:

THE WEST HARRIS COUNTY REGIONAL WATER AUTHORITY, a Texas regional water authority

GRANTEE'S MAILING ADDRESS:

c/o James A. Boone, Esq.
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

CONSIDERATION:

Ten and No/100'S Dollars (\$10.00) and other good and valuable consideration

PROPERTY:

A permanent and perpetual easement (the "Easement") for the purpose of installing, constructing, maintaining, removing, replacing, and operating water lines and water meters and related appurtenances, fiber optics, and other controls, including, without limitation, cathodic protection, over, under and across a _____ acre, more or less, tract of land out of the _____ Survey, Abstract No. _____, Harris County, Texas; and being out of that certain _____; said tract also being out of and a portion of that certain tract of land conveyed from _____ to the City of Houston by deed dated _____, and recorded under Clerk's File No. _____ of the Official Public Records of Real Property of Harris County, Texas; said tract being more particularly described by metes and bounds on EXHIBIT A, consisting of _____ (____) pages, attached hereto and made a part hereof (the "Property").

WHEREAS, Grantor and Grantee entered into that certain Second Supplement to the Water Supply Contract, effective _____, 2015, (the "Second Supplement"), which Second Supplement was approved by City Ordinance 2015-_____; and

WHEREAS, the Second Supplement provides that Grantor, if requested by Grantee, will convey an easement to Grantee so that Grantee may install water meters and associated water lines on the property described as EXHIBIT A; and

WHEREAS, Grantee has requested such easement from Grantor, and it is Grantor's intent to convey such easement;

NOW, THEREFORE, Grantor, for the Consideration, grants and conveys to Grantee the Easement over, under and across the Property, together with, all and singular, the rights and appurtenances thereto in anywise belonging, to have and hold to Grantee and Grantee's successors and assigns forever. Grantor binds Grantor and Grantor's successors and assigns to warrant and forever defend, all and singular, the Easement in and to the Property to Grantee and Grantee's successors and assigns against every person whosoever lawfully claiming or to claim the same or any part thereof, by, through or under Grantor, but not otherwise. This conveyance is made subject to all restrictions, covenants, conditions, rights-of-way, easements, mineral reservations, royalty reservations and other items of record, if any, in the office of the County Clerk of Harris County, Texas, but only to the extent that the same are valid and subsisting and affect the Property.

Grantee shall have such access across, along, under and upon the Property, and may enter upon the Property to engage in such activities as may be necessary, requisite, convenient or appropriate in connection with the Easement. Grantee's rights in and to the Property shall include, without limitation, the right to clear and remove trees, growth and shrubbery from within the Property, the right to construct or install a roadway to provide pedestrian and vehicular access from the Easement to a public right of way if no such roadway exists, and the right to bring and operate such equipment upon the Easement and the Property as may be necessary or appropriate to effectuate the purposes for which the Easement is granted.

Grantor reserves the right to use the Property for purposes not inconsistent with Grantee's permitted use of the Easement, including but not limited to, paving, curbing, utility lines, sidewalks and landscaping, provided such use shall not interfere with the exercise by Grantee of the rights hereby granted. Grantee and its successors and assigns shall, in the use and, enjoyment of the Easement, use reasonable efforts to minimize interference with Grantor's other uses of the Property and damage to Grantor's improvements, if any. Grantee shall restore all areas disturbed by Grantee in the performance of any work in connection with the Easement to the extent reasonably possible.

[Additionally, Grantor grants and conveys to Grantee a temporary construction easement (the "Temporary Construction Easement") for Grantee's use in constructing its facilities, over, under, and across that certain tract of land described on EXHIBIT B attached hereto. The Temporary Construction Easement shall terminate ninety (90) days after the construction and installation of Grantee's facilities within the Property has been completed and such facilities have been accepted by the Board of Directors of Grantee, and any necessary approvals for such facilities have been provided by the City of Houston. Upon termination, the Temporary Construction Easement shall automatically revert to Grantor without the necessity for Grantor to take any action.]

Notwithstanding anything herein to the contrary, Grantor and Grantee agree to coordinate the installation and construction of any roadway on the Property. If Grantee constructs such a roadway, Grantor shall have the right to use it for pedestrian and vehicular ingress and egress in common with Grantee. If Grantor constructs such a roadway, Grantee shall have the right to use it for pedestrian and vehicular ingress and egress in common with Grantor. In no event shall both Grantee and Grantor construct separate roadways on the Property without prior written consent of Grantor's Director of Public Works and Engineering and Grantee.

[Remainder of page is blank]



PART C52



CITY OF HOUSTON

Public Works and Engineering Department

Annise D. Parker

Mayor

Daniel W. Krueger, P.E.
Director
P.O. Box 1562
Houston, Texas 77251-1562

www.houstontx.gov

January 31, 2013

West Harris County Water Authority
Attn: Alex Garcia
c/o Allen, Boone, Humphries, Robinson, LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027

RE: The First Amendment to the First Supplement to Water Supply Contract between the City of Houston and the West Harris County Regional Water Authority; C73170 Ordinance No. 2013-0046

Dear Mr. Garcia:

Please find enclosed an original, signed and executed contract for the above referenced agreement that was countersigned on January 22, 2013 by the City of Houston.

Should you have any questions or require additional information, please contact me at 832-395-3080 or e-mail veronica.osegueda@houstontx.gov.

Sincerely,

A handwritten signature in blue ink that reads "Veronica R. Osegueda".

Veronica R. Osegueda
Administration Manager
Infrastructure Planning Branch
Planning and Development Services Division

Enclosure

VO:fe



C173170
2013-0046

THE STATE OF TEXAS §
 §
COUNTY OF HARRIS §

THIS FIRST AMENDMENT TO THE FIRST SUPPLEMENT TO WATER SUPPLY CONTRACT ("First Amendment") is made by and between the CITY OF HOUSTON, TEXAS ("Houston"), a Home Rule City located principally in Harris County, and, AND THE WEST HARRIS COUNTY REGIONAL WATER AUTHORITY, as a body politic and corporate under Article XVI, Section 59 of the Texas Constitution, ("Authority") (collectively the "Parties").

RECITALS:

1. Pursuant to Ordinance No. 2003-0242 (March 26, 2003), Houston and the Authority entered into a Water Supply Agreement (the "Original Contract"). The Original Contract contemplated a cost-sharing arrangement for untreated water facilities and certain other facilities necessary to convey water to the Authority.
2. The Luce Bayou Interbasin Transfer Project (the "Project") is one of the untreated water facilities necessary to convey water to the Authority.
3. Pursuant to Ordinance 09-0052 (January 28, 2009), Houston and the Authority executed a First Supplement to Water Supply Contract ("First Supplement") to provide for the permitting, engineering, surveying, and right-of-way and site acquisition necessary for the Project ("Phase 1") and its construction ("Phase 2").
4. The First Supplement contemplated that Houston would cause Coastal Water Authority ("CWA") to issue bonds to the Texas Water Development Board ("TWDB") through the Water Infrastructure Fund ("WIF") Program for certain Phase 1 costs, and that all funds obtained by CWA for Phase 1 would be structured so Annual Outstanding Debt Service (as



defined in the First Supplement) would not be due before January 1, 2018 (“Debt Structure Requirement”).

5. As contemplated by the First Supplement, CWA issued \$28,000,000 in bonds to the TWDB in 2009 through the WIF Program to pay for Phase 1.
6. CWA issued an additional \$5,150,000 in bonds to the TWDB in 2010 through the WIF Program, but will need additional funds to complete the design and permitting of the Project.
7. CWA anticipates that completion of Phase 1 may require an estimated additional \$6,000,000.
8. Pursuant to Section 2 of the First Supplement, Houston is causing CWA to seek funding in amounts sufficient to complete Phase 1.
9. CWA intends to enter into a Master Agreement with TWDB for its participation in the Project in an amount not to exceed \$29,000,000, through the State Participation Fund, which CWA must obtain before April 1, 2013 (“2013 Funding”).
10. The Parties desire to amend the First Supplement: (A) so Houston may arrange for CWA to obtain the 2013 Funding to complete Phase 1 of the Project and begin Phase 2, without violating (i) the Debt Structure Requirement in Sections 6 of the First Supplement or (ii) the last paragraph of Section 7 of the First Supplement; and (B) to address other matters related to the 2013 Funding.
11. The Parties agree that the payments that CWA must make to TWDB under the Master Agreement are considered “other obligations”, as referenced in Section 5A of the First Supplement.
12. Because the majority of the proceeds of the 2013 Funding will be spent on Phase 2, Houston and the Authority agree that for all purposes under the First Supplement, the 2013 Funding



shall be deemed to have been issued to finance the costs of Phase 2.

NOW, THEREFORE, the City and Authority agree as follows:

ARTICLE I.

The recitals above are true and correct and are incorporated into this First Amendment by reference.

ARTICLE II.

Section 1. Section 1 of the First Supplement is amended to include the language below in the alphabetical order apparent in Section 1:

“2013 Funding” is defined in the recitals of this First Amendment.

“Unamortized Closing Costs” are those issuance costs that (i) are related to 2013 Funding, (ii) CWA applied for and is obligated to pay, including attorneys’ fees and financial advisors’ fees, and (iii) the TWDB will not allow CWA to pay for out of the proceeds of the 2013 Funding. Unamortized Closing Costs include the administrative fee charged under 31 T.A.C. § 363.1017 that will be due to the TWDB upon CWA’s closing of the 2013 Funding.

Section 2. Section 2 of the First Supplement is amended to include the following sentence at the end of Section 2:

Houston shall cause CWA to use its best efforts to obtain the 2013 Funding in the maximum amount of funds and most favorable financing terms available.

Section 3. The following portion of the First Paragraph of Section 6 of the First Supplement is amended to read as follows (all portions of Section 6 not included below remain unchanged):

Calculation and Administration of Phase 1 Annual New Untreated Water Facilities Payments. Notwithstanding any provision of this First Supplement, Houston shall cause the bonds, notes, or other obligations issued by CWA or Houston to finance Phase 1 to be structured such that there is no Annual Outstanding Debt Service for Phase 1 until after September 1, 2013. All of the Annual Outstanding Debt Service due under the 2013 Funding that is associated with Phase 1 costs will be deemed to be part of the Annual Outstanding Debt Service for Phase 2 (instead of being part of the Annual Outstanding Debt Service for Phase 1).

Section 4. A new Section 5B is included after Section 5A of the First Supplement and reads as follows:

Section 5B. Formula for Unamortized Closing Costs. The Authority shall pay Houston for



Unamortized Closing Costs related to the 2013 Funding based on the following formula:

Authority's Share of Unamortized Closing Costs = (D/E) H

Where: "D" is the same amount in MGD as "D" provided in Subsection 5(2) of the First Supplement.

"E" is the total amount of untreated surface water (in MGD) sold to Houston's water customers during Houston's fiscal year ending June 30, 2012, including such untreated surface water received at Houston's water treatment plants as well as the billable quantity (including any take-or-pay amounts) taken by Houston's untreated surface water customers, but excluding untreated surface water loss by evaporation or leakage.

"H" is a dollar amount equal to the total Unamortized Closing Costs.

Section 5. The following portion of the First Paragraph of Section 7 of the First Supplement is amended to read as follows (all portions of Section 7 not included below remain unchanged):

Calculation and Administration of Phase 2 Annual New Untreated Water Facilities Payments. Notwithstanding any provision of this First Supplement, Houston shall use its best efforts to cause the bonds, notes, or other obligations issued by CWA or Houston to finance Phase 2 to be structured such that there is no Annual Outstanding Debt Service for Phase 2 until after January 1, 2018. However, Annual Outstanding Debt Service due pursuant to the 2013 Funding that is associated with Phase 1 or Phase 2 costs, other than Unamortized Closing Costs, shall be included as part of the Annual Outstanding Debt Service for Phase 2 beginning on or after January 1, 2015.

Section 6. A new Section 7A is included after Section 7 of the First Supplement and reads as follows:

Administration of Unamortized Closing Costs. No later than April 1, 2013, Houston shall invoice the Authority for the Authority's Share of Unamortized Closing Costs based on the formula set forth in Section 5B. The Authority shall pay such invoice within 35 days of receipt in accordance with the wiring instructions provided by Houston in such invoice.

Section 7. The last Paragraph of Section 7 of the First Supplement is hereby deleted from the First Supplement.

Section 8. The last sentence of Section 13 of the First Supplement is amended to read as follows (all portions of Section 13 not included below remain unchanged):

Although CWA is the Project Manager and may issue bonds, notes, or other obligations for the Project (and although after the closing of the 2013 Funding, an entity other than CWA may from



time to time own an interest in the Project), Houston shall at all times be obligated to provide the Authority with the Authority's Water Demand Allocation (including its Untreated Water Facilities Demand Allocation) pursuant to the Contract and this First Supplement.

ARTICLE III.

Except as modified herein, the Original Contract as amended by the First Supplement will remain in full force and effect. In the event of a conflict between the Original Contract (as modified by the First Supplement) and this First Amendment, this First Amendment will prevail. The effective date of this First Amendment is the date that this First Amendment is countersigned by the Houston Controller, as indicated below.

ARTICLE IV.

The Parties hereto have executed this First Amendment in multiple copies, each of which shall be an original.



AUTHORITY

By: Bruce Parker
Name: BRUCE PARKER
Title: PRESIDENT

WITNESS:

By: D. Foster
Name: Douglas C. Foster
Title: Secretary

CITY OF HOUSTON, TEXAS

ATTEST/SEAL:

Christa Russell
City Secretary

SIGNED BY:

Annise D. Parker
Mayor Mark D. Appert

APPROVED BY:

Dalwick
Director, Public Works & Engineering
Department

COUNTERSIGNED BY:

Ronald C. Thur
City Controller Jerome Volk

APPROVED AS TO FORM BY:

Angie C. [Signature]
Assistant City Attorney
LD No.

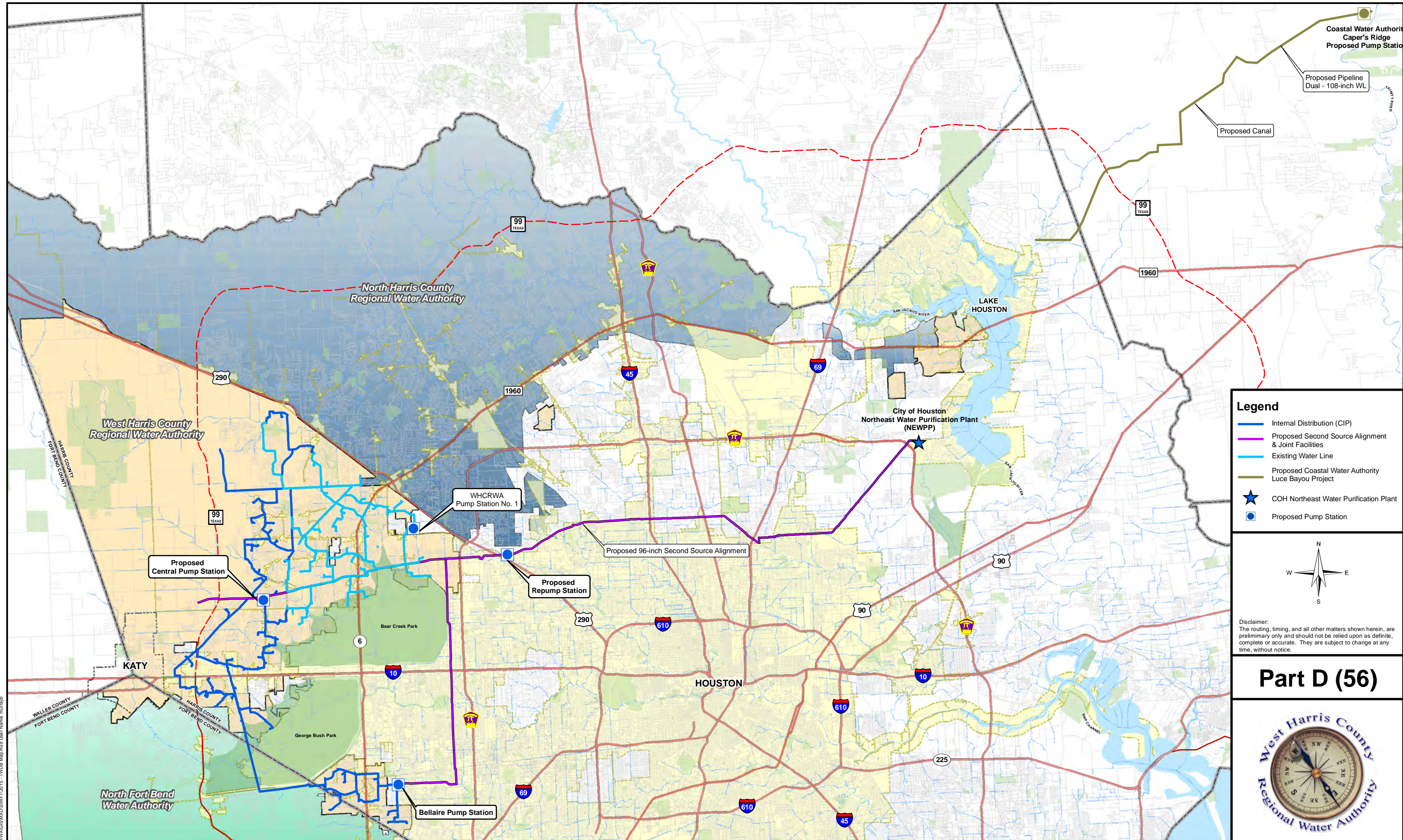
DATE COUNTERSIGNED:

1-22-13

0801200127002



Part D



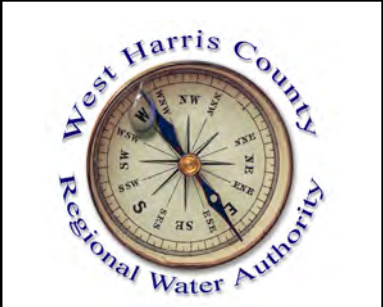
Legend

- Internal Distribution (CIP)
- Proposed Second Source Alignment & Joint Facilities
- Existing Water Line
- Proposed Coastal Water Authority Luce Bayou Project
- ★ COH Northeast Water Purification Plant
- Proposed Pump Station

North arrow and disclaimer:

Disclaimer:
The routing, timing, and all other matters shown herein, are preliminary only and should not be relied upon as definite, complete or accurate. They are subject to change at any time, without notice.

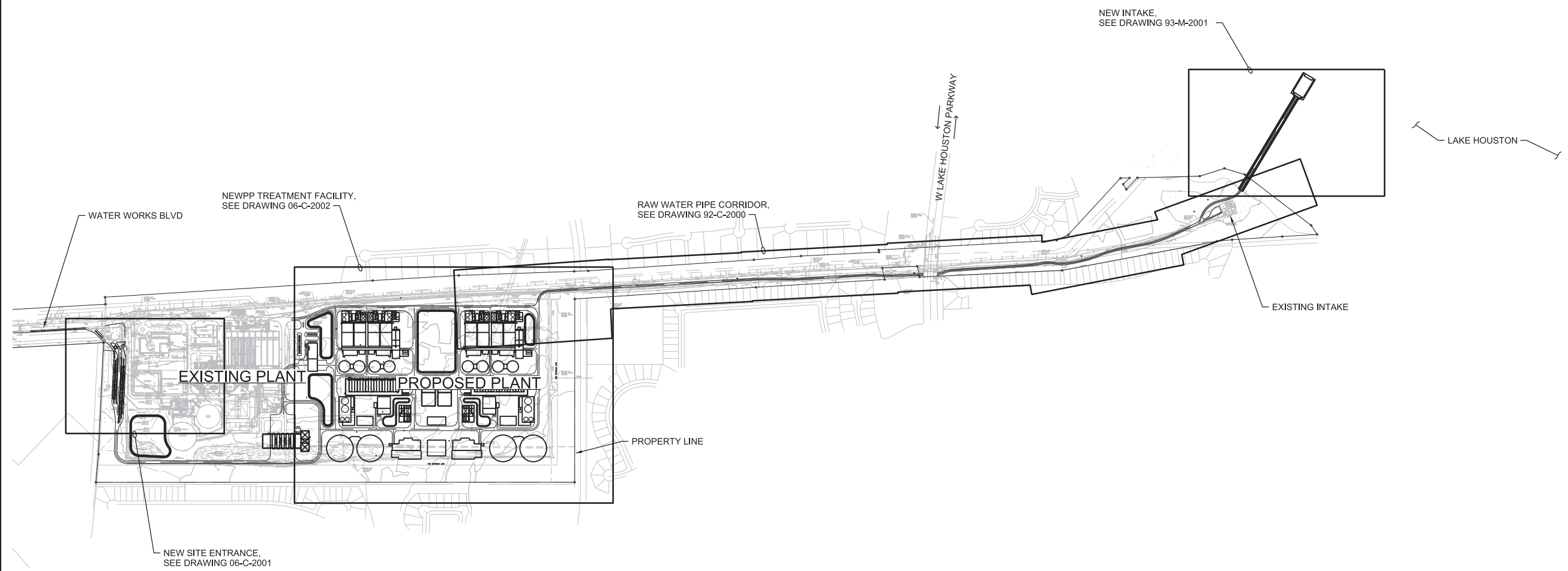
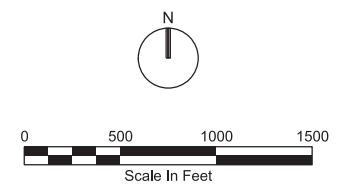
Part D (56)



DANNENBAUM
ENGINEERING CORPORATION
3100 WEST ALABAMA HOUSTON, TX 77098 (713) 520-8570

WHCRWA Program Overview

Document Path: G:\110\WHCRWA\GIS\DWG\WFT2015 - TWDB Map.mxd User Name: murrah



NEWPP Expansion Project

No.	Date	Revisions	App.
APPROVED:	R ROGERS	DATE:	APRIL 2017
DESIGNED BY:	D PETERSON	DRAWN BY:	R BROWN



THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF RANDY ROGERS LICENSE NO. 85031. APRIL 2017. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.

SURVEYED BY: BCE FB NO. TBD

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

NORTHEAST WATER PURIFICATION PLANT EXPANSION

CIVIL
PROJECT PLAN

WARNING
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DWG. NO.
06-C-1000

WBS NO.
S-000065-0002-3

DRAWING SCALE
1"=500'

CITY OF HOUSTON PD
JEFFERY BENJAMIN, P.E.

SHEET NO. OF

West Harris County Regional Water Authority (WHCRWA)

Entities to be Served (Source: WHCRWA GRP as of January 2015)

Entity Name	
1.	Addicks UD
2.	Barker Cypress MUD
3.	Bear Creek UD
4.	Beechnut MUD
5.	Bissonnet MUD
6.	Camfield MUD
7.	Castlewood MUD
8.	Chelford City MUD
9.	Chelford One MUD
10.	Cimarron MUD
11.	Clay Road MUD
12.	Fry Road MUD
13.	HC MUD 102
14.	HC MUD 105
15.	HC MUD 106
16.	HC MUD 120
17.	HC MUD 127/239
18.	HC MUD 130
19.	HC MUD 132
20.	HC MUD 136
21.	HC MUD 144
22.	HC MUD 147
23.	HC MUD 149
24.	HC MUD 151
25.	HC MUD 152
26.	HC MUD 155
27.	HC MUD 156
28.	HC MUD 157
29.	HC MUD 162
30.	HC MUD 163
31.	HC MUD 165
32.	HC MUD 166
33.	HC MUD 167
34.	HC MUD 171
35.	HC MUD 172
36.	HC MUD 173
37.	HC MUD 179
38.	HC MUD 180
39.	HC MUD 183

40.	HC MUD 185
41.	HC MUD 186
42.	HC MUD 188
43.	HC MUD 196
44.	HC MUD 197
45.	HC MUD 208
46.	HC MUD 225
47.	HC MUD 238
48.	HC MUD 250
49.	HC MUD 255
50.	HC MUD 257
51.	HC MUD 263
52.	HC MUD 264
53.	HC MUD 268
54.	HC MUD 276
55.	HC MUD 284
56.	HC MUD 287
57.	HC MUD 306
58.	HC MUD 328
59.	HC MUD 329
60.	HC MUD 330
61.	HC MUD 341
62.	HC MUD 370
63.	HC MUD 371
64.	HC MUD 374
65.	HC MUD 375
66.	HC MUD 376
67.	HC MUD 377
68.	HC MUD 378
69.	HC MUD 379
70.	HC MUD 380
71.	HC MUD 405
72.	HC MUD 418
73.	HC MUD 419
74.	HC MUD 432
75.	HC MUD 433
76.	HC MUD 434
77.	HC MUD 435
78.	HC MUD 437
79.	HC MUD 438
80.	HC MUD 457
81.	HC MUD 458
82.	HC MUD 46

83. HC MUD 500
84. HC MUD 501
85. HC MUD 502
86. HC MUD 503
87. HC MUD 532
88. HC MUD 533
89. HC MUD 534
90. HC MUD 61
91. HC MUD 62
92. HC MUD 63
93. HC MUD 64
94. HC MUD 70
95. HC MUD 71
96. HC MUD 76
97. HC MUD 81
98. HC UD 6
99. HC WCID 157
100. H-FBC MUD 3
101. H-FBC MUD 4
102. Horsepen Bayou MUD
103. Interstate MUD
104. Jackrabbit Road PUD
105. Langham Creek UD
106. Mayde Creek MUD
107. Memorial MUD
108. Mission Bend MUD 1
109. Mission Bend MUD 2
110. Morton Road MUD
111. Nottingham Country MUD
112. NW HC MUD 12
113. Remington MUD 1
114. Renn Road MUD
115. Ricewood MUD
116. Rolling Creek UD
117. Spencer Road PUD
118. Trail of the Lakes
119. W HC MUD 14
120. W HC MUD 15
121. W HC MUD 17
122. W HC MUD 2
123. W HC MUD 4
124. W HC MUD 5
125. W HC MUD 7

126. West Memorial MUD
127. West Park MUD
128. Westlake MUD 1
129. Weston MUD
<i>Note: This list includes the WHCRWA Municipalities and Municipal Utility Districts within the</i>
<i>130. WHCRWA's Groundwater Reduction Plan as of January 2015. Additional entities will be added as</i>
<i>more districts are created in the future.</i>



West Harris County Regional Water Authority

2012 POPULATION AND WATER DEMAND PROJECTIONS

Introduction:

Population and water demand projections were previously completed in 2004 and updated in 2006. The scope of this project is to verify the previous water demand projections for the West Harris County Regional Water Authority (Authority) based on the 2010 census.

Water demand projections are based on population projections and water use demand factors. Water production, water use, existing population, and future population projections were used to calculate water demand factors and project future water use. Sources for the population and water demand data include:

- 1) Census Bureau 2010 census data for the areas within the Authority's boundary,
- 2) The services of Municipal Information Services (MIS) were acquired to allocate the 2010 population data and provide population projections for the Authority from 2010 through 2050,
- 3) Boundary data for the Authority and Municipal Utility Districts (MUDs) was obtained from:
 - a. West Harris County Regional Water Authority (Authority),
 - b. U.S. Census Bureau - Census Tract (CT) boundaries,
 - c. Harris County Appraisal District (HCAD) - Water utility boundary information,
 - d. Municipal Information Services (MIS), and
- 4) Pumpage data for non-exempt water users within the Authority.

Population Projections Methodology:

The services of MIS were acquired to divide the 2010 census tract population by MUDs and develop the future population projections. Dr. Ronald Welch, Ph.D. owns and is the primary consultant for MIS. Dr. Welch was previously an economist with the University of Houston's Institute for Regional Forecasting and has been working in the Houston metro area since the mid-1970s. Dr. Welch also updates DATABook Houston for the University of Houston's Hobby Center for Public Policy on a monthly basis. DATABook Houston includes employment and population projections in five year increments for Suburban Harris County (SHC) through 2040. The population estimates are based on SHC's expected shares of the expected annual population growth for the entire metropolitan statistical area. The Authority's historical population estimates and short-run forecasts were compared to SHC's population forecasts to derive a series of the capture rates for the Authority utilizing the population growth in SHC. The long-run forecasts of population growth in the Authority were based on the historical trends for those capture rates. Population projections were developed by census tract and by MUD within the Authority utilizing the Census Bureau's 2010 census data. Population projections were provided for the Authority from 2010 through 2050.

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As in the 2002 GRP, three (3) categories of water users were evaluated and updated. The three categories of users include:

1. Active MUDs including Contract MUDs;
2. Dormant MUDs; and,
3. Non-Muds (previously, Remainders of Census Tracts).

The methods applied in projecting water demand varied based on whether the area under consideration is an Active MUD, Dormant MUD, or Remainder of a Census Tract.

Active, Dormant, and Contract MUDs:

A current list of active and dormant MUDs within the Authority was developed for the population projections, see Exhibit 1. It was determined that numerous inactive, or dormant, MUDs are located within the WHCRWA in addition to the active MUDs. The Authority's boundary is shown on Exhibit 2: Overall MUD Index. The Authority's boundary has not changed since being officially created by the Texas 77th Legislature in 2001. However, the boundaries of many of the MUDs within and surrounding the WHCRWA have changed since the boundary was formed. A mapbook showing the detailed location of the Authority's MUDs is shown on Exhibit 4.

The changes in the MUD boundaries have been primarily through annexation. The official Authority boundary was used for the projections unless a known Authority MUD extended beyond the Authority's boundary, or a MUD was determined to be part of a GRP of another

entity. During this process the following MUDs were identified as not matching the Authority's boundary or were found not to be part of the Authority.

- The following Contract MUDs extend beyond the Authority's boundary.
 - HC MUD 106
 - HC MUD 132
 - HC MUD 151
 - HC MUD 152
 - Trail of Lakes MUD
- HC MUD 158 – Opted out of the Authority, but has since annexed area within the Authority's boundary. The area annexed within the Authority's boundary now includes the majority of HC MUD 243.
- HC MUD 197 – Listed as a dormant MUD within the Authority. However, the majority of the MUD has been annexed by Spencer Rd MUD and HC MUD 102.
- HC MUD 243 – Currently listed as a dormant MUD, but the majority of the MUD has been annexed by HC MUD 158.
- HC MUD 248 – Documentation from bond sales state HC MUD 248 is part of the North Harris County Regional Water Authority (NHCRWA).
- Cypress Hill MUD – A small portion of the MUD is shown as being located within the Authority's boundary, but the majority of the MUD is located in the NHCRWA.
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- The boundaries for the HC MUDs 437, 438, and 503 were not able to be determined and are listed as dormant by the Authority. Population located within these MUDs was included in the Non-MUD population projections.

Based on historical information the following MUDs were determined to have opted out of the Authority and were not included in the population projections:

- Baker Road MUD
- Chimney Hill MUD
- Cinco MUD 3
- Cinco MUD 6
- Cinco MUD 9
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- HC FWSD 61
- HC MUD 158
- HC MUD 216
- HC MUD 345
- HC MUD 346
- HC MUD 65
- Kingsbridge MUD
- Longhorn Town UD
- Mason Creek UD
- NW HC MUD 16
- W HC MUD 6

The population projections for MUDs and Non-MUDs located within large developments were combined, such as the Bridgeland and the Esra Grae developments. The Bridgeland development includes HC MUDs 418, 419, and 462 in addition to the surrounding “Non-MUD” areas labeled “Bridgeland” on Sheets C2 and D2 in Exhibit 4. The Esra Grae tract will partially be in HC MUD 165. MIS assumed HC MUD 165 will annex the rest of the Esra Grae development; therefore all of the population projections for this development are included with the HC MUD 165 population projections, as shown on Sheet D2 in Exhibit 4.

Non-MUD Areas (Remainder of Census Tracts):

Portions of census tracts outside of MUDs are largely undeveloped and in this study are referred to as “Non-MUDs”. The boundaries of the census tracts located within the Authority’s boundary are shown on Exhibit 3 and in more detail in the Mapbook in Exhibit 4.

One significant change from previous water demand projections is how the Non-MUD Population Growth is shown in the projections. In previous water demand calculations, the projected population within the remainder of each census tract was assumed to be distributed evenly throughout the census tract. However, some areas within census tracts are not available for residential development. Census Tract 5431 located west of Katy Hockley Rd and north of Freeman Rd within the Authority has large areas that will not be available for development due to the following.

- A large parcel of land is protected by the Katy Prairie Conservancy, which includes the Warren Ranch.
- In addition to the Warren Ranch there is a ranch currently in the process to become part of the USDA Farm and Ranch Lands Protection Program, which will keep the land in agriculture uses.
- Another environmentally protected area is the Katy-Cypress Mitigation Bank.
- Existing commercial and industrial operations, such as the Hockley Salt Domes will also limit residential growth.

Many of the areas in the northwestern portion of the Authority can be identified on the land use map in Exhibit 5.

For the 2012 projections, MIS provided detailed information regarding where future growth will occur within the remainder of census tracts. Information such as distance to large areas employment, access to major thoroughfares, and school districts were considered as part of the future growth projections. Based on information from MIS, the land within the Waller ISD is anticipated to develop slower than the land located within the Cypress-Fairbanks ISD and Katy ISD. The boundaries for the school districts located within the Authority are shown in Exhibit 6. This detailed allocation of growth will allow for more accurate hydraulic modeling and will better assist in developing the Authority's CIP. Areas identified for future growth are shown by assuming existing MUDs will annex the areas where growth is expected or a new MUD will potentially be created. The boundaries for the existing MUDs that may annex one of the future developments are shown with the MUD name plus the word "Annex" on the Mapbook in Exhibit 4. Any potential new MUDs are labeled with an alphabetic notation such as MUD XYZ on the Mapbook in Exhibit 4.

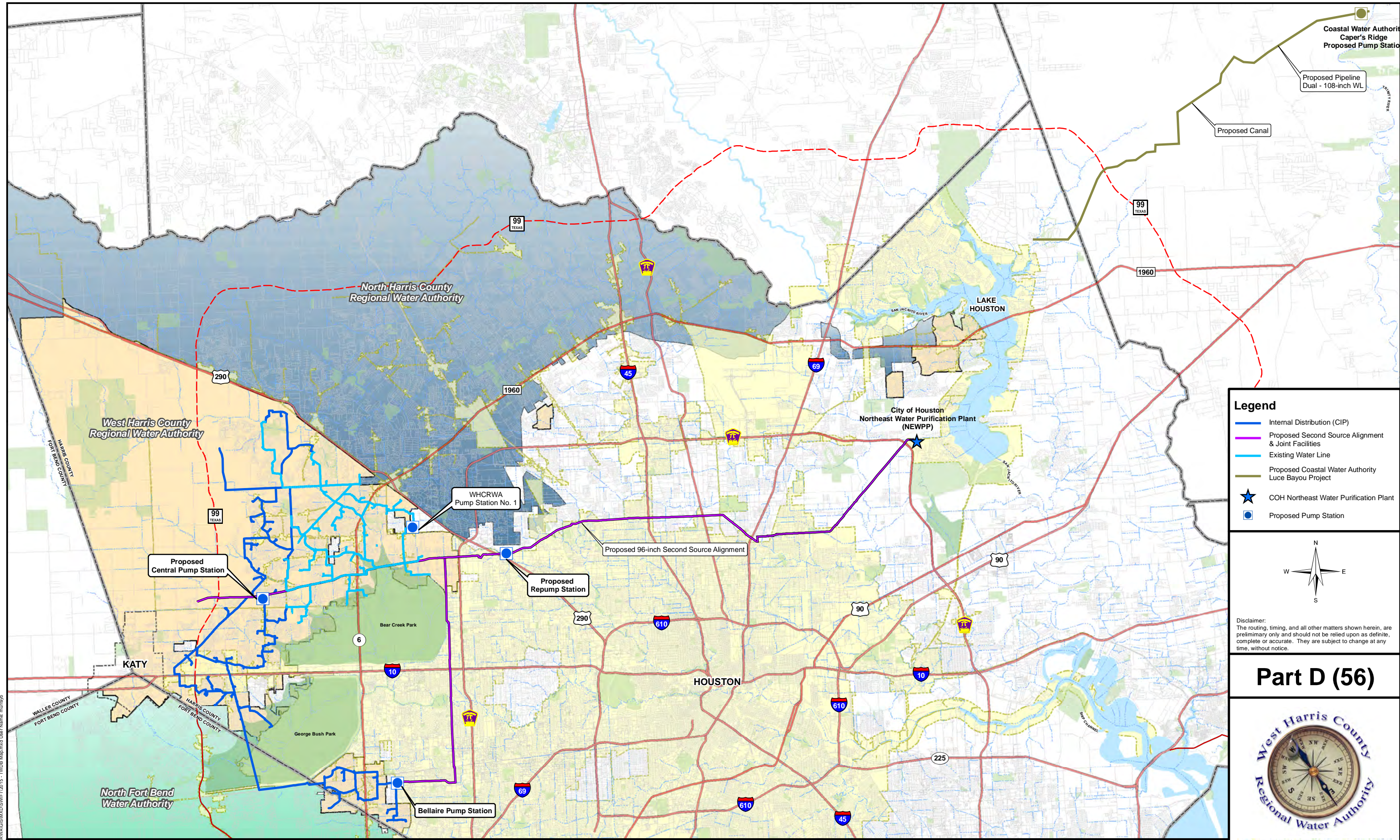
Population Projections Summary:

Based on information from MIS, the Authority population between south of Clay Rd and east of Barker Cypress is anticipated to be built-out in 5 years. The remaining significant growth in the Authority is expected to take place along the Grand Parkway corridor. The estimated population growth percent increase from 2010 to 2030 is shown in Exhibit 7. Table 1 summarizes the Authority population from 2010 through the projected 2050 population.

Table 1: Authority 2010 and Projected Population

2010	2020	2030	2040	2050
461,771	548,677	631,746	681,985	722,880

Part D



Legend

- Internal Distribution (CIP)
- Proposed Second Source Alignment & Joint Facilities
- Existing Water Line
- Proposed Coastal Water Authority Luce Bayou Project
- ★ COH Northeast Water Purification Plant
- Proposed Pump Station

Disclaimer:
The routing, timing, and all other matters shown herein, are preliminary only and should not be relied upon as definite, complete or accurate. They are subject to change at any time, without notice.

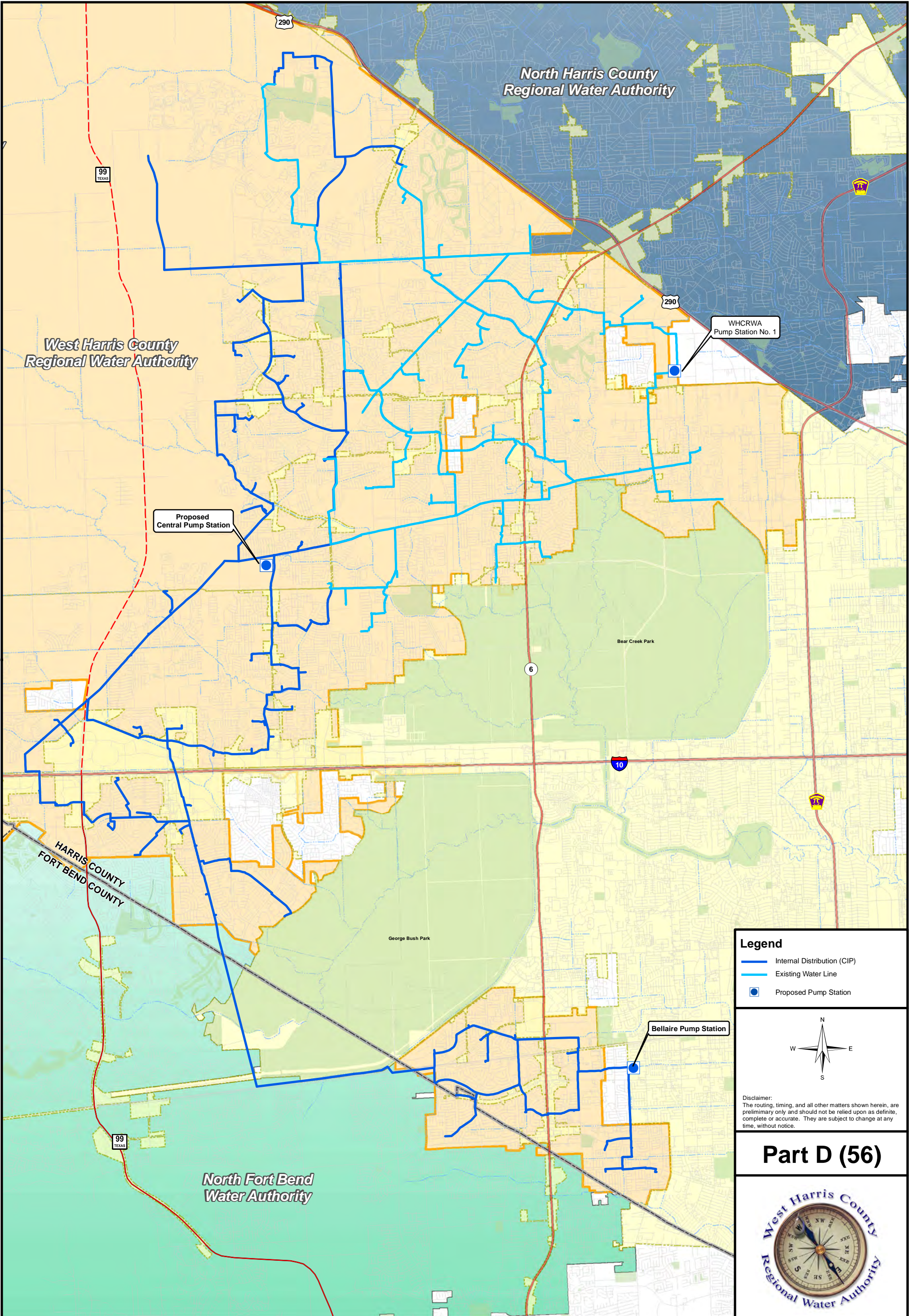
Part D (56)



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ENGINEERING CORPORATION
3100 WEST ALABAMA HOUSTON, TX 77098 (713) 520-8570

WHCRWA Program Overview

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Proposed Central Pump Station

WHCRWA Pump Station No. 1

Bellaire Pump Station

Legend

- Internal Distribution (CIP)
- Existing Water Line
- Proposed Pump Station



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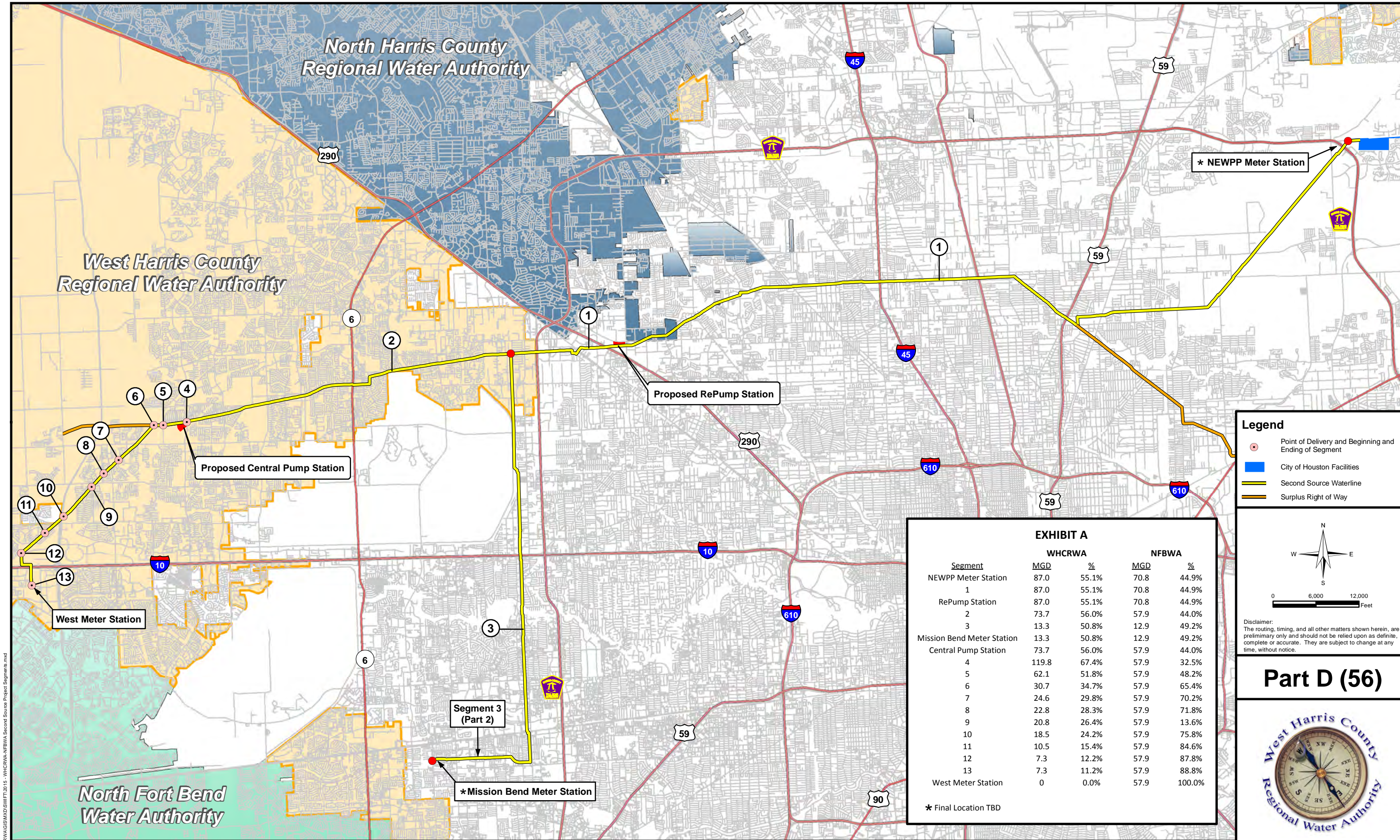
Part D (56)



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WHCRWA Internal Distribution (CIP)

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Legend

- Point of Delivery and Beginning and Ending of Segment
- City of Houston Facilities
- Second Source Waterline
- Surplus Right of Way

0 6,000 12,000 Feet

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EXHIBIT A

Segment	WHCRWA		NFBWA	
	MGD	%	MGD	%
NEWPP Meter Station	87.0	55.1%	70.8	44.9%
1	87.0	55.1%	70.8	44.9%
RePump Station	87.0	55.1%	70.8	44.9%
2	73.7	56.0%	57.9	44.0%
3	13.3	50.8%	12.9	49.2%
Mission Bend Meter Station	13.3	50.8%	12.9	49.2%
Central Pump Station	73.7	56.0%	57.9	44.0%
4	119.8	67.4%	57.9	32.5%
5	62.1	51.8%	57.9	48.2%
6	30.7	34.7%	57.9	65.4%
7	24.6	29.8%	57.9	70.2%
8	22.8	28.3%	57.9	71.8%
9	20.8	26.4%	57.9	13.6%
10	18.5	24.2%	57.9	75.8%
11	10.5	15.4%	57.9	84.6%
12	7.3	12.2%	57.9	87.8%
13	7.3	11.2%	57.9	88.8%
West Meter Station	0	0.0%	57.9	100.0%

* Final Location TBD

Part D (56)



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WHCRWA Transmission (Second Source Project)

Document Path: G:\110\WHCRWA\GIS\MapDocs\SWFT\2015 - WHCRWA - NFBWA - Second Source Project Segments.mxd

West Harris County Regional Water Authority (WHCRWA)

Entities to be Served (Source: WHCRWA GRP as of January 2015)

Entity Name	
1.	Addicks UD
2.	Barker Cypress MUD
3.	Bear Creek UD
4.	Beechnut MUD
5.	Bissonnet MUD
6.	Camfield MUD
7.	Castlewood MUD
8.	Chelford City MUD
9.	Chelford One MUD
10.	Cimarron MUD
11.	Clay Road MUD
12.	Fry Road MUD
13.	HC MUD 102
14.	HC MUD 105
15.	HC MUD 106
16.	HC MUD 120
17.	HC MUD 127/239
18.	HC MUD 130
19.	HC MUD 132
20.	HC MUD 136
21.	HC MUD 144
22.	HC MUD 147
23.	HC MUD 149
24.	HC MUD 151
25.	HC MUD 152
26.	HC MUD 155
27.	HC MUD 156
28.	HC MUD 157
29.	HC MUD 162
30.	HC MUD 163
31.	HC MUD 165
32.	HC MUD 166
33.	HC MUD 167
34.	HC MUD 171
35.	HC MUD 172
36.	HC MUD 173
37.	HC MUD 179
38.	HC MUD 180
39.	HC MUD 183

40.	HC MUD 185
41.	HC MUD 186
42.	HC MUD 188
43.	HC MUD 196
44.	HC MUD 197
45.	HC MUD 208
46.	HC MUD 225
47.	HC MUD 238
48.	HC MUD 250
49.	HC MUD 255
50.	HC MUD 257
51.	HC MUD 263
52.	HC MUD 264
53.	HC MUD 268
54.	HC MUD 276
55.	HC MUD 284
56.	HC MUD 287
57.	HC MUD 306
58.	HC MUD 328
59.	HC MUD 329
60.	HC MUD 330
61.	HC MUD 341
62.	HC MUD 370
63.	HC MUD 371
64.	HC MUD 374
65.	HC MUD 375
66.	HC MUD 376
67.	HC MUD 377
68.	HC MUD 378
69.	HC MUD 379
70.	HC MUD 380
71.	HC MUD 405
72.	HC MUD 418
73.	HC MUD 419
74.	HC MUD 432
75.	HC MUD 433
76.	HC MUD 434
77.	HC MUD 435
78.	HC MUD 437
79.	HC MUD 438
80.	HC MUD 457
81.	HC MUD 458
82.	HC MUD 46

83. HC MUD 500
84. HC MUD 501
85. HC MUD 502
86. HC MUD 503
87. HC MUD 532
88. HC MUD 533
89. HC MUD 534
90. HC MUD 61
91. HC MUD 62
92. HC MUD 63
93. HC MUD 64
94. HC MUD 70
95. HC MUD 71
96. HC MUD 76
97. HC MUD 81
98. HC UD 6
99. HC WCID 157
100. H-FBC MUD 3
101. H-FBC MUD 4
102. Horsepen Bayou MUD
103. Interstate MUD
104. Jackrabbit Road PUD
105. Langham Creek UD
106. Mayde Creek MUD
107. Memorial MUD
108. Mission Bend MUD 1
109. Mission Bend MUD 2
110. Morton Road MUD
111. Nottingham Country MUD
112. NW HC MUD 12
113. Remington MUD 1
114. Renn Road MUD
115. Ricewood MUD
116. Rolling Creek UD
117. Spencer Road PUD
118. Trail of the Lakes
119. W HC MUD 14
120. W HC MUD 15
121. W HC MUD 17
122. W HC MUD 2
123. W HC MUD 4
124. W HC MUD 5
125. W HC MUD 7

126. West Memorial MUD
127. West Park MUD
128. Westlake MUD 1
129. Weston MUD
<i>Note: This list includes the WHCRWA Municipalities and Municipal Utility Districts within the</i>
<i>130. WHCRWA's Groundwater Reduction Plan as of January 2015. Additional entities will be added as</i>
<i>more districts are created in the future.</i>



West Harris County Regional Water Authority

2012 POPULATION AND WATER DEMAND PROJECTIONS

Introduction:

Population and water demand projections were previously completed in 2004 and updated in 2006. The scope of this project is to verify the previous water demand projections for the West Harris County Regional Water Authority (Authority) based on the 2010 census.

Water demand projections are based on population projections and water use demand factors. Water production, water use, existing population, and future population projections were used to calculate water demand factors and project future water use. Sources for the population and water demand data include:

- 1) Census Bureau 2010 census data for the areas within the Authority's boundary,
- 2) The services of Municipal Information Services (MIS) were acquired to allocate the 2010 population data and provide population projections for the Authority from 2010 through 2050,
- 3) Boundary data for the Authority and Municipal Utility Districts (MUDs) was obtained from:
 - a. West Harris County Regional Water Authority (Authority),
 - b. U.S. Census Bureau - Census Tract (CT) boundaries,
 - c. Harris County Appraisal District (HCAD) - Water utility boundary information,
 - d. Municipal Information Services (MIS), and
- 4) Pumpage data for non-exempt water users within the Authority.

Population Projections Methodology:

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- Another environmentally protected area is the Katy-Cypress Mitigation Bank.
- Existing commercial and industrial operations, such as the Hockley Salt Domes will also limit residential growth.

Many of the areas in the northwestern portion of the Authority can be identified on the land use map in Exhibit 5.

A comparison with previous population projections is shown on the graph in Exhibit 8.

Additionally, detailed population projections by MUD and census tract are shown in the table in Exhibit 9.

Water Demand Projections:

In addition to updating the population projections, information regarding water use and the estimation of water demand factors were updated based on recent monthly pumpage reports.

Water demand projections were developed for each MUD within the Authority as well as the Non-MUD areas (remainder of each census tracts). The non-exempt groundwater and surface water usage for users within the Authority from 2008 through 2011 were reviewed. The summary of the Authority's water pumpage is shown in Exhibit 10. The total water pumpage within the Authority increased approximately 25% from 2010 to 2011 due primarily to the historic drought experienced in 2011.

Climate information for Harris County was reviewed and compared to pumpage data to determine the impact the historical 2011 drought had on the Authority's water pumpage. A summary of the climate data is shown in Table 2.

Table 2: Houston Average Climate Data

Bush Intercontinental Airport (IAH) Climate Data							
	2006	2007	2008	2009	2010	2011	Average (1981-2010)
Average Temp. (F)	70.6	69.7	69.9	70.3	69.3	71.5	69.8
Total Rainfall (in.)	57.7	62.3	41.3	46.2	41.3	23.2	49.8

Based on the historic climate and pumpage data, the water pumpage from 2009 and 2010 appear to be an accurate representation of the average water usage within the Authority. The higher water pumpage of the years 2009 and 2010 was used on a MUD-by-MUD basis to develop the water use factors for each MUD. This approach is more conservative than using only the 2010 data, but not as conservative as using the pumpage data during the historical 2011 drought.

A Unit Demand Factor (UDF) in gallons per capita per day (gpcd) was calculated for each MUD by dividing the 2010 MUD population by the highest of the two pumpage years, 2009 or 2010. The UDF was used to determine the future water demand for each MUD by multiplying the UDF times the future MUD population. If pumpage data was available for a specific MUD it was used as the basis for projecting future water demand. This assumes water demand will grow at the same rate as population. If pumpage data was not available for a MUD or “Non-MUD” area, then the Authority’s average UDF was used to calculate the water demand. The Authority’s average calculated UDF is 132 gpcd. In comparison, the Authority’s average UDF is very similar to the UDF (134 gpcd) developed by Freese and Nichols for the Harris Galveston Subsidence District (HGSD) water demand calculations.

Many of the private well owners within the Authority were associated with home owner associations (HOAs) or golf courses. If a private groundwater well was able to be located within a MUD and the well was not associated with another MUD, then the groundwater well pumpage was added to the MUD it was located in. A summary of the water demand projections is shown in Table 3 and graphed on Exhibit 11.

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A variety of factors can significantly impact the future demand projections. The two key factors affecting future water usage in the Authority will be climate conditions, such as temperature and rainfall, and changes in water rates. Typically, average water usage will trend downward when water rates increase. Significant droughts most likely create a surge in water usage, such as the water usage increase during the 2011 drought.

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The anticipated average daily water demand at 2050 for the Authority is approximately 104.3 million gallons per day (MGD). A comparison of the water demand projections between the 2006 projections and the 2012 projections is shown in Table 4.

Table 4: Water Demand Projections for Authority

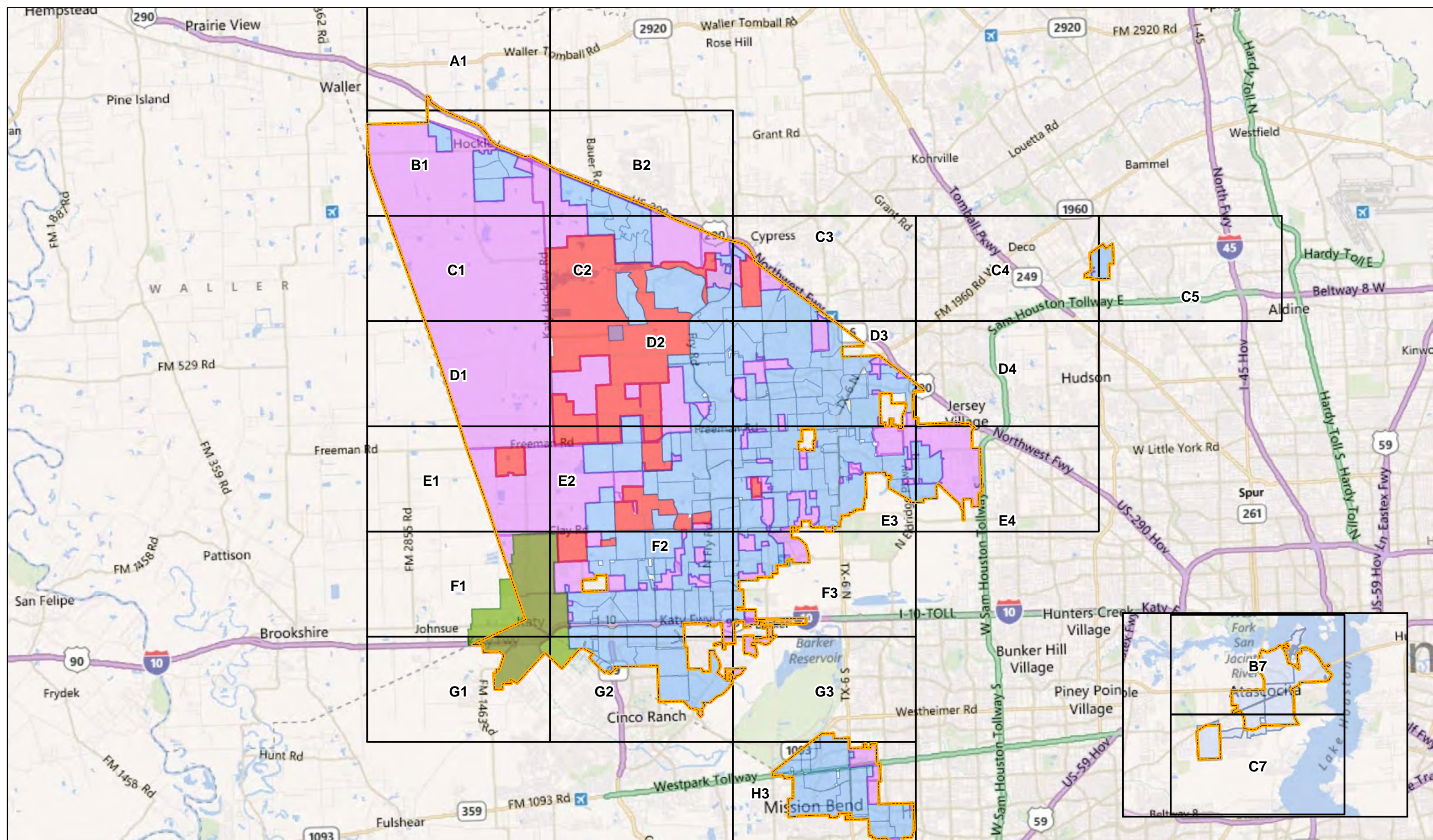
	2020	2030	2040	2050
2006 Projections	80.3 MGD	91.9 MGD	98.8 MGD	102.5 MGD
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EXHIBIT 1
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY - DIRECTOR PRECINCTS

PRECINCT 1	PRECINCT 2	PRECINCT 3	PRECINCT 4	PRECINCT 5	PRECINCT 6	PRECINCT 7	PRECINCT 8	PRECINCT 9	WHCRWA Contract MUDs
Beechnut MUD	HC MUD 120	Cimarron MUD	Addicks UD	Clay Road MUD	HC MUD 149	HC MUD 155	Camfield MUD	City of Katy*	HC MUD 46
Bissonnet MUD	Castlewood MUD	HC MUD 81	Barker Cypress MUD	HC MUD 70	HC MUD 166	HC MUD 162	HC MUD 102	Bear Creek UD+	HC MUD 106
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W HC MUD 4*			Ricewood MUD	HC MUD 173			HC MUD 370	HC MUD 157	
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			W HC MUD 7	HC MUD 264				HC MUD 268+	
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				HC MUD 376				HC MUD 330+	
				HC MUD 377				HC MUD 405	
				HC MUD 378				HC MUD 432	
				HC MUD 379				HC MUD 457	
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				HC MUD 433				W HC MUD 2	
				HC MUD 434				W HC MUD 5+	
				HC MUD 435+					
				HC MUD 437+					
				HC MUD 438+					
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				W HC MUD 14					
				W HC MUD 15					
				HC WCID 157					

+ - Dormant

* - Partially in Fort Bend County



WHCRWA 2012 Population Projections

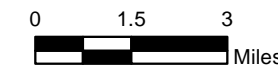
Exhibit 2

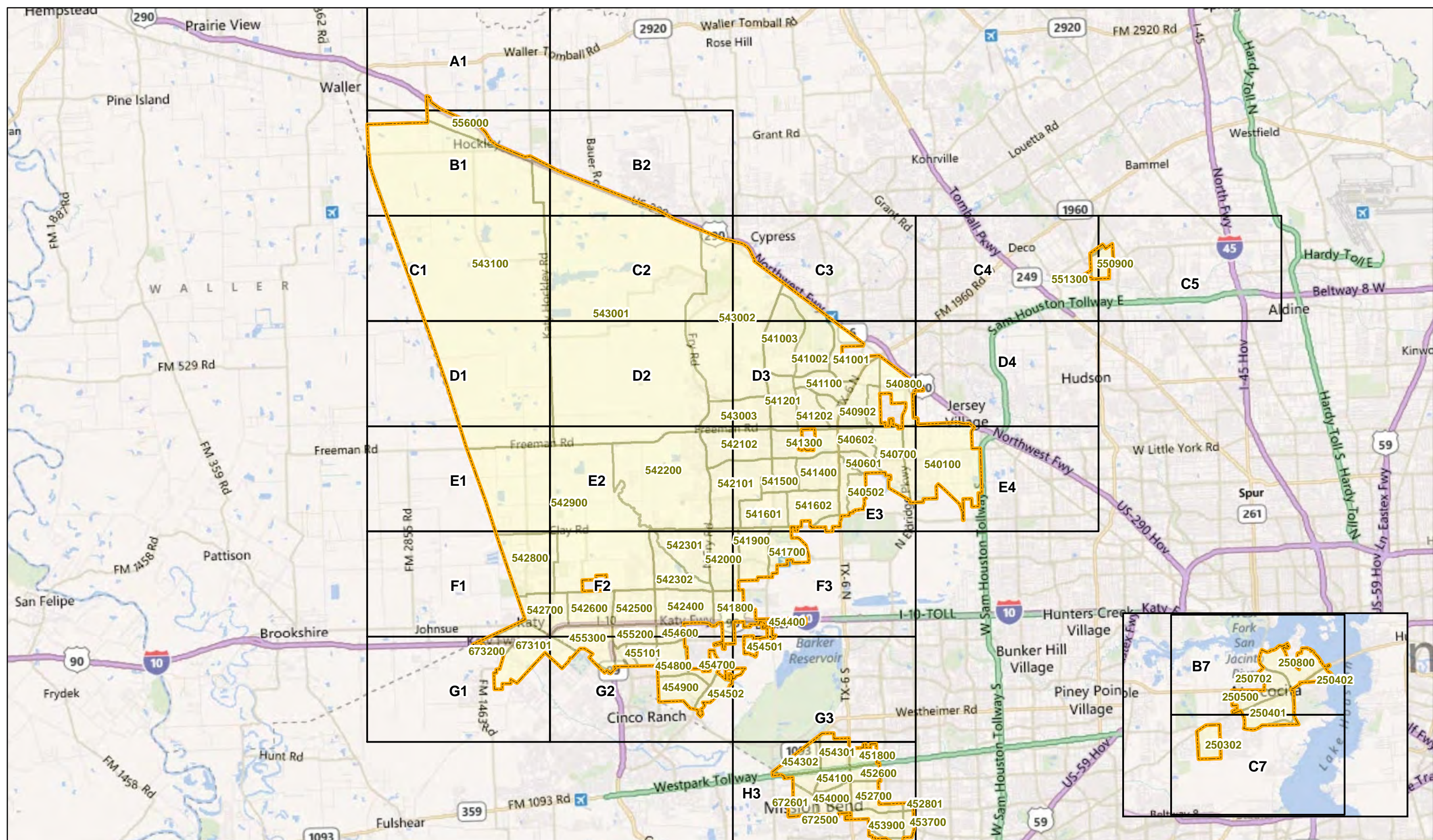
Overall MUD Index

*See Exhibit 4 for all MUD labels



-  WHCRWA Boundary
-  WHCRWA Mapbook Grid
-  WHCRWA MUDs
-  Future WHCRWA MUDs
-  City of Katy
-  Remainder of Census Tracts

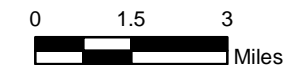




WHCRA 2012 Population Projections
Exhibit 3
Overall Census Tract Index
*See Exhibit 4 for all Census Tract labels



- WHCRA Boundary
- WHCRA Census Tracts
- WHCRA Mapbook Grid



A comparison with previous population projections is shown on the graph in Exhibit 8.

Additionally, detailed population projections by MUD and census tract are shown in the table in Exhibit 9.

Water Demand Projections:

In addition to updating the population projections, information regarding water use and the estimation of water demand factors were updated based on recent monthly pumpage reports.

Water demand projections were developed for each MUD within the Authority as well as the Non-MUD areas (remainder of each census tracts). The non-exempt groundwater and surface water usage for users within the Authority from 2008 through 2011 were reviewed. The summary of the Authority's water pumpage is shown in Exhibit 10. The total water pumpage within the Authority increased approximately 25% from 2010 to 2011 due primarily to the historic drought experienced in 2011.

Climate information for Harris County was reviewed and compared to pumpage data to determine the impact the historical 2011 drought had on the Authority's water pumpage. A summary of the climate data is shown in Table 2.

Table 2: Houston Average Climate Data

Bush Intercontinental Airport (IAH) Climate Data							
	2006	2007	2008	2009	2010	2011	Average (1981-2010)
Average Temp. (F)	70.6	69.7	69.9	70.3	69.3	71.5	69.8
Total Rainfall (in.)	57.7	62.3	41.3	46.2	41.3	23.2	49.8

Based on the historic climate and pumpage data, the water pumpage from 2009 and 2010 appear to be an accurate representation of the average water usage within the Authority. The higher water pumpage of the years 2009 and 2010 was used on a MUD-by-MUD basis to develop the water use factors for each MUD. This approach is more conservative than using only the 2010 data, but not as conservative as using the pumpage data during the historical 2011 drought.

A Unit Demand Factor (UDF) in gallons per capita per day (gpcd) was calculated for each MUD by dividing the 2010 MUD population by the highest of the two pumpage years, 2009 or 2010. The UDF was used to determine the future water demand for each MUD by multiplying the UDF times the future MUD population. If pumpage data was available for a specific MUD it was used as the basis for projecting future water demand. This assumes water demand will grow at the same rate as population. If pumpage data was not available for a MUD or “Non-MUD” area, then the Authority’s average UDF was used to calculate the water demand. The Authority’s average calculated UDF is 132 gpcd. In comparison, the Authority’s average UDF is very similar to the UDF (134 gpcd) developed by Freese and Nichols for the Harris Galveston Subsidence District (HGSD) water demand calculations.

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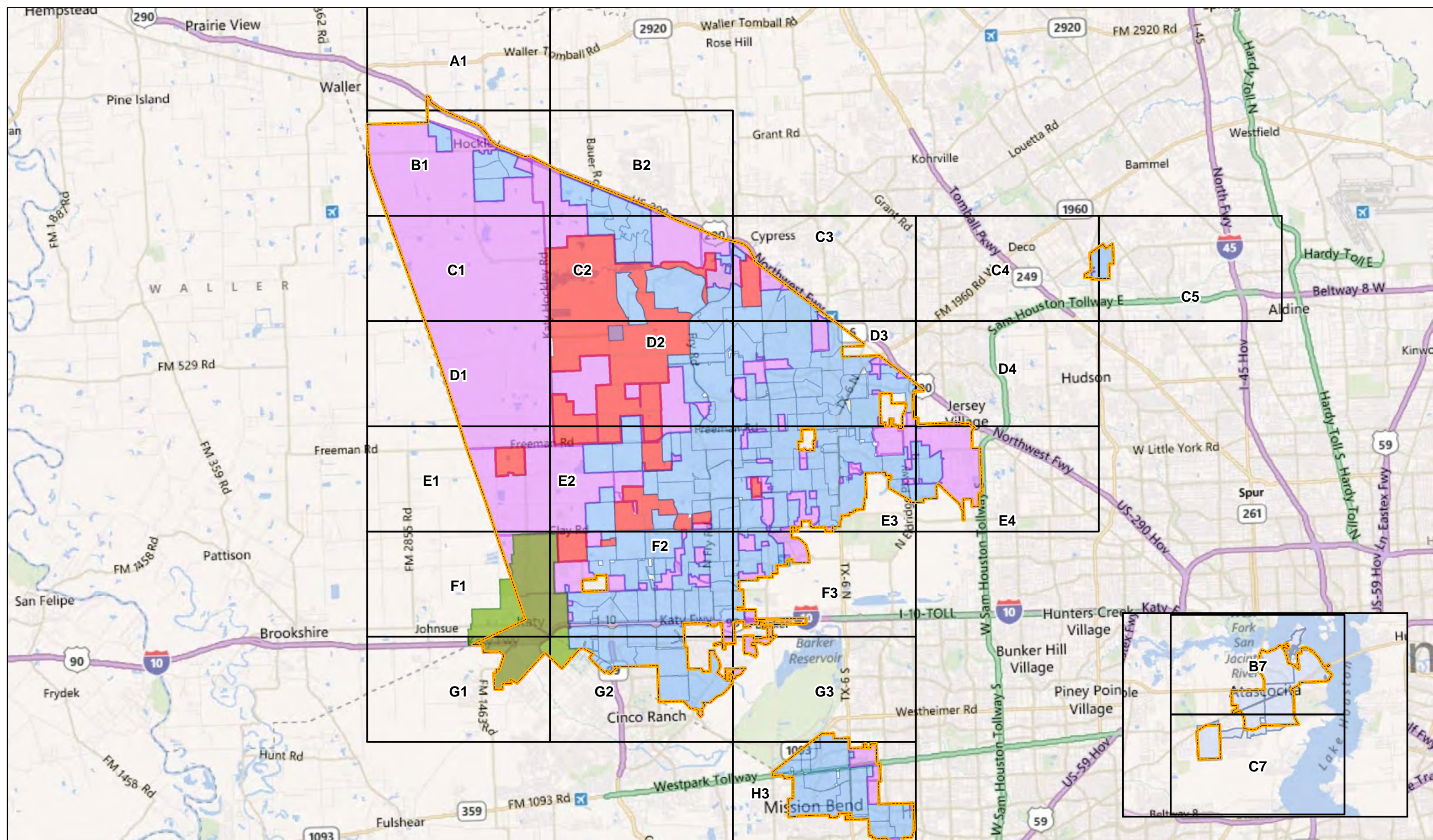
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WHCRA 2012 Population Projections

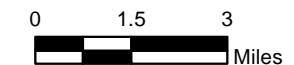
Exhibit 2

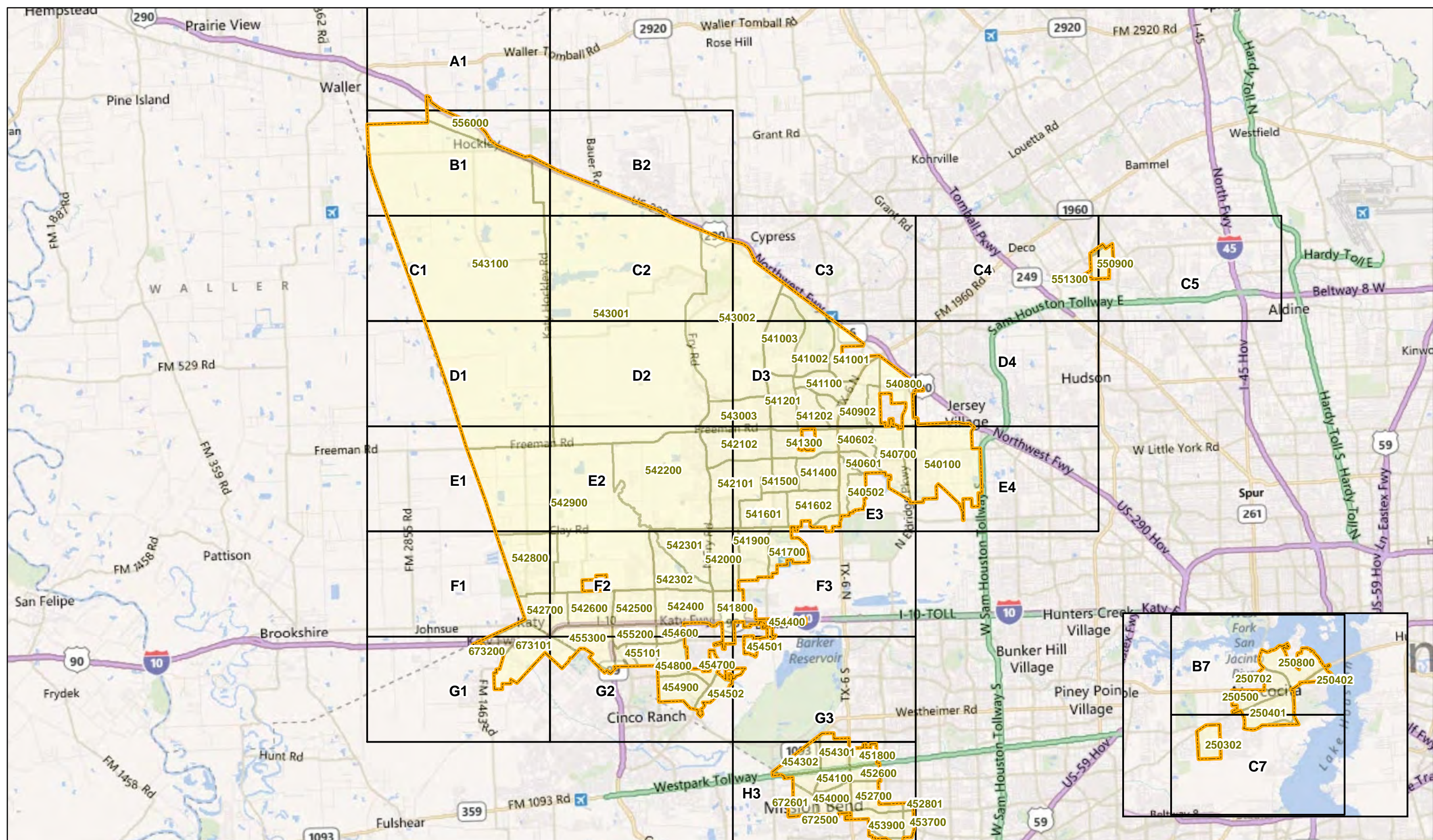
Overall MUD Index

*See Exhibit 4 for all MUD labels



- WHCRA Boundary
- WHCRA Mapbook Grid
- WHCRA MUDs
- Future WHCRA MUDs
- City of Katy
- Remainder of Census Tracts

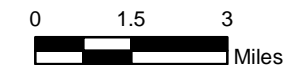


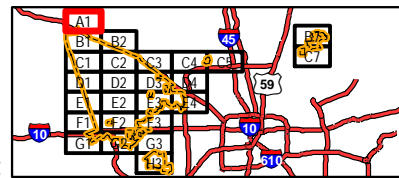
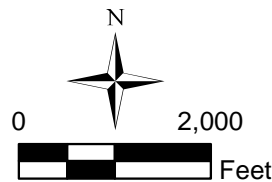
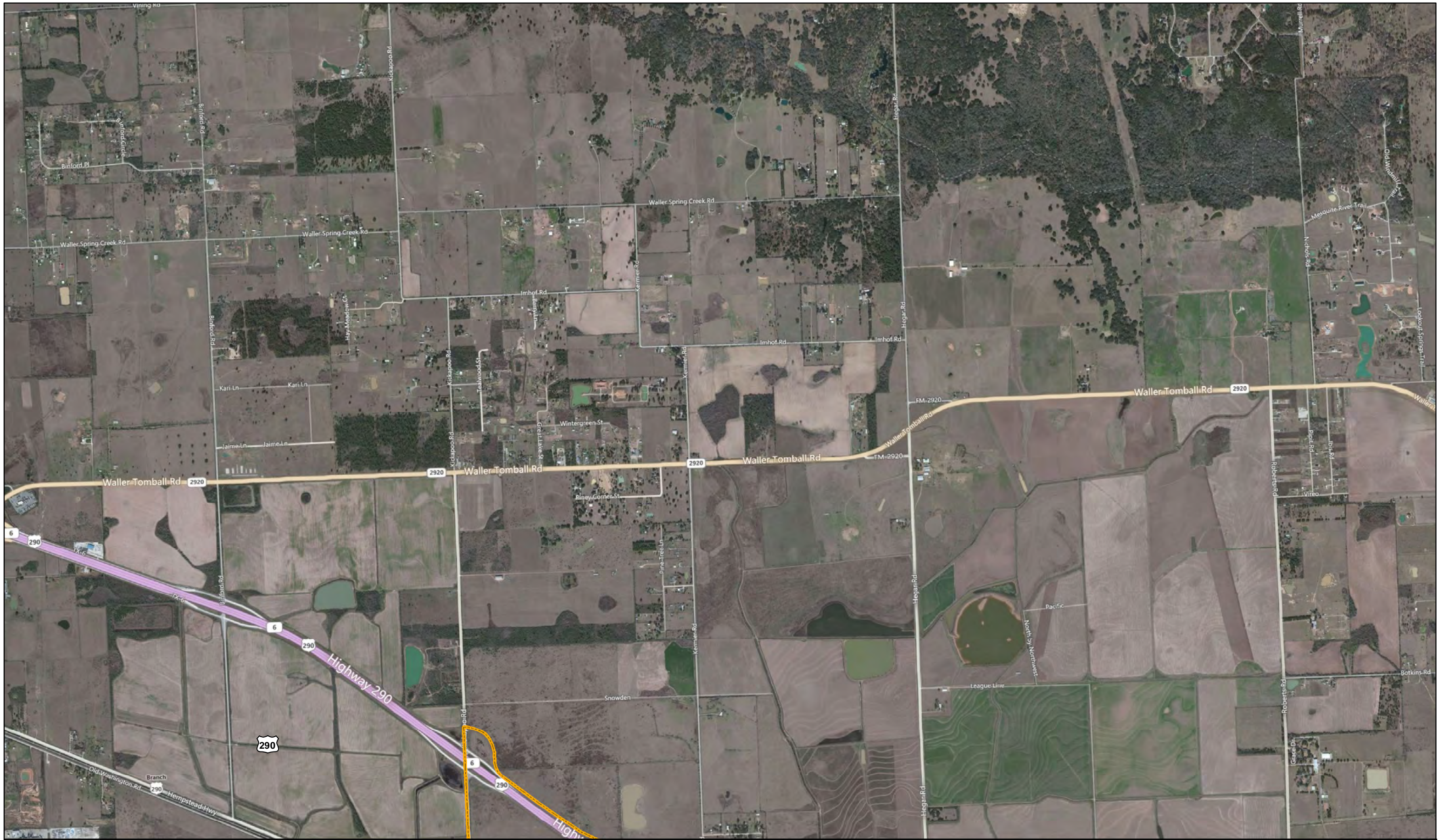


- WHCRA Boundary
- WHCRA Census Tracts
- WHCRA Mapbook Grid

WHCRA 2012 Population Projections Exhibit 3 Overall Census Tract Index

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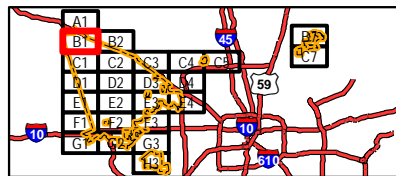
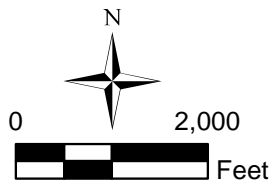
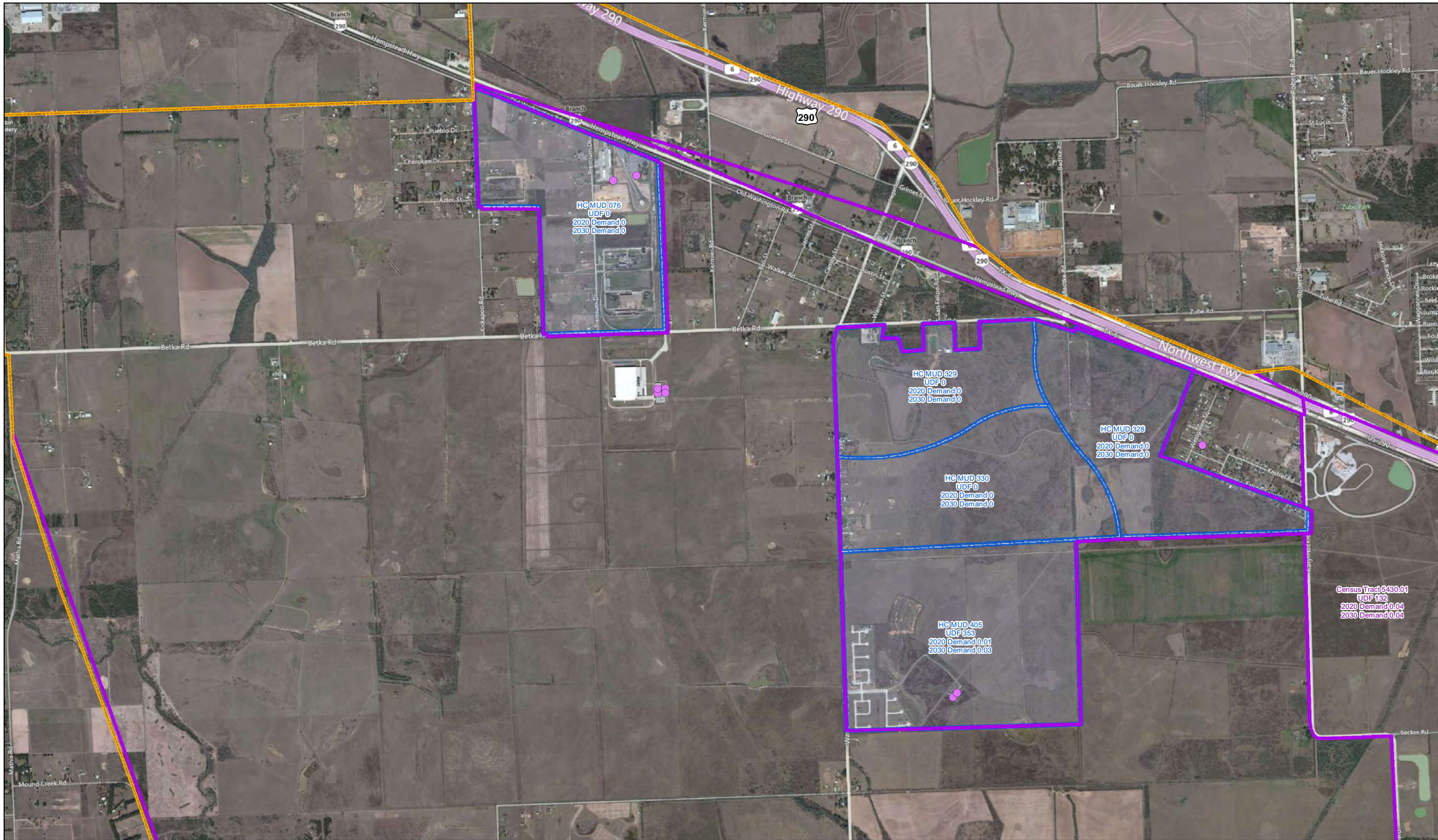




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet A1

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

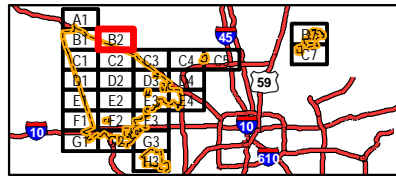
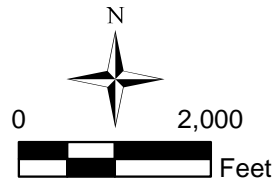
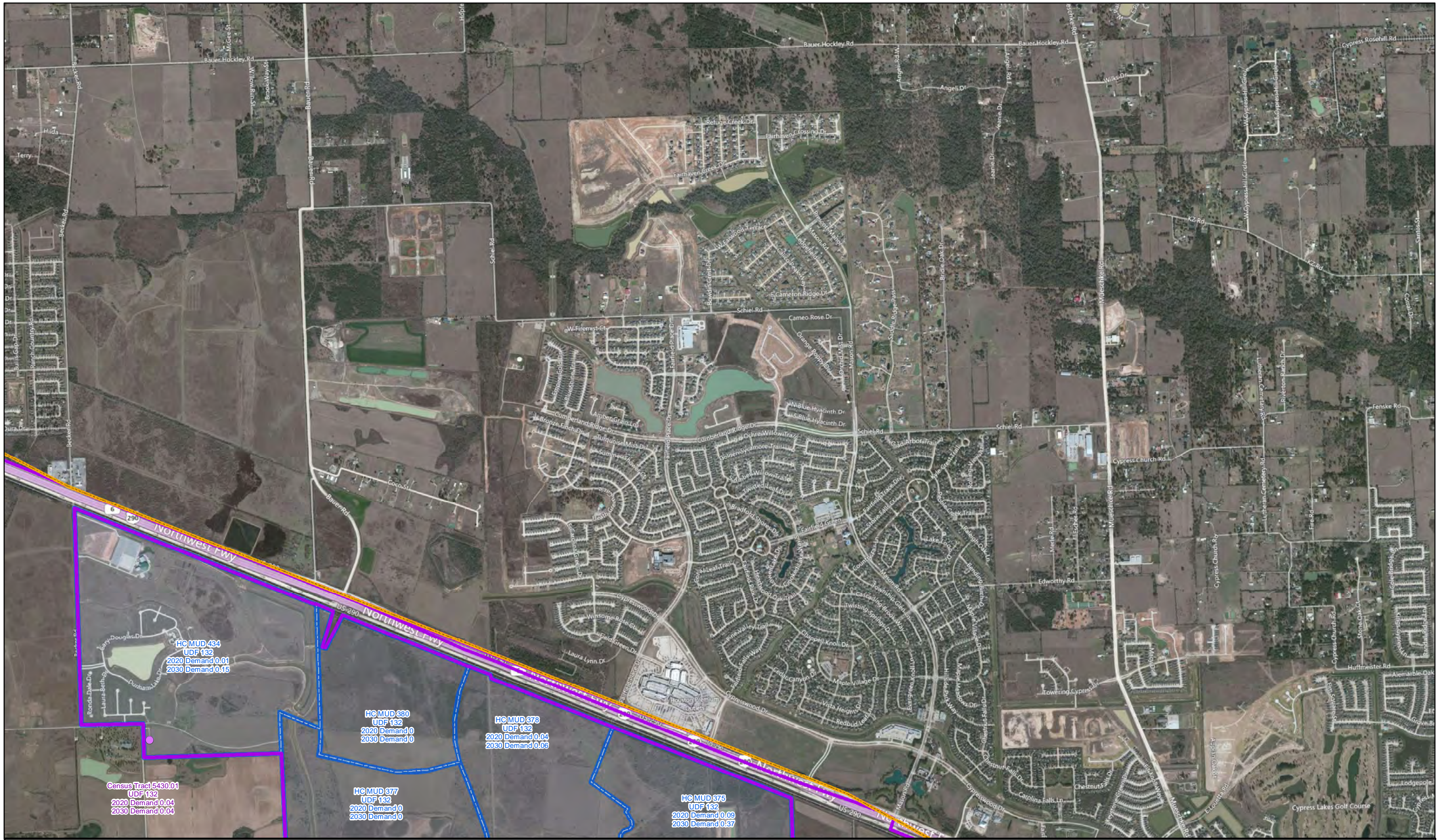




WHCRA 2012 Population Projections Exhibit 4 - Mapbooks Sheet B1

- WHCRA Boundary
- City of Katy
- WP Converted
- WHCRA MUDs
- WHC Water Wells
- WP Not Converted
- Future WHCRA MUDs
- WHC Pump Stations
- WP Not in WHCRA
- Remainder of Census Tracts

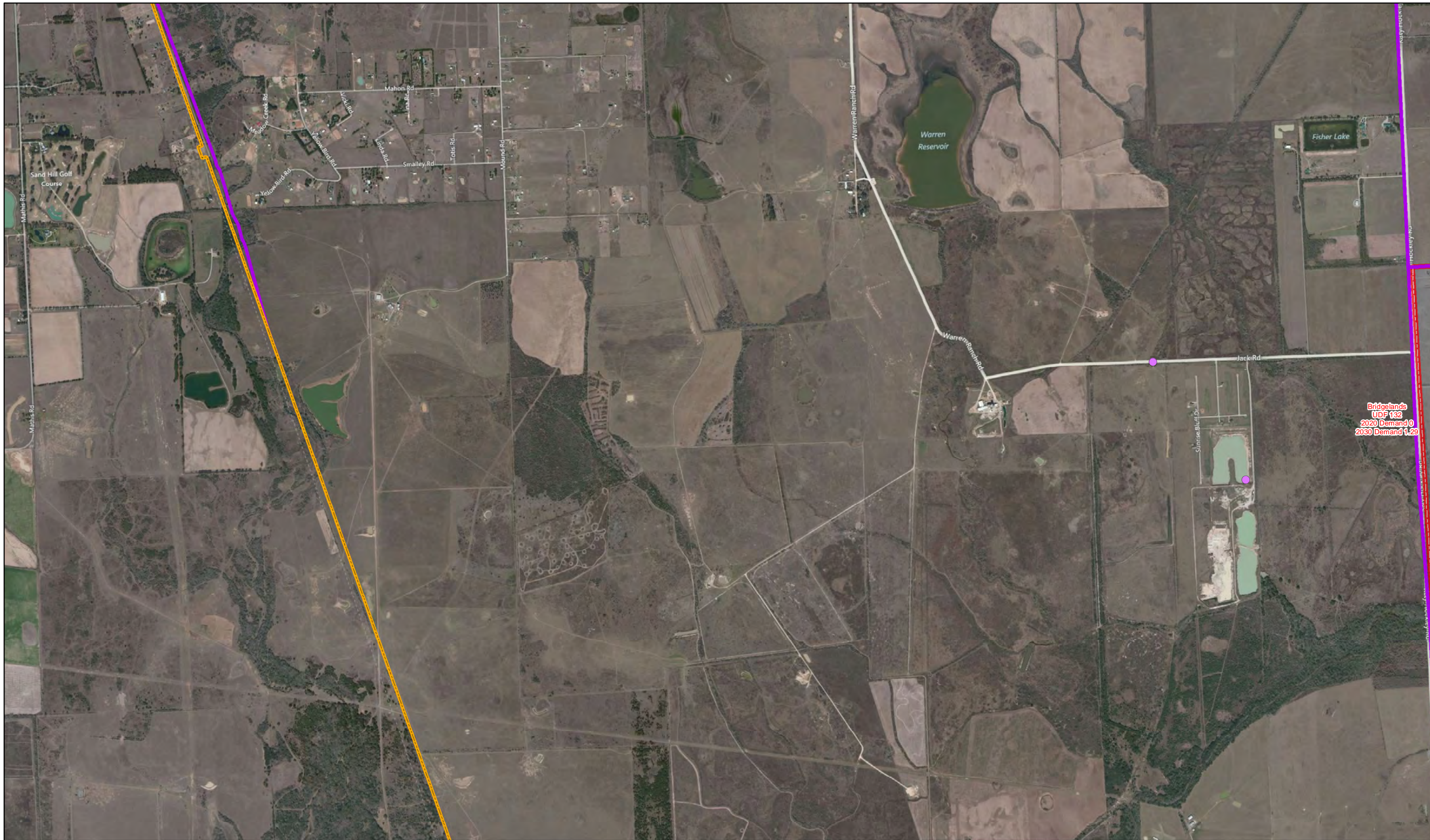




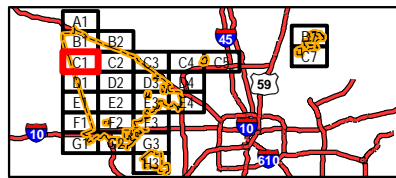
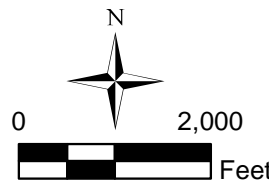
WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet B2

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA





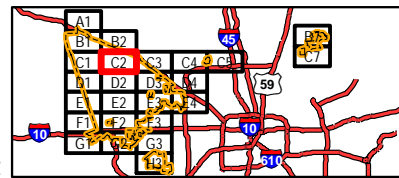
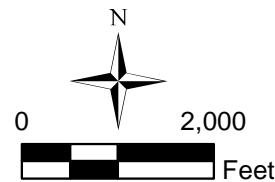
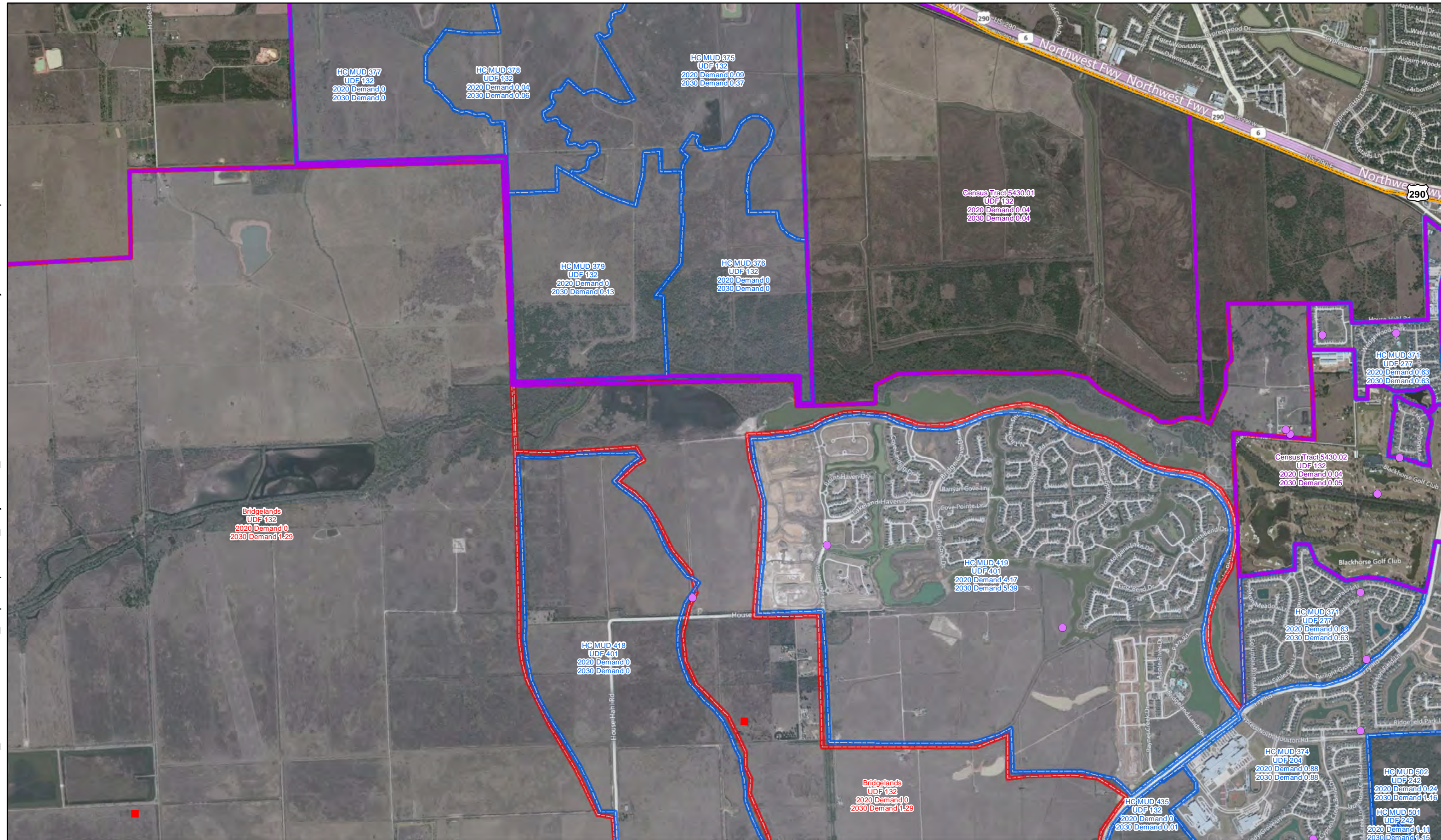
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UDF 132
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2030 Demand 1.29



WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet C1

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
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- WP Converted
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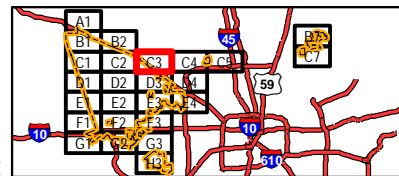
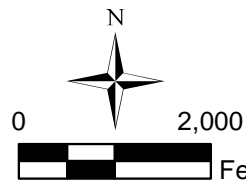
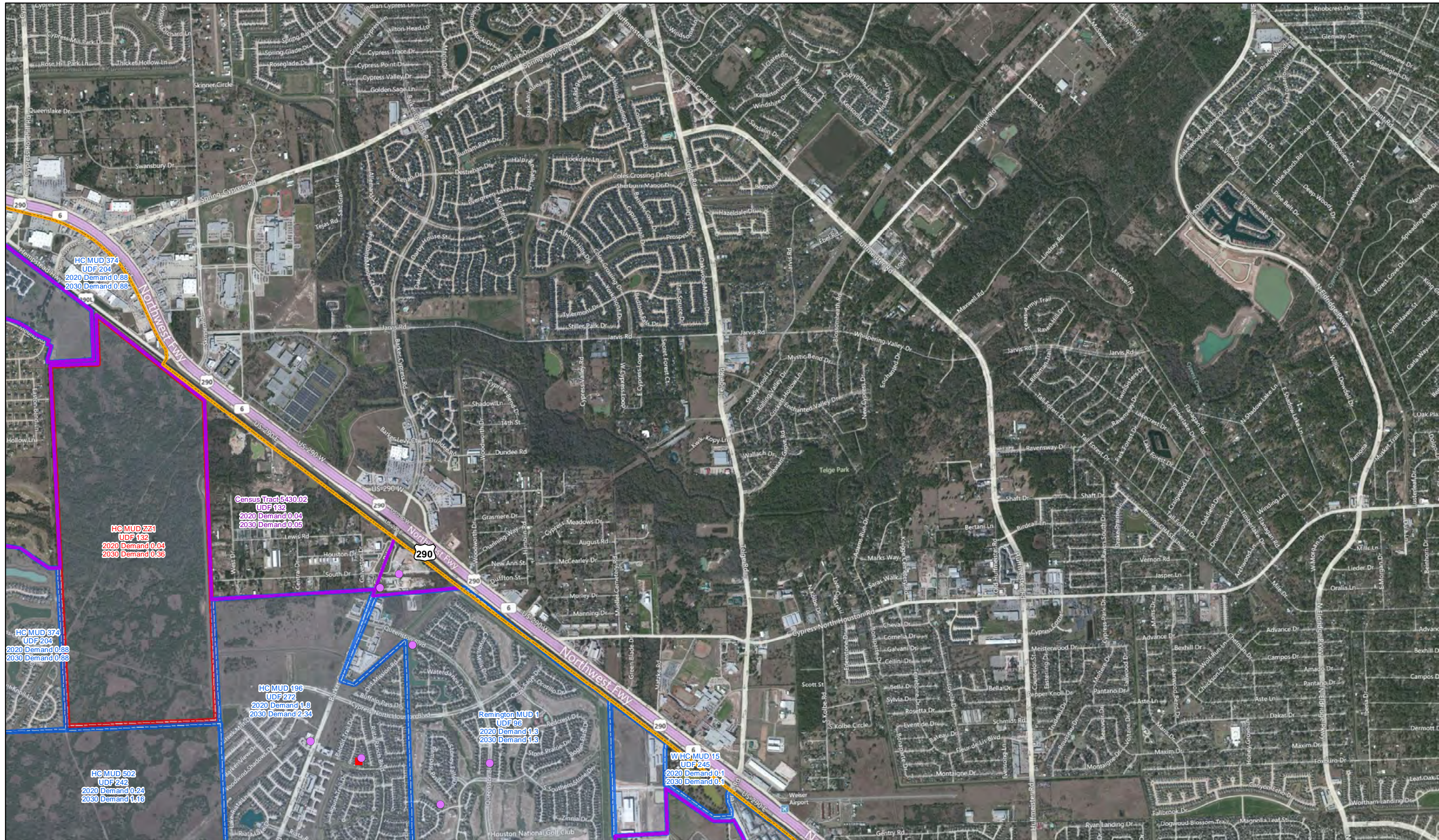




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet C2

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
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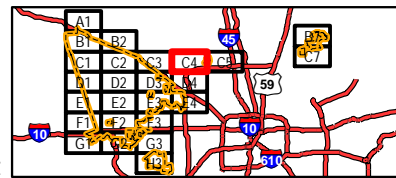
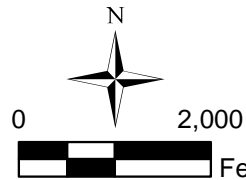
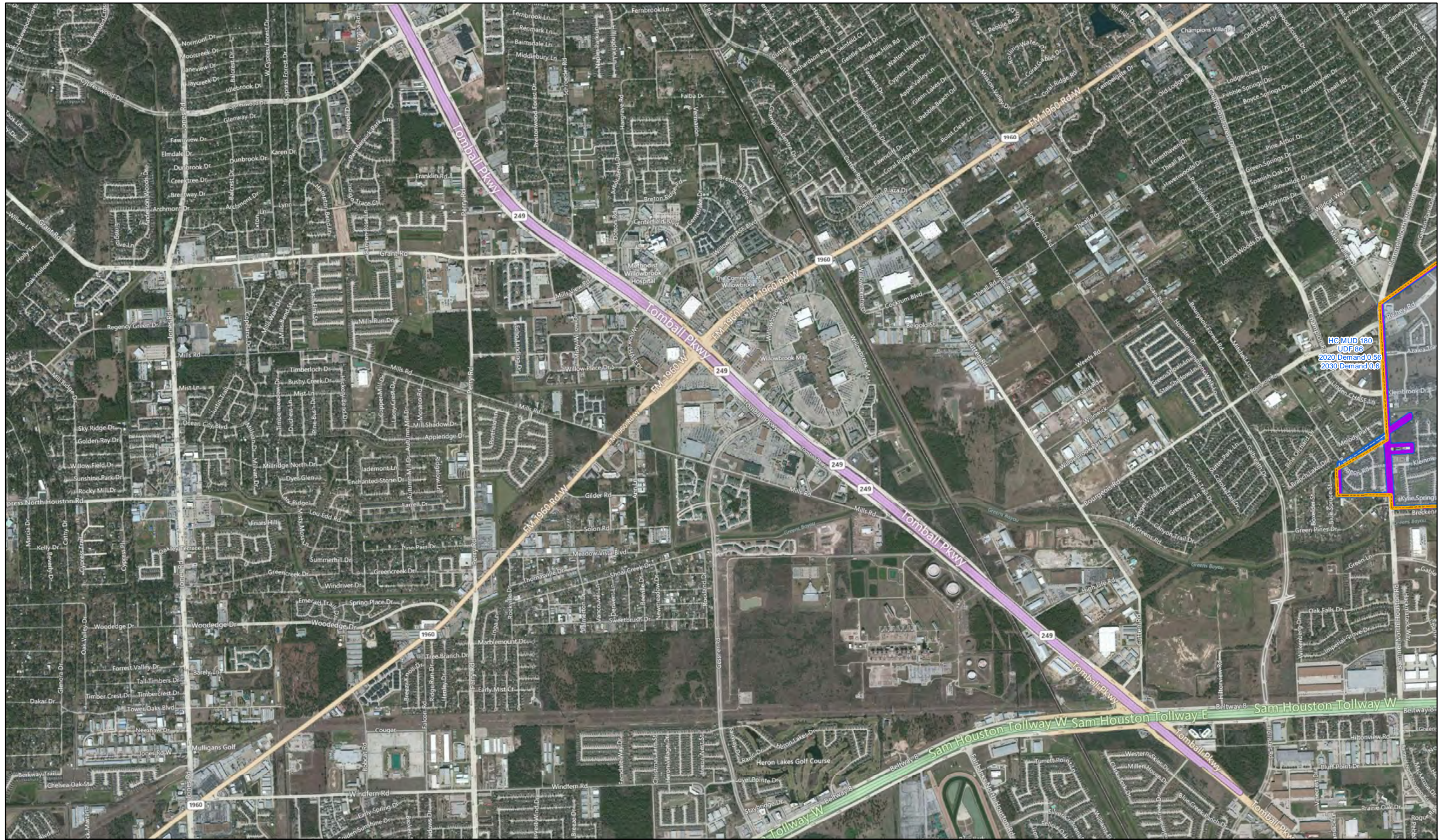




WHCRA 2012 Population Projections Exhibit 4 - Mapbooks Sheet C3

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- WHCRA MUDs
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- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
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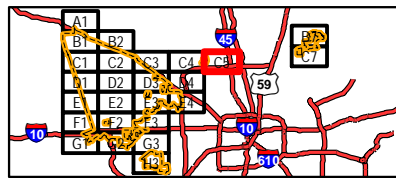
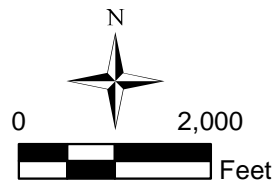
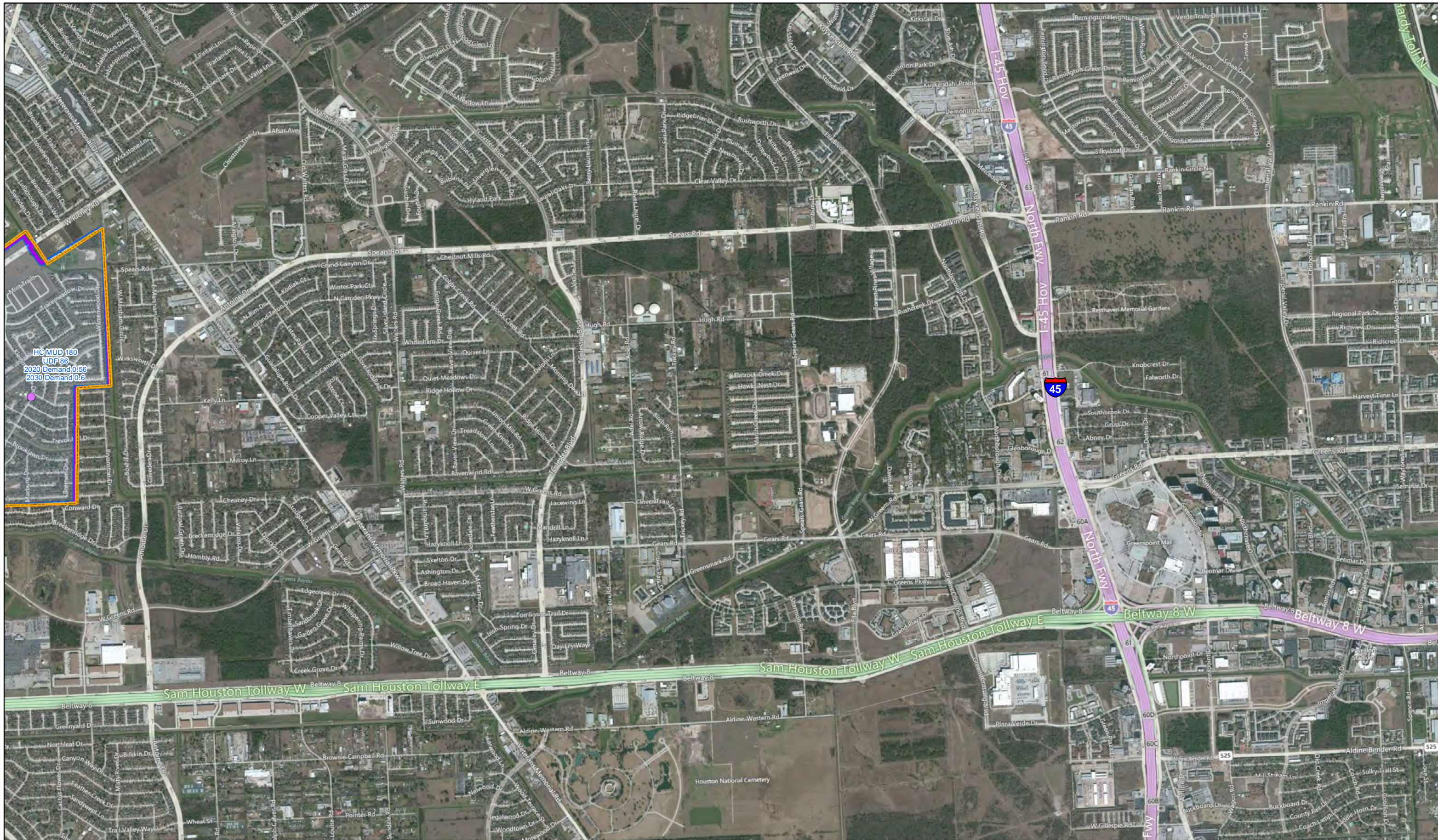




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet C4

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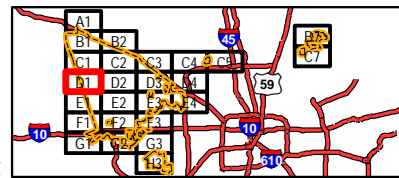
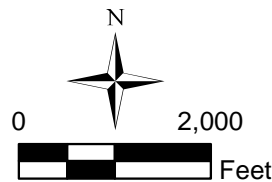




WHCRA 2012 Population Projections Exhibit 4 - Mapbooks Sheet C5

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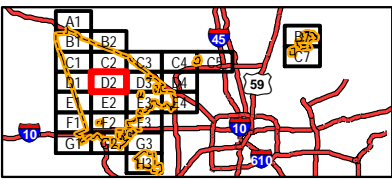
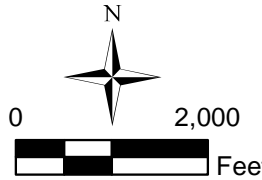
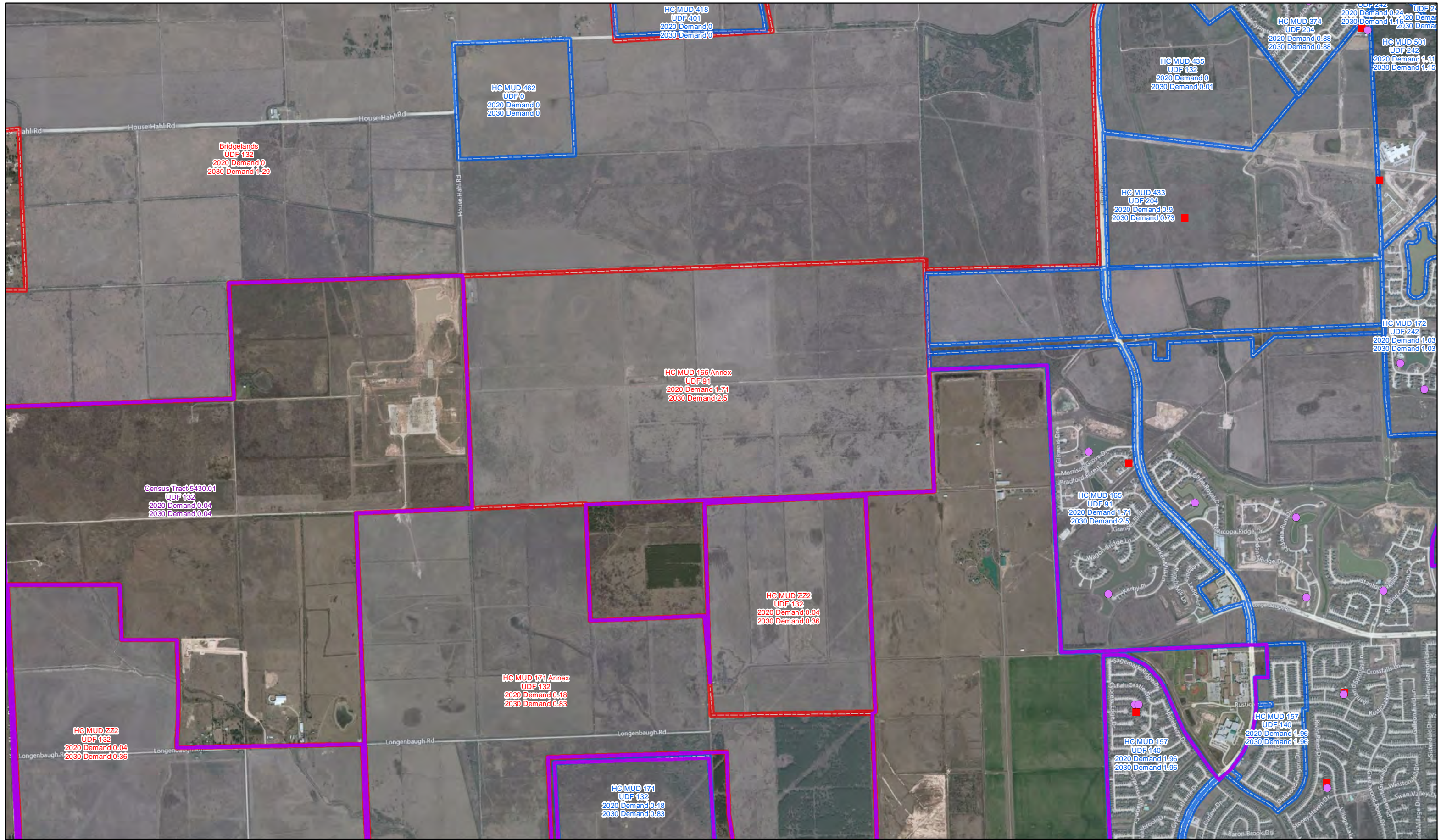




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet D1

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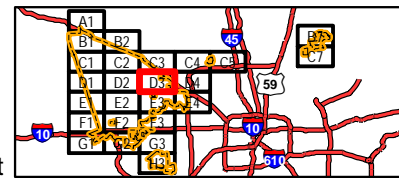
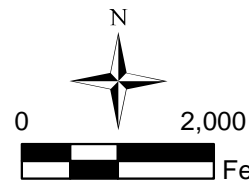
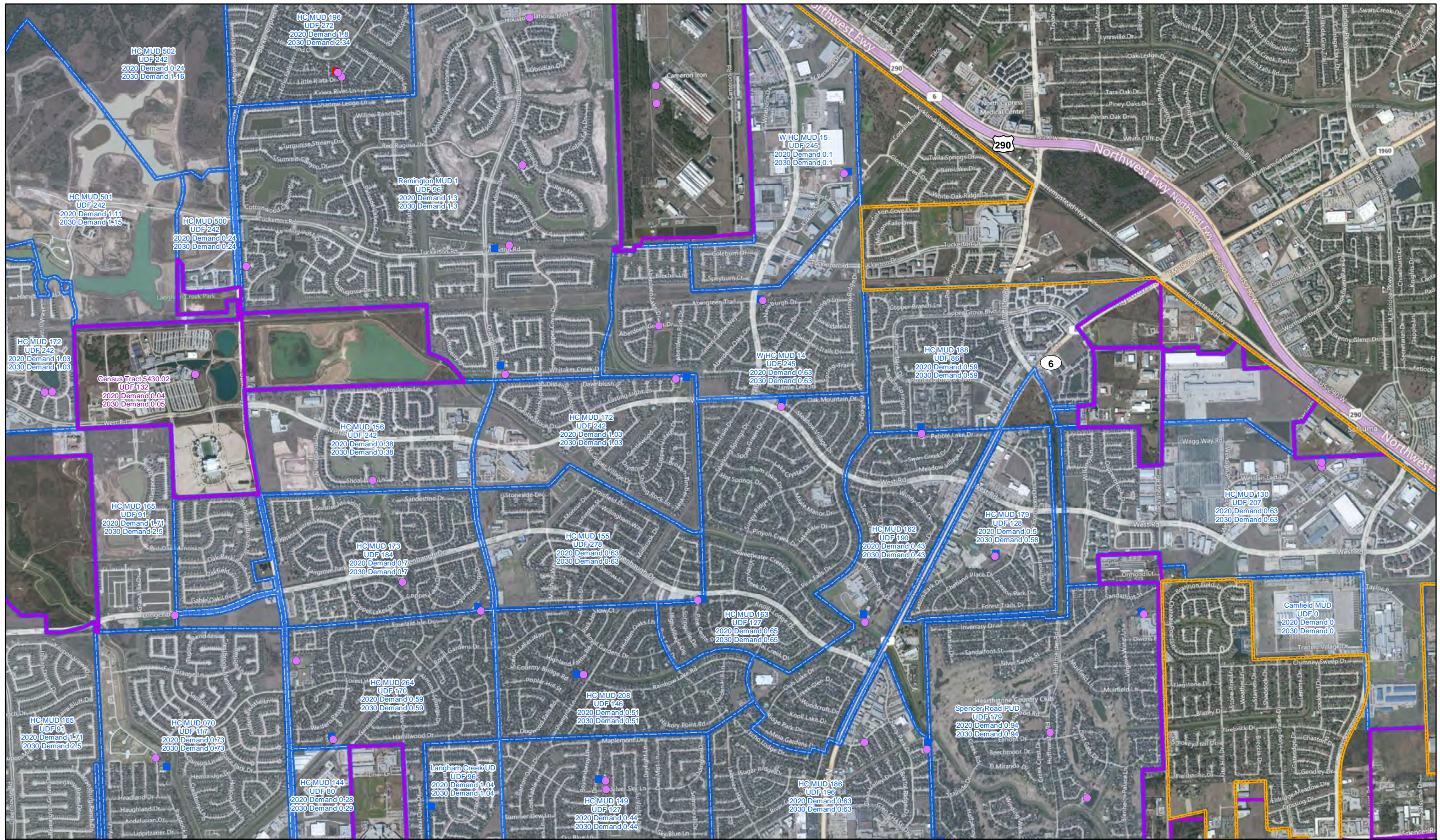




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet D2

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- Remainder of Census Tracts
- City of Katy
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- WHC Pump Stations
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- WP Not Converted
- WP Not in WHCRWA

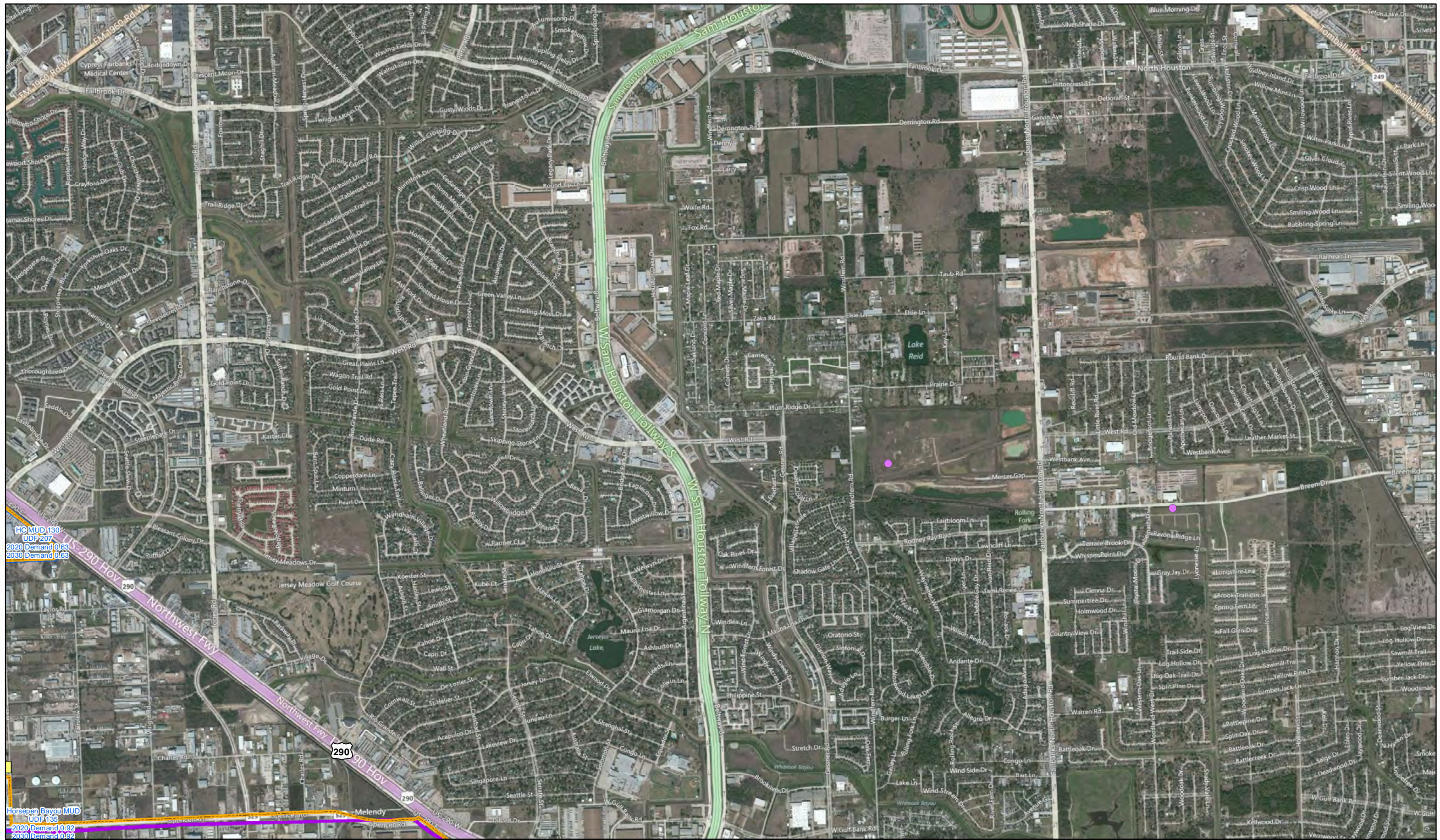




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet D3

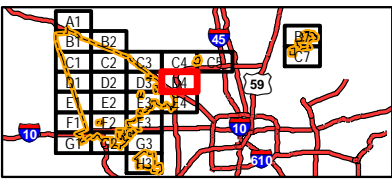
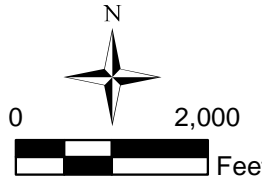
- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

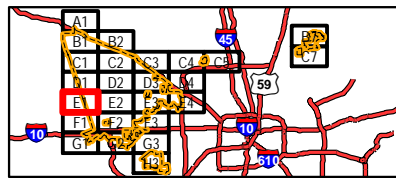
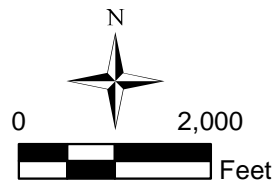
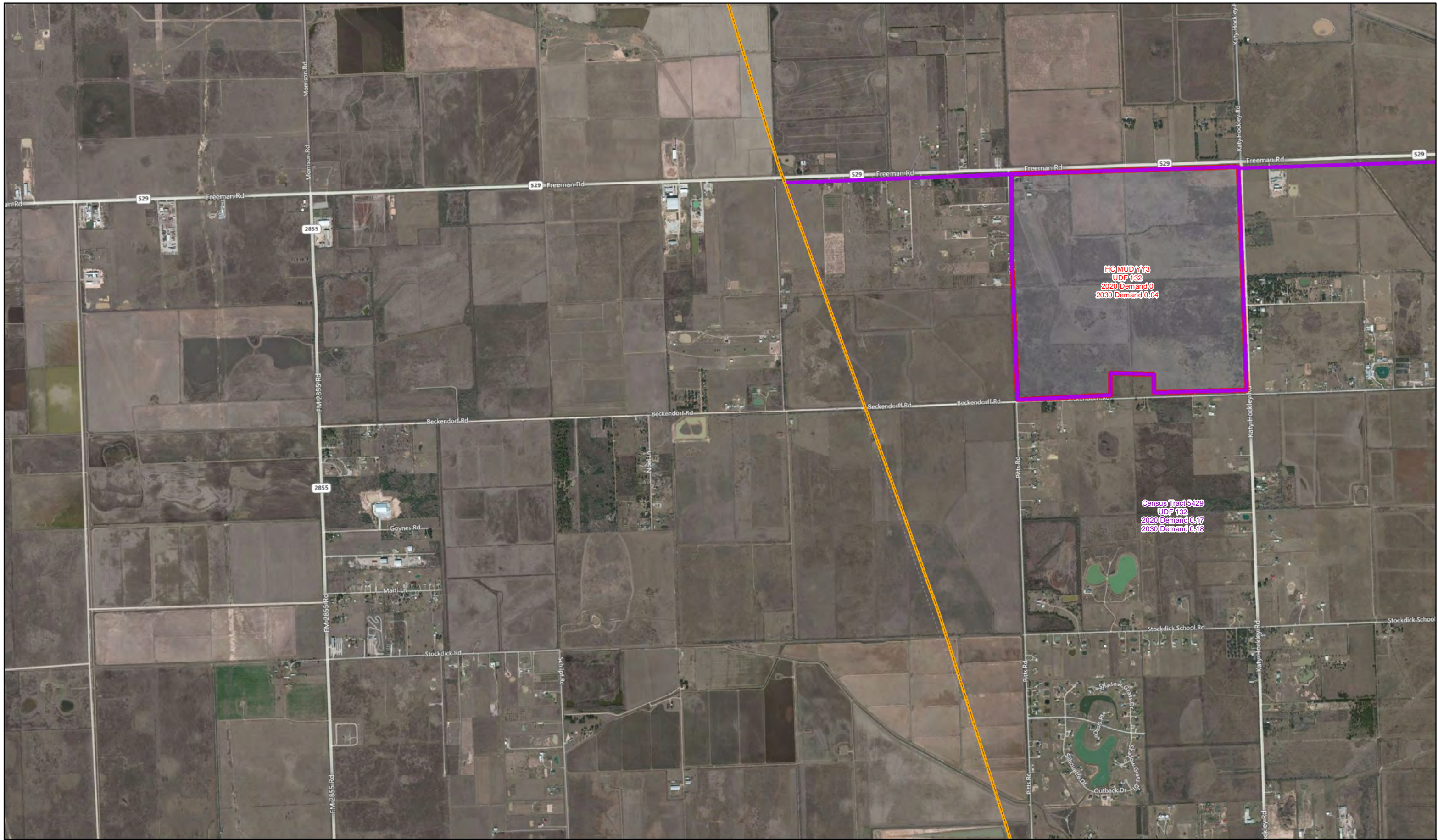




WHCRA 2012 Population Projections Exhibit 4 - Mapbooks Sheet D4

- WHCRA Boundary
- WHCRA MUDs
- Future WHCRA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRA

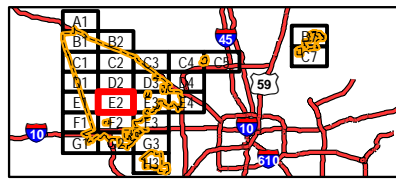
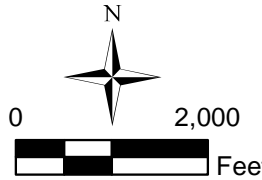
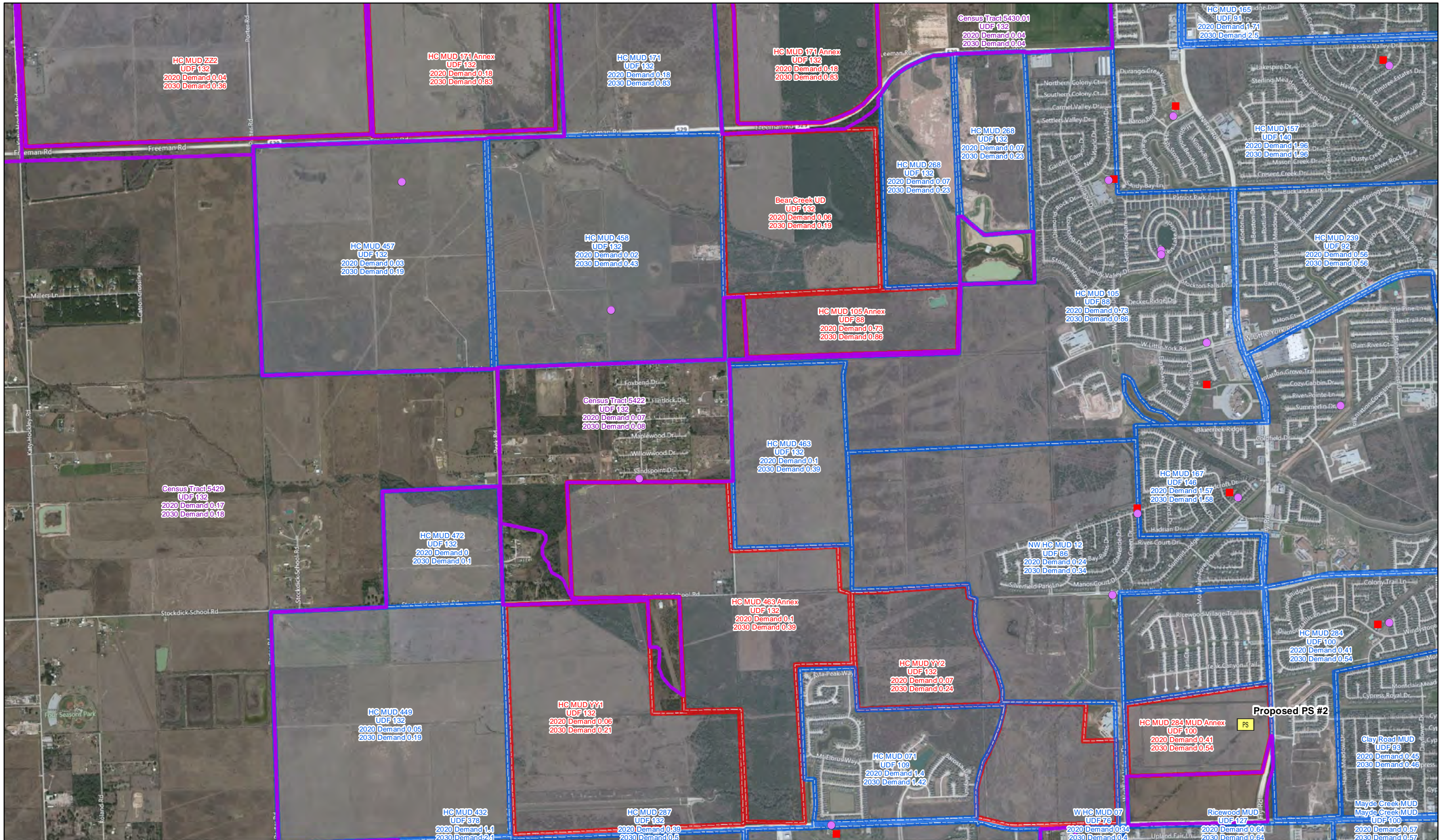




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet E1

- WHCRWA Boundary
- City of Katy
- WP Converted
- WHCRWA MUDs
- WHC Water Wells
- WP Not Converted
- Future WHCRWA MUDs
- WHC Pump Stations
- WP Not in WHCRWA
- Remainder of Census Tracts





WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet E2

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA



For the 2012 projections, MIS provided detailed information regarding where future growth will occur within the remainder of census tracts. Information such as distance to large areas employment, access to major thoroughfares, and school districts were considered as part of the future growth projections. Based on information from MIS, the land within the Waller ISD is anticipated to develop slower than the land located within the Cypress-Fairbanks ISD and Katy ISD. The boundaries for the school districts located within the Authority are shown in Exhibit 6. This detailed allocation of growth will allow for more accurate hydraulic modeling and will better assist in developing the Authority’s CIP. Areas identified for future growth are shown by assuming existing MUDs will annex the areas where growth is expected or a new MUD will potentially be created. The boundaries for the existing MUDs that may annex one of the future developments are shown with the MUD name plus the word “Annex” on the Mapbook in Exhibit 4. Any potential new MUDs are labeled with an alphabetic notation such as MUD XYZ on the Mapbook in Exhibit 4.

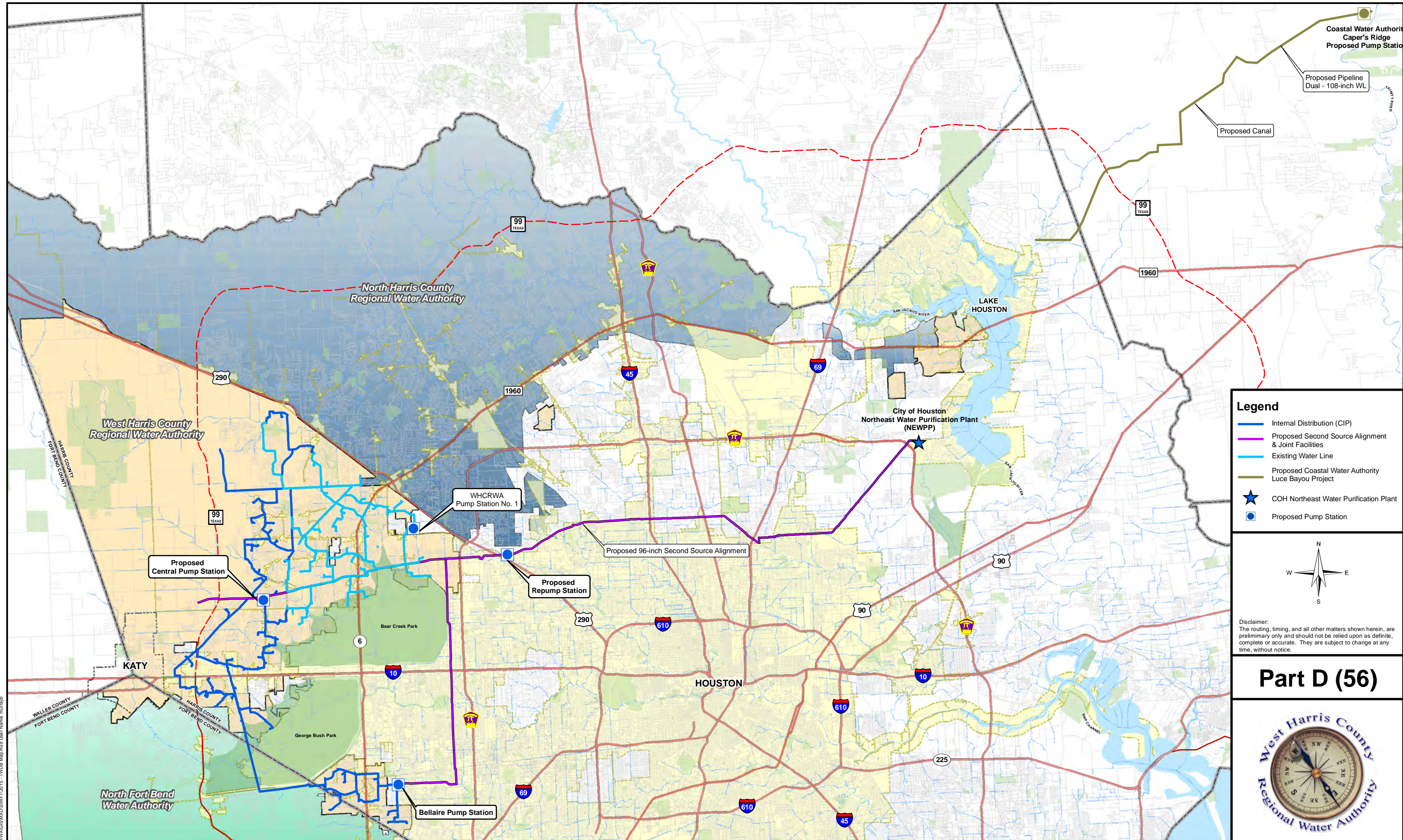
Population Projections Summary:

Based on information from MIS, the Authority population between south of Clay Rd and east of Barker Cypress is anticipated to be built-out in 5 years. The remaining significant growth in the Authority is expected to take place along the Grand Parkway corridor. The estimated population growth percent increase from 2010 to 2030 is shown in Exhibit 7. Table 1 summarizes the Authority population from 2010 through the projected 2050 population.

Table 1: Authority 2010 and Projected Population

2010	2020	2030	2040	2050
461,771	548,677	631,746	681,985	722,880

Part D



Legend

- Internal Distribution (CIP)
- Proposed Second Source Alignment & Joint Facilities
- Existing Water Line
- Proposed Coastal Water Authority Luce Bayou Project
- ★ COH Northeast Water Purification Plant
- Proposed Pump Station

North arrow and disclaimer:

Disclaimer:
The routing, timing, and all other matters shown herein, are preliminary only and should not be relied upon as definite, complete or accurate. They are subject to change at any time, without notice.

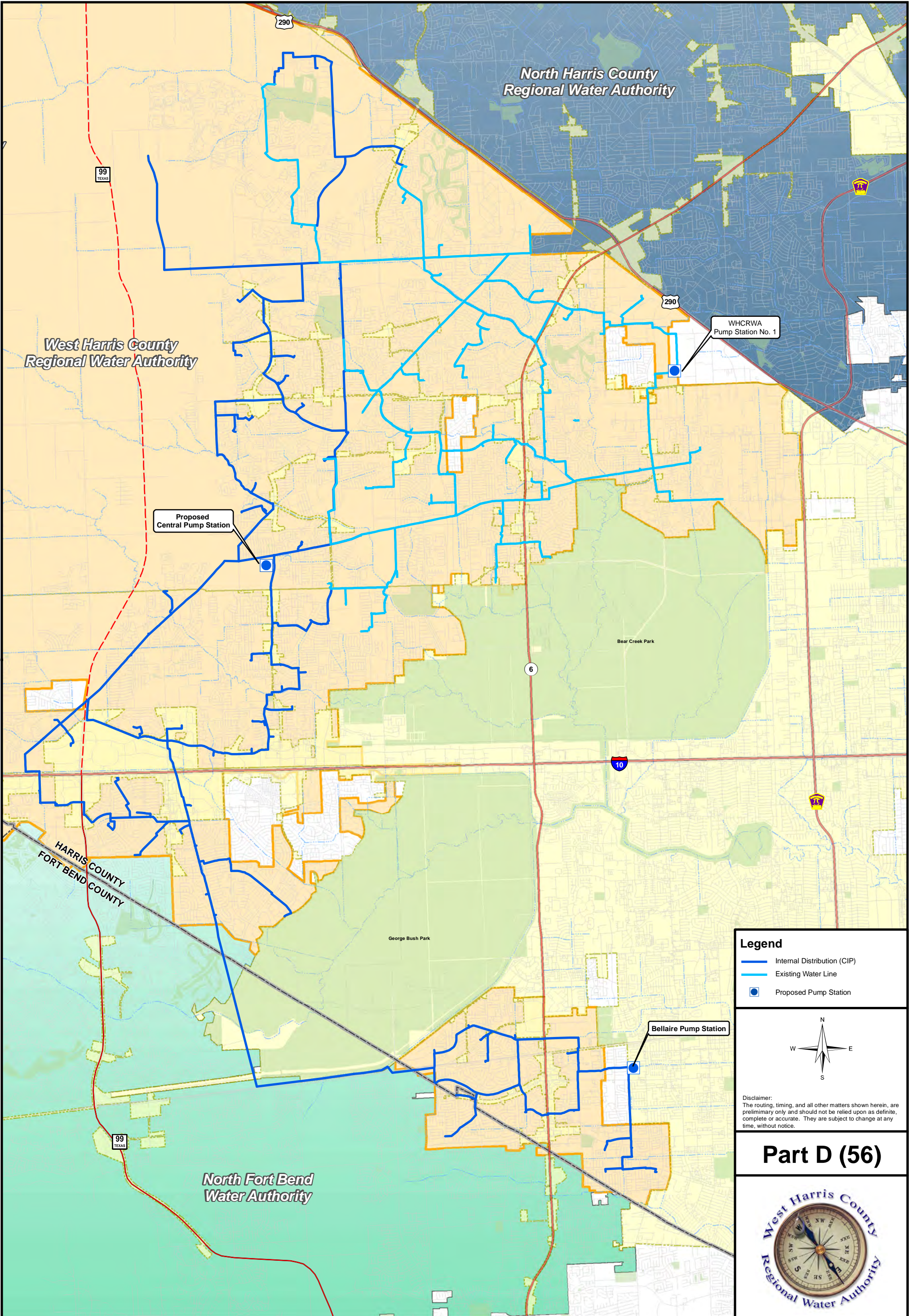
Part D (56)



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3100 WEST ALABAMA HOUSTON, TX 77098 (713) 520-8570

WHCRWA Program Overview

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Proposed Central Pump Station

WHRWA Pump Station No. 1

Bellaire Pump Station

Legend

- Internal Distribution (CIP)
- Existing Water Line
- Proposed Pump Station



Disclaimer:
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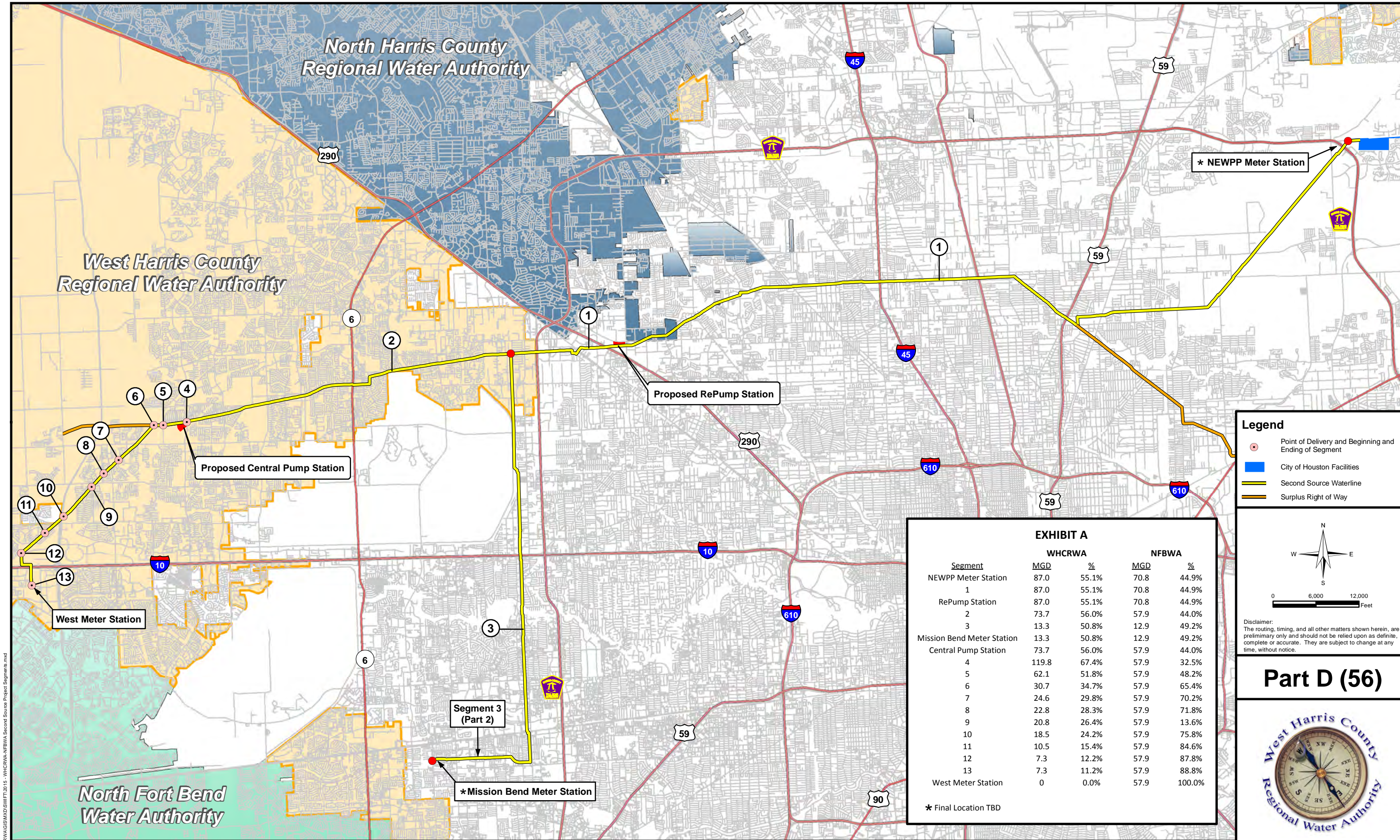
Part D (56)



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WHCRWA Internal Distribution (CIP)

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Legend

- Point of Delivery and Beginning and Ending of Segment
- City of Houston Facilities
- Second Source Waterline
- Surplus Right of Way

0 6,000 12,000 Feet

Disclaimer:
The routing, timing, and all other matters shown herein, are preliminary only and should not be relied upon as definite, complete or accurate. They are subject to change at any time, without notice.

EXHIBIT A

Segment	WHCRWA		NFBWA	
	MGD	%	MGD	%
NEWPP Meter Station	87.0	55.1%	70.8	44.9%
1	87.0	55.1%	70.8	44.9%
RePump Station	87.0	55.1%	70.8	44.9%
2	73.7	56.0%	57.9	44.0%
3	13.3	50.8%	12.9	49.2%
Mission Bend Meter Station	13.3	50.8%	12.9	49.2%
Central Pump Station	73.7	56.0%	57.9	44.0%
4	119.8	67.4%	57.9	32.5%
5	62.1	51.8%	57.9	48.2%
6	30.7	34.7%	57.9	65.4%
7	24.6	29.8%	57.9	70.2%
8	22.8	28.3%	57.9	71.8%
9	20.8	26.4%	57.9	13.6%
10	18.5	24.2%	57.9	75.8%
11	10.5	15.4%	57.9	84.6%
12	7.3	12.2%	57.9	87.8%
13	7.3	11.2%	57.9	88.8%
West Meter Station	0	0.0%	57.9	100.0%

* Final Location TBD

Part D (56)



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WHCRWA Transmission (Second Source Project)

Document Path: G:\110\WHCRWA\GIS\MapDocs\WFT2015 - WHCRWA - NFBWA - Second Source Project Segments.mxd

West Harris County Regional Water Authority (WHCRWA)

Entities to be Served (Source: WHCRWA GRP as of January 2015)

Entity Name	
1.	Addicks UD
2.	Barker Cypress MUD
3.	Bear Creek UD
4.	Beechnut MUD
5.	Bissonnet MUD
6.	Camfield MUD
7.	Castlewood MUD
8.	Chelford City MUD
9.	Chelford One MUD
10.	Cimarron MUD
11.	Clay Road MUD
12.	Fry Road MUD
13.	HC MUD 102
14.	HC MUD 105
15.	HC MUD 106
16.	HC MUD 120
17.	HC MUD 127/239
18.	HC MUD 130
19.	HC MUD 132
20.	HC MUD 136
21.	HC MUD 144
22.	HC MUD 147
23.	HC MUD 149
24.	HC MUD 151
25.	HC MUD 152
26.	HC MUD 155
27.	HC MUD 156
28.	HC MUD 157
29.	HC MUD 162
30.	HC MUD 163
31.	HC MUD 165
32.	HC MUD 166
33.	HC MUD 167
34.	HC MUD 171
35.	HC MUD 172
36.	HC MUD 173
37.	HC MUD 179
38.	HC MUD 180
39.	HC MUD 183

40.	HC MUD 185
41.	HC MUD 186
42.	HC MUD 188
43.	HC MUD 196
44.	HC MUD 197
45.	HC MUD 208
46.	HC MUD 225
47.	HC MUD 238
48.	HC MUD 250
49.	HC MUD 255
50.	HC MUD 257
51.	HC MUD 263
52.	HC MUD 264
53.	HC MUD 268
54.	HC MUD 276
55.	HC MUD 284
56.	HC MUD 287
57.	HC MUD 306
58.	HC MUD 328
59.	HC MUD 329
60.	HC MUD 330
61.	HC MUD 341
62.	HC MUD 370
63.	HC MUD 371
64.	HC MUD 374
65.	HC MUD 375
66.	HC MUD 376
67.	HC MUD 377
68.	HC MUD 378
69.	HC MUD 379
70.	HC MUD 380
71.	HC MUD 405
72.	HC MUD 418
73.	HC MUD 419
74.	HC MUD 432
75.	HC MUD 433
76.	HC MUD 434
77.	HC MUD 435
78.	HC MUD 437
79.	HC MUD 438
80.	HC MUD 457
81.	HC MUD 458
82.	HC MUD 46

83. HC MUD 500
84. HC MUD 501
85. HC MUD 502
86. HC MUD 503
87. HC MUD 532
88. HC MUD 533
89. HC MUD 534
90. HC MUD 61
91. HC MUD 62
92. HC MUD 63
93. HC MUD 64
94. HC MUD 70
95. HC MUD 71
96. HC MUD 76
97. HC MUD 81
98. HC UD 6
99. HC WCID 157
100. H-FBC MUD 3
101. H-FBC MUD 4
102. Horsepen Bayou MUD
103. Interstate MUD
104. Jackrabbit Road PUD
105. Langham Creek UD
106. Mayde Creek MUD
107. Memorial MUD
108. Mission Bend MUD 1
109. Mission Bend MUD 2
110. Morton Road MUD
111. Nottingham Country MUD
112. NW HC MUD 12
113. Remington MUD 1
114. Renn Road MUD
115. Ricewood MUD
116. Rolling Creek UD
117. Spencer Road PUD
118. Trail of the Lakes
119. W HC MUD 14
120. W HC MUD 15
121. W HC MUD 17
122. W HC MUD 2
123. W HC MUD 4
124. W HC MUD 5
125. W HC MUD 7

126. West Memorial MUD
127. West Park MUD
128. Westlake MUD 1
129. Weston MUD
<i>Note: This list includes the WHCRWA Municipalities and Municipal Utility Districts within the</i>
<i>130. WHCRWA's Groundwater Reduction Plan as of January 2015. Additional entities will be added as</i>
<i>more districts are created in the future.</i>



West Harris County Regional Water Authority

2012 POPULATION AND WATER DEMAND PROJECTIONS

Introduction:

Population and water demand projections were previously completed in 2004 and updated in 2006. The scope of this project is to verify the previous water demand projections for the West Harris County Regional Water Authority (Authority) based on the 2010 census.

Water demand projections are based on population projections and water use demand factors. Water production, water use, existing population, and future population projections were used to calculate water demand factors and project future water use. Sources for the population and water demand data include:

- 1) Census Bureau 2010 census data for the areas within the Authority's boundary,
- 2) The services of Municipal Information Services (MIS) were acquired to allocate the 2010 population data and provide population projections for the Authority from 2010 through 2050,
- 3) Boundary data for the Authority and Municipal Utility Districts (MUDs) was obtained from:
 - a. West Harris County Regional Water Authority (Authority),
 - b. U.S. Census Bureau - Census Tract (CT) boundaries,
 - c. Harris County Appraisal District (HCAD) - Water utility boundary information,
 - d. Municipal Information Services (MIS), and
- 4) Pumpage data for non-exempt water users within the Authority.

Population Projections Methodology:

The services of MIS were acquired to divide the 2010 census tract population by MUDs and develop the future population projections. Dr. Ronald Welch, Ph.D. owns and is the primary consultant for MIS. Dr. Welch was previously an economist with the University of Houston's Institute for Regional Forecasting and has been working in the Houston metro area since the mid-1970s. Dr. Welch also updates DATABook Houston for the University of Houston's Hobby Center for Public Policy on a monthly basis. DATABook Houston includes employment and population projections in five year increments for Suburban Harris County (SHC) through 2040. The population estimates are based on SHC's expected shares of the expected annual population growth for the entire metropolitan statistical area. The Authority's historical population estimates and short-run forecasts were compared to SHC's population forecasts to derive a series of the capture rates for the Authority utilizing the population growth in SHC. The long-run forecasts of population growth in the Authority were based on the historical trends for those capture rates. Population projections were developed by census tract and by MUD within the Authority utilizing the Census Bureau's 2010 census data. Population projections were provided for the Authority from 2010 through 2050.

MIS has been compiling information regarding the 700+ Houston area MUDs and other water districts since the mid-1970s. The MIS database contains breakdowns for all the MUDs and other water districts the Authority wholly or partially overlaps dating back to the 1980 tax year. These breakdowns provide one of the bases for providing past and current population estimates. Other bases for providing past and current population estimates include data from the 1980, 1990, 2000, and the most recent 2010 decennial censuses. In addition, GIS parcel data from the

Harris County Appraisal District (HCAD), in conjunction with aerial imagery, was used to estimate the housing and population estimates for non-MUD areas of a jurisdiction.

MIS aggregates the MUD and non-MUD data by census tracts if a jurisdiction wholly or partially overlaps a census tract. If a MUD overlaps two or more census tracts, then the data for that MUD is allocated to the census tract in which the housing units are actually located. The two vital statistics from the decennial census data for each census tract that are used to generate the population estimates are the occupancy rates of the housing units and the persons per occupied unit. The housing units from the 2010 Census Data for each census tract were reconciled with the housing units in MUDs from their 2010 tax rolls plus the housing units in non-MUD areas from the 2010 HCAD parcel data. Ideally, the housing units from the 2010 HCAD parcel data should equal the housing units reported by the Census Bureau. However, MIS identified multiple areas where the housing units did not match. These areas were reconciled and the 2010 populations for each MUD and Census Tract were adjusted accordingly. Based on research by MIS, the differences were due to incorrect calculation of housing units in the 2010 census data of mobile homes and apartments.

Dr. Welch toured the majority of the active subdivisions in all the MUDs to determine the current levels of building activities. Additionally, Dr. Welch talked to engineers, developers, and other MUD industry professionals active within the Authority for an indication of new projects that are in some stage of planning and to determine the timing of such developments. Based on this information and the historical growth rates in the MUDs in each of the census tracts, the population estimates within the Authority's boundary were determined for 2010 through 2050.

Summary of GRP Methodology:

As in the 2002 GRP, three (3) categories of water users were evaluated and updated. The three categories of users include:

1. Active MUDs including Contract MUDs;
2. Dormant MUDs; and,
3. Non-Muds (previously, Remainders of Census Tracts).

The methods applied in projecting water demand varied based on whether the area under consideration is an Active MUD, Dormant MUD, or Remainder of a Census Tract.

Active, Dormant, and Contract MUDs:

A current list of active and dormant MUDs within the Authority was developed for the population projections, see Exhibit 1. It was determined that numerous inactive, or dormant, MUDs are located within the WHCRWA in addition to the active MUDs. The Authority's boundary is shown on Exhibit 2: Overall MUD Index. The Authority's boundary has not changed since being officially created by the Texas 77th Legislature in 2001. However, the boundaries of many of the MUDs within and surrounding the WHCRWA have changed since the boundary was formed. A mapbook showing the detailed location of the Authority's MUDs is shown on Exhibit 4.

The changes in the MUD boundaries have been primarily through annexation. The official Authority boundary was used for the projections unless a known Authority MUD extended beyond the Authority's boundary, or a MUD was determined to be part of a GRP of another

entity. During this process the following MUDs were identified as not matching the Authority's boundary or were found not to be part of the Authority.

- The following Contract MUDs extend beyond the Authority's boundary.
 - HC MUD 106
 - HC MUD 132
 - HC MUD 151
 - HC MUD 152
 - Trail of Lakes MUD
- HC MUD 158 – Opted out of the Authority, but has since annexed area within the Authority's boundary. The area annexed within the Authority's boundary now includes the majority of HC MUD 243.
- HC MUD 197 – Listed as a dormant MUD within the Authority. However, the majority of the MUD has been annexed by Spencer Rd MUD and HC MUD 102.
- HC MUD 243 – Currently listed as a dormant MUD, but the majority of the MUD has been annexed by HC MUD 158.
- HC MUD 248 – Documentation from bond sales state HC MUD 248 is part of the North Harris County Regional Water Authority (NHCRWA).
- Cypress Hill MUD – A small portion of the MUD is shown as being located within the Authority's boundary, but the majority of the MUD is located in the NHCRWA.
- HC MUD 263 – Listed as a dormant MUD within the Authority. The MUD was dissolved on April 29, 2005.
- All MUDs within the City of Katy's city limits were assumed to be provided water by the City and are included in the City of Katy population projections. The City of Katy population used in the demand projections is only for the portion of the City within the Authority's boundary.

- The boundaries for the HC MUDs 437, 438, and 503 were not able to be determined and are listed as dormant by the Authority. Population located within these MUDs was included in the Non-MUD population projections.

Based on historical information the following MUDs were determined to have opted out of the Authority and were not included in the population projections:

- Baker Road MUD
- Chimney Hill MUD
- Cinco MUD 3
- Cinco MUD 6
- Cinco MUD 9
- Cornerstone MUD
- Green Trails MUD
- HC FWSD 61
- HC MUD 158
- HC MUD 216
- HC MUD 345
- HC MUD 346
- HC MUD 65
- Kingsbridge MUD
- Longhorn Town UD
- Mason Creek UD
- NW HC MUD 16
- W HC MUD 6

The population projections for MUDs and Non-MUDs located within large developments were combined, such as the Bridgeland and the Esra Grae developments. The Bridgeland development includes HC MUDs 418, 419, and 462 in addition to the surrounding “Non-MUD” areas labeled “Bridgeland” on Sheets C2 and D2 in Exhibit 4. The Esra Grae tract will partially be in HC MUD 165. MIS assumed HC MUD 165 will annex the rest of the Esra Grae development; therefore all of the population projections for this development are included with the HC MUD 165 population projections, as shown on Sheet D2 in Exhibit 4.

Non-MUD Areas (Remainder of Census Tracts):

Portions of census tracts outside of MUDs are largely undeveloped and in this study are referred to as “Non-MUDs”. The boundaries of the census tracts located within the Authority’s boundary are shown on Exhibit 3 and in more detail in the Mapbook in Exhibit 4.

One significant change from previous water demand projections is how the Non-MUD Population Growth is shown in the projections. In previous water demand calculations, the projected population within the remainder of each census tract was assumed to be distributed evenly throughout the census tract. However, some areas within census tracts are not available for residential development. Census Tract 5431 located west of Katy Hockley Rd and north of Freeman Rd within the Authority has large areas that will not be available for development due to the following.

- A large parcel of land is protected by the Katy Prairie Conservancy, which includes the Warren Ranch.
- In addition to the Warren Ranch there is a ranch currently in the process to become part of the USDA Farm and Ranch Lands Protection Program, which will keep the land in agriculture uses.
- Another environmentally protected area is the Katy-Cypress Mitigation Bank.
- Existing commercial and industrial operations, such as the Hockley Salt Domes will also limit residential growth.

Many of the areas in the northwestern portion of the Authority can be identified on the land use map in Exhibit 5.

A comparison with previous population projections is shown on the graph in Exhibit 8.

Additionally, detailed population projections by MUD and census tract are shown in the table in Exhibit 9.

Water Demand Projections:

In addition to updating the population projections, information regarding water use and the estimation of water demand factors were updated based on recent monthly pumpage reports.

Water demand projections were developed for each MUD within the Authority as well as the Non-MUD areas (remainder of each census tracts). The non-exempt groundwater and surface water usage for users within the Authority from 2008 through 2011 were reviewed. The summary of the Authority's water pumpage is shown in Exhibit 10. The total water pumpage within the Authority increased approximately 25% from 2010 to 2011 due primarily to the historic drought experienced in 2011.

Climate information for Harris County was reviewed and compared to pumpage data to determine the impact the historical 2011 drought had on the Authority's water pumpage. A summary of the climate data is shown in Table 2.

Table 2: Houston Average Climate Data

Bush Intercontinental Airport (IAH) Climate Data							
	2006	2007	2008	2009	2010	2011	Average (1981-2010)
Average Temp. (F)	70.6	69.7	69.9	70.3	69.3	71.5	69.8
Total Rainfall (in.)	57.7	62.3	41.3	46.2	41.3	23.2	49.8

Based on the historic climate and pumpage data, the water pumpage from 2009 and 2010 appear to be an accurate representation of the average water usage within the Authority. The higher water pumpage of the years 2009 and 2010 was used on a MUD-by-MUD basis to develop the water use factors for each MUD. This approach is more conservative than using only the 2010 data, but not as conservative as using the pumpage data during the historical 2011 drought.

A Unit Demand Factor (UDF) in gallons per capita per day (gpcd) was calculated for each MUD by dividing the 2010 MUD population by the highest of the two pumpage years, 2009 or 2010. The UDF was used to determine the future water demand for each MUD by multiplying the UDF times the future MUD population. If pumpage data was available for a specific MUD it was used as the basis for projecting future water demand. This assumes water demand will grow at the same rate as population. If pumpage data was not available for a MUD or “Non-MUD” area, then the Authority’s average UDF was used to calculate the water demand. The Authority’s average calculated UDF is 132 gpcd. In comparison, the Authority’s average UDF is very similar to the UDF (134 gpcd) developed by Freese and Nichols for the Harris Galveston Subsidence District (HGSD) water demand calculations.

Many of the private well owners within the Authority were associated with home owner associations (HOAs) or golf courses. If a private groundwater well was able to be located within a MUD and the well was not associated with another MUD, then the groundwater well pumpage was added to the MUD it was located in. A summary of the water demand projections is shown in Table 3 and graphed on Exhibit 11.

Table 3: Authority Water Demand (mgd)

2010	2020	2030	2040	2050
56.4	79.1	92.2	98.8	104.3

The detailed water demand projections by MUD and remainder of Census Tract are shown on Exhibit 12.

Factors Impacting Water Demand Projections:

A variety of factors can significantly impact the future demand projections. The two key factors affecting future water usage in the Authority will be climate conditions, such as temperature and rainfall, and changes in water rates. Typically, average water usage will trend downward when water rates increase. Significant droughts most likely create a surge in water usage, such as the water usage increase during the 2011 drought.

Summary:

The anticipated average daily water demand at 2050 for the Authority is approximately 104.3 million gallons per day (MGD). A comparison of the water demand projections between the 2006 projections and the 2012 projections is shown in Table 4.

Table 4: Water Demand Projections for Authority

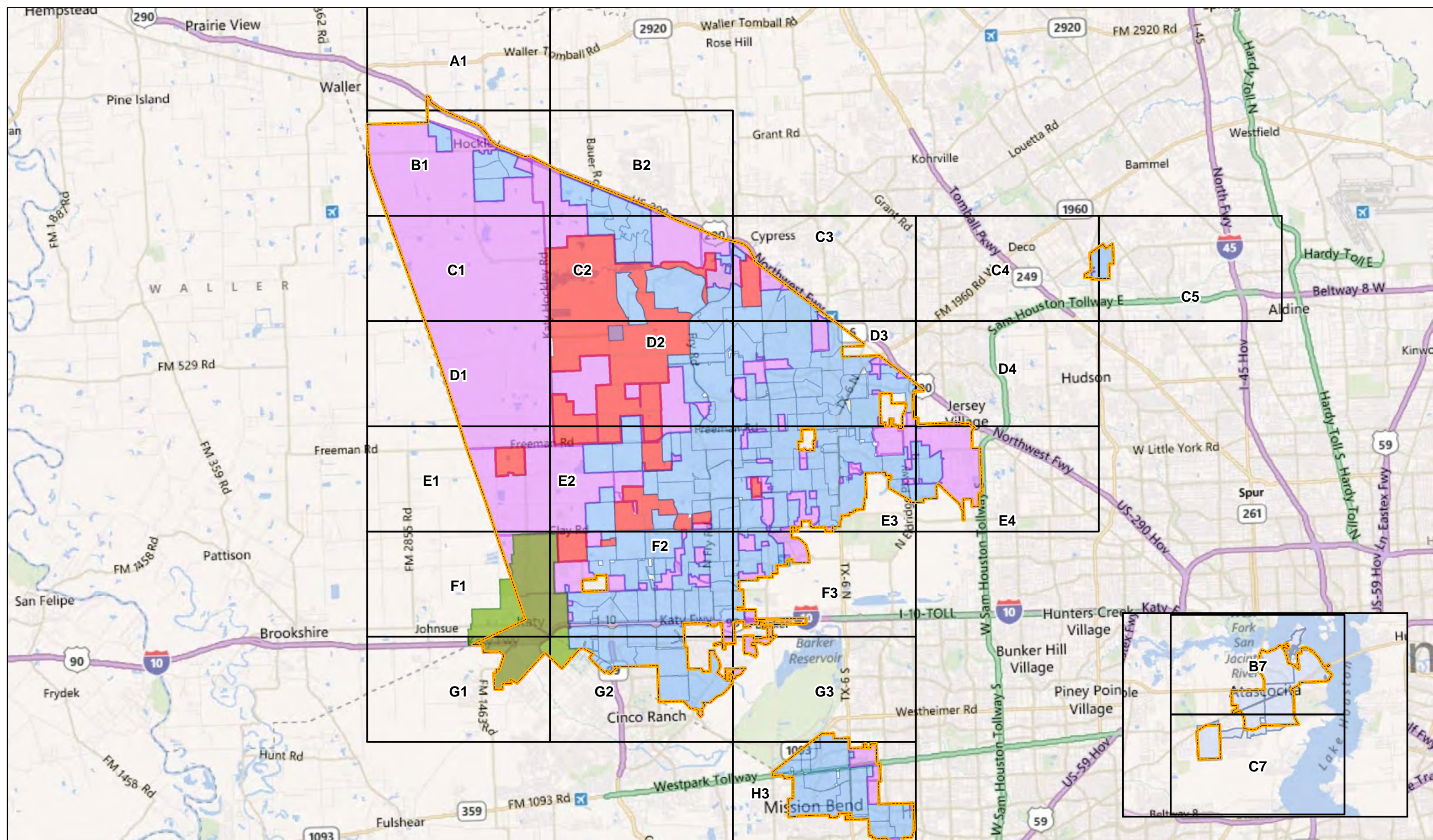
	2020	2030	2040	2050
2006 Projections	80.3 MGD	91.9 MGD	98.8 MGD	102.5 MGD
2012 Projections	79.1 MGD	92.2 MGD	98.8 MGD	104.3 MGD

EXHIBIT 1
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY - DIRECTOR PRECINCTS

PRECINCT 1	PRECINCT 2	PRECINCT 3	PRECINCT 4	PRECINCT 5	PRECINCT 6	PRECINCT 7	PRECINCT 8	PRECINCT 9	WHCRWA Contract MUDs
Beechnut MUD	HC MUD 120	Cimarron MUD	Addicks UD	Clay Road MUD	HC MUD 149	HC MUD 155	Camfield MUD	City of Katy*	HC MUD 46
Bissonnet MUD	Castlewood MUD	HC MUD 81	Barker Cypress MUD	HC MUD 70	HC MUD 166	HC MUD 162	HC MUD 102	Bear Creek UD+	HC MUD 106
Chelford City MUD *	Fry Road MUD	H-FBC MUD 3*	HC MUD 71	HC MUD 127	HC MUD 257	HC MUD 163	HC MUD 130	HC MUD 61	HC MUD 132
Chelford One MUD	Nottingham Country MUD	Interstate MUD	HC MUD 136	HC MUD 144	HC MUD 276	HC MUD 172	HC MUD 185	HC MUD 62	HC MUD 151
HC MUD 147	Weston MUD	Memorial MUD*	HC MUD 183	HC MUD 156	HC UD 6	HC MUD 179	HC MUD 197+	HC MUD 63	HC MUD 152
Mission Bend MUD 1*	West Park MUD	West Memorial MUD	HC MUD 238	HC MUD 165	Jackrabbit Road PUD	HC MUD 186	HC MUD 250	HC MUD 64	HC MUD 180
Mission Bend MUD 2	W HC MUD 17		Mayde Creek MUD	HC MUD 167	Langham Creek UD	HC MUD 188	HC MUD 255	HC MUD 76+	Trail of the Lakes MUD
Renn Road*			Morton Road MUD	HC MUD 171+		HC MUD 208	HC MUD 341	HC MUD 105	
W HC MUD 4*			Ricewood MUD	HC MUD 173			HC MUD 370	HC MUD 157	
HC MUD 243+			Rolling Creek UD	HC MUD 196			Horsepen Bayou MUD	HC MUD 225+	
			Westlake MUD 1	HC MUD 239			Spencer Road PUD	HC MUD 263+	
			W HC MUD 7	HC MUD 264				HC MUD 268+	
				HC MUD 284				HC MUD 287+	
				HC MUD 371				HC MUD 306+	
				HC MUD 374				HC MUD 328+	
				HC MUD 375				HC MUD 329+	
				HC MUD 376				HC MUD 330+	
				HC MUD 377				HC MUD 405	
				HC MUD 378				HC MUD 432	
				HC MUD 379				HC MUD 457	
				HC MUD 380				HC MUD 458	
				HC MUD 418				H-FBC MUD 4*	
				HC MUD 419				NW HC MUD 12	
				HC MUD 433				W HC MUD 2	
				HC MUD 434				W HC MUD 5+	
				HC MUD 435+					
				HC MUD 437+					
				HC MUD 438+					
				HC MUD 500					
				HC MUD 501					
				HC MUD 502+					
				HC MUD 503+					
				Remington MUD 1					
				W HC MUD 14					
				W HC MUD 15					
				HC WCID 157					

+ - Dormant

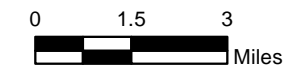
* - Partially in Fort Bend County

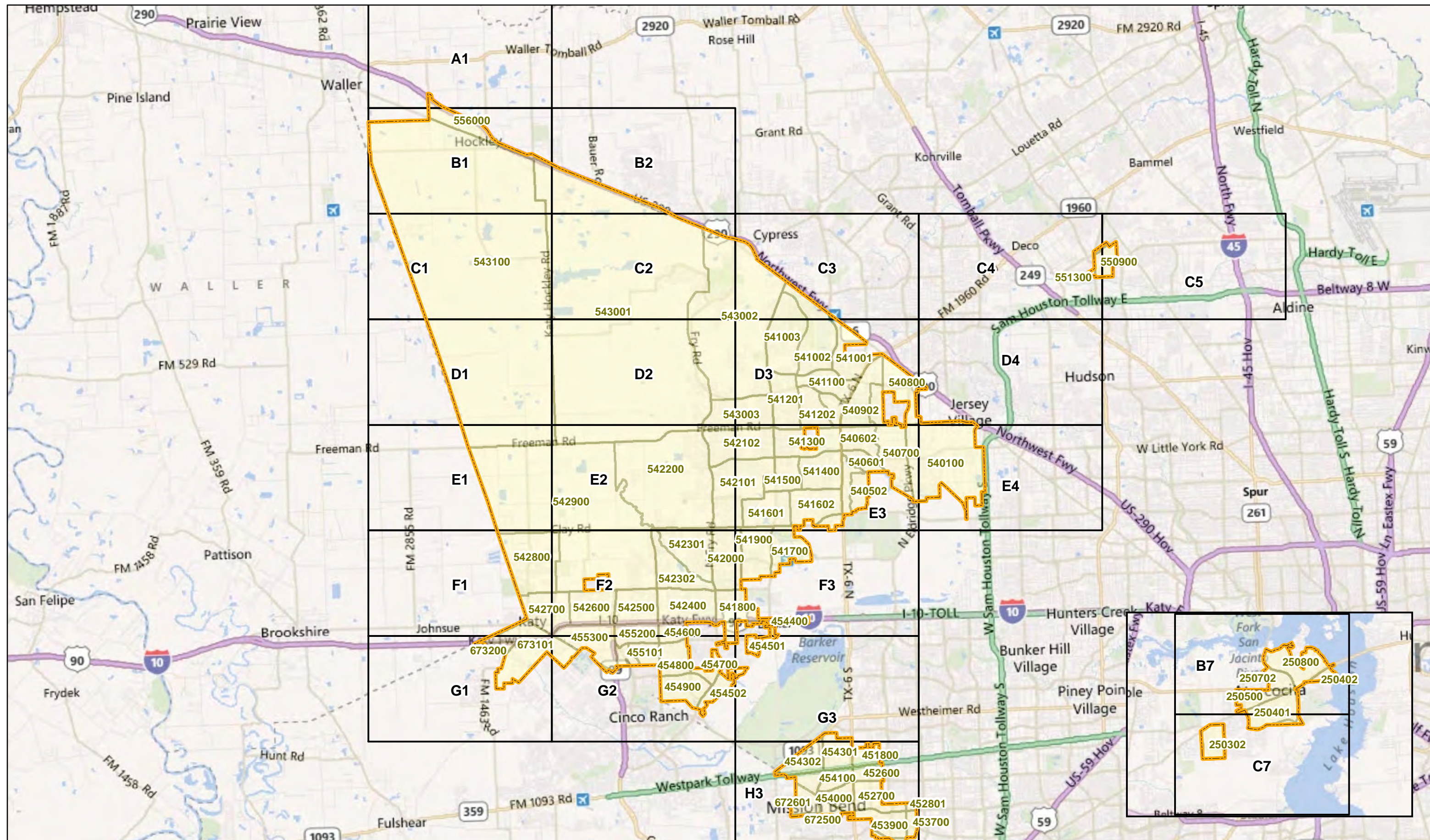


WHCRWA 2012 Population Projections
Exhibit 2
Overall MUD Index
 *See Exhibit 4 for all MUD labels



- WHCRWA Boundary
- WHCRWA Mapbook Grid
- WHCRWA MUDs
- Future WHCRWA MUDs
- City of Katy
- Remainder of Census Tracts

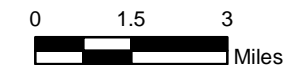




WHCRA 2012 Population Projections
Exhibit 3
Overall Census Tract Index
 *See Exhibit 4 for all Census Tract labels



- WHCRA Boundary
- WHCRA Census Tracts
- WHCRA Mapbook Grid



A comparison with previous population projections is shown on the graph in Exhibit 8.

Additionally, detailed population projections by MUD and census tract are shown in the table in Exhibit 9.

Water Demand Projections:

In addition to updating the population projections, information regarding water use and the estimation of water demand factors were updated based on recent monthly pumpage reports.

Water demand projections were developed for each MUD within the Authority as well as the Non-MUD areas (remainder of each census tracts). The non-exempt groundwater and surface water usage for users within the Authority from 2008 through 2011 were reviewed. The summary of the Authority's water pumpage is shown in Exhibit 10. The total water pumpage within the Authority increased approximately 25% from 2010 to 2011 due primarily to the historic drought experienced in 2011.

Climate information for Harris County was reviewed and compared to pumpage data to determine the impact the historical 2011 drought had on the Authority's water pumpage. A summary of the climate data is shown in Table 2.

Table 2: Houston Average Climate Data

Bush Intercontinental Airport (IAH) Climate Data							
	2006	2007	2008	2009	2010	2011	Average (1981-2010)
Average Temp. (F)	70.6	69.7	69.9	70.3	69.3	71.5	69.8
Total Rainfall (in.)	57.7	62.3	41.3	46.2	41.3	23.2	49.8

Based on the historic climate and pumpage data, the water pumpage from 2009 and 2010 appear to be an accurate representation of the average water usage within the Authority. The higher water pumpage of the years 2009 and 2010 was used on a MUD-by-MUD basis to develop the water use factors for each MUD. This approach is more conservative than using only the 2010 data, but not as conservative as using the pumpage data during the historical 2011 drought.

A Unit Demand Factor (UDF) in gallons per capita per day (gpcd) was calculated for each MUD by dividing the 2010 MUD population by the highest of the two pumpage years, 2009 or 2010. The UDF was used to determine the future water demand for each MUD by multiplying the UDF times the future MUD population. If pumpage data was available for a specific MUD it was used as the basis for projecting future water demand. This assumes water demand will grow at the same rate as population. If pumpage data was not available for a MUD or “Non-MUD” area, then the Authority’s average UDF was used to calculate the water demand. The Authority’s average calculated UDF is 132 gpcd. In comparison, the Authority’s average UDF is very similar to the UDF (134 gpcd) developed by Freese and Nichols for the Harris Galveston Subsidence District (HGSD) water demand calculations.

Many of the private well owners within the Authority were associated with home owner associations (HOAs) or golf courses. If a private groundwater well was able to be located within a MUD and the well was not associated with another MUD, then the groundwater well pumpage was added to the MUD it was located in. A summary of the water demand projections is shown in Table 3 and graphed on Exhibit 11.

Table 3: Authority Water Demand (mgd)

2010	2020	2030	2040	2050
56.4	79.1	92.2	98.8	104.3

The detailed water demand projections by MUD and remainder of Census Tract are shown on Exhibit 12.

Factors Impacting Water Demand Projections:

A variety of factors can significantly impact the future demand projections. The two key factors affecting future water usage in the Authority will be climate conditions, such as temperature and rainfall, and changes in water rates. Typically, average water usage will trend downward when water rates increase. Significant droughts most likely create a surge in water usage, such as the water usage increase during the 2011 drought.

Summary:

The anticipated average daily water demand at 2050 for the Authority is approximately 104.3 million gallons per day (MGD). A comparison of the water demand projections between the 2006 projections and the 2012 projections is shown in Table 4.

Table 4: Water Demand Projections for Authority

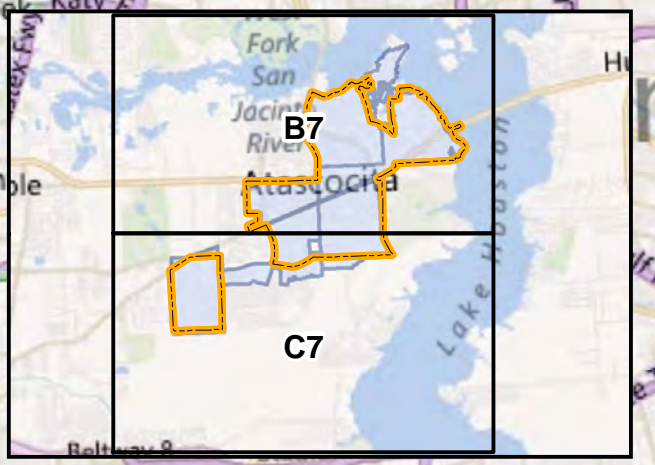
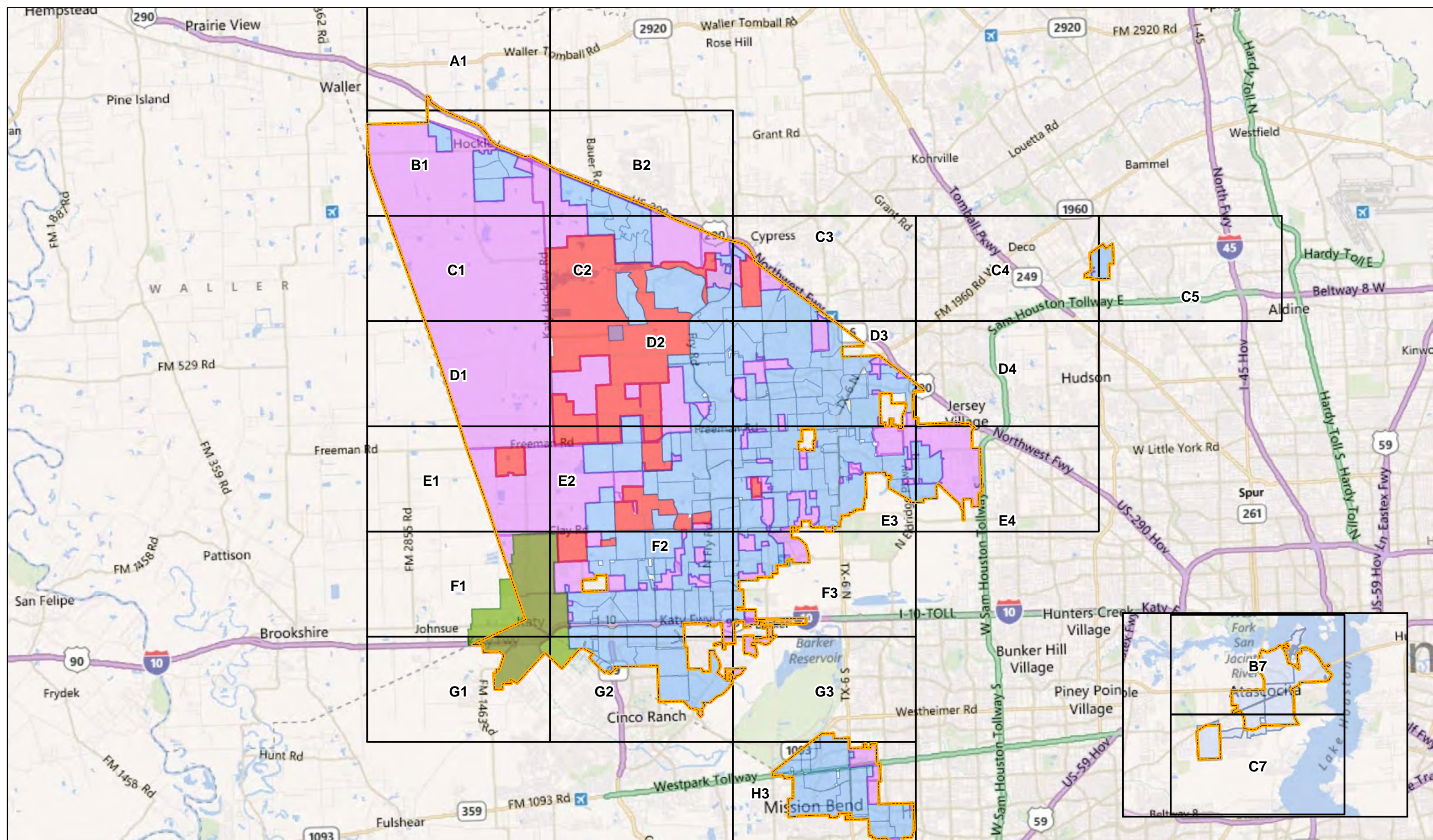
	2020	2030	2040	2050
2006 Projections	80.3 MGD	91.9 MGD	98.8 MGD	102.5 MGD
2012 Projections	79.1 MGD	92.2 MGD	98.8 MGD	104.3 MGD

EXHIBIT 1
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY - DIRECTOR PRECINCTS

PRECINCT 1	PRECINCT 2	PRECINCT 3	PRECINCT 4	PRECINCT 5	PRECINCT 6	PRECINCT 7	PRECINCT 8	PRECINCT 9	WHCRWA Contract MUDs
Beechnut MUD	HC MUD 120	Cimarron MUD	Addicks UD	Clay Road MUD	HC MUD 149	HC MUD 155	Camfield MUD	City of Katy*	HC MUD 46
Bissonnet MUD	Castlewood MUD	HC MUD 81	Barker Cypress MUD	HC MUD 70	HC MUD 166	HC MUD 162	HC MUD 102	Bear Creek UD+	HC MUD 106
Chelford City MUD *	Fry Road MUD	H-FBC MUD 3*	HC MUD 71	HC MUD 127	HC MUD 257	HC MUD 163	HC MUD 130	HC MUD 61	HC MUD 132
Chelford One MUD	Nottingham Country MUD	Interstate MUD	HC MUD 136	HC MUD 144	HC MUD 276	HC MUD 172	HC MUD 185	HC MUD 62	HC MUD 151
HC MUD 147	Weston MUD	Memorial MUD*	HC MUD 183	HC MUD 156	HC UD 6	HC MUD 179	HC MUD 197+	HC MUD 63	HC MUD 152
Mission Bend MUD 1*	West Park MUD	West Memorial MUD	HC MUD 238	HC MUD 165	Jackrabbit Road PUD	HC MUD 186	HC MUD 250	HC MUD 64	HC MUD 180
Mission Bend MUD 2	W HC MUD 17		Mayde Creek MUD	HC MUD 167	Langham Creek UD	HC MUD 188	HC MUD 255	HC MUD 76+	Trail of the Lakes MUD
Renn Road*			Morton Road MUD	HC MUD 171+		HC MUD 208	HC MUD 341	HC MUD 105	
W HC MUD 4*			Ricewood MUD	HC MUD 173			HC MUD 370	HC MUD 157	
HC MUD 243+			Rolling Creek UD	HC MUD 196			Horsepen Bayou MUD	HC MUD 225+	
			Westlake MUD 1	HC MUD 239			Spencer Road PUD	HC MUD 263+	
			W HC MUD 7	HC MUD 264				HC MUD 268+	
				HC MUD 284				HC MUD 287+	
				HC MUD 371				HC MUD 306+	
				HC MUD 374				HC MUD 328+	
				HC MUD 375				HC MUD 329+	
				HC MUD 376				HC MUD 330+	
				HC MUD 377				HC MUD 405	
				HC MUD 378				HC MUD 432	
				HC MUD 379				HC MUD 457	
				HC MUD 380				HC MUD 458	
				HC MUD 418				H-FBC MUD 4*	
				HC MUD 419				NW HC MUD 12	
				HC MUD 433				W HC MUD 2	
				HC MUD 434				W HC MUD 5+	
				HC MUD 435+					
				HC MUD 437+					
				HC MUD 438+					
				HC MUD 500					
				HC MUD 501					
				HC MUD 502+					
				HC MUD 503+					
				Remington MUD 1					
				W HC MUD 14					
				W HC MUD 15					
				HC WCID 157					

+ - Dormant

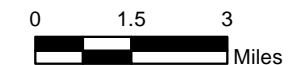
* - Partially in Fort Bend County

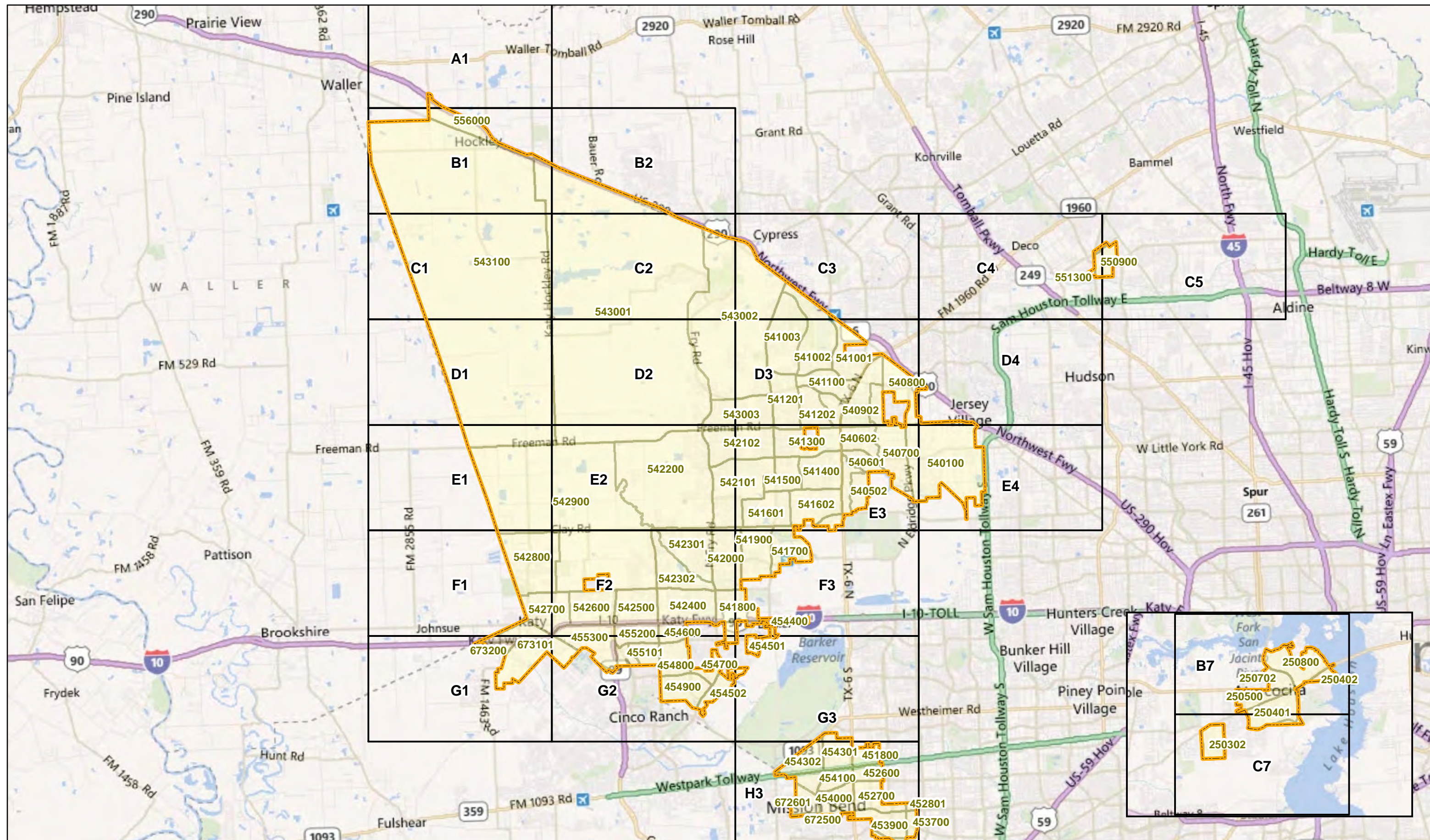


WHCRWA 2012 Population Projections
Exhibit 2
Overall MUD Index
 *See Exhibit 4 for all MUD labels



-  WHCRWA Boundary
-  WHCRWA Mapbook Grid
-  WHCRWA MUDs
-  Future WHCRWA MUDs
-  City of Katy
-  Remainder of Census Tracts

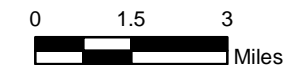


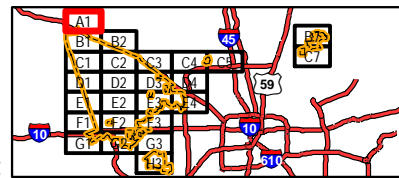
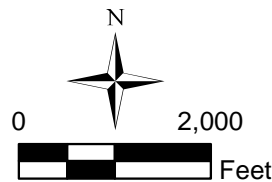
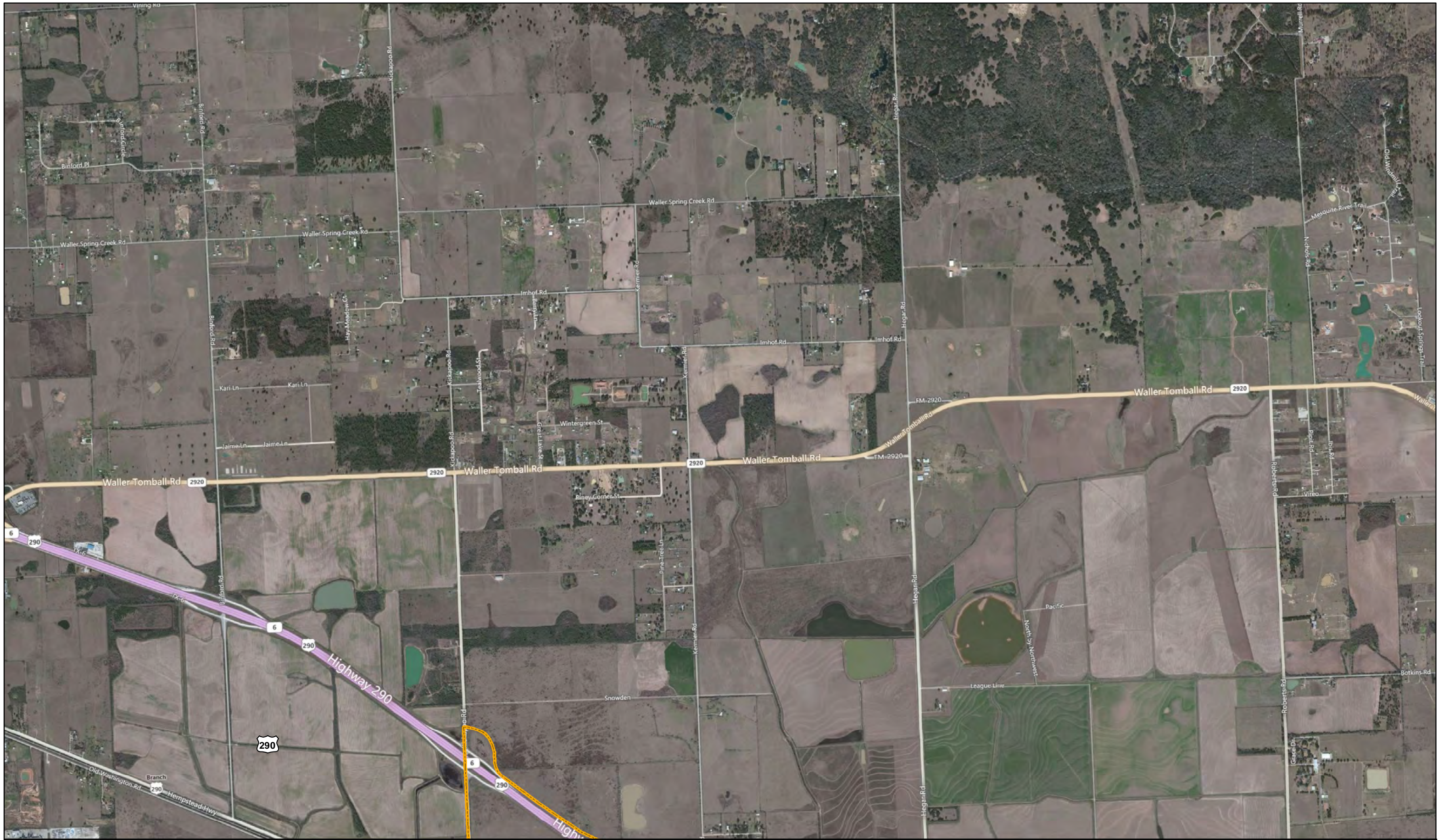


WHCRA 2012 Population Projections
Exhibit 3
Overall Census Tract Index
 *See Exhibit 4 for all Census Tract labels



- WHCRA Boundary
- WHCRA Census Tracts
- WHCRA Mapbook Grid

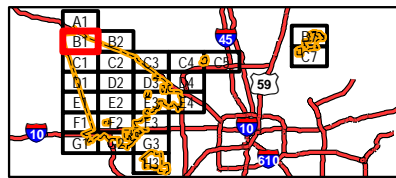
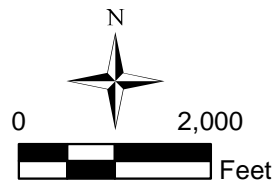
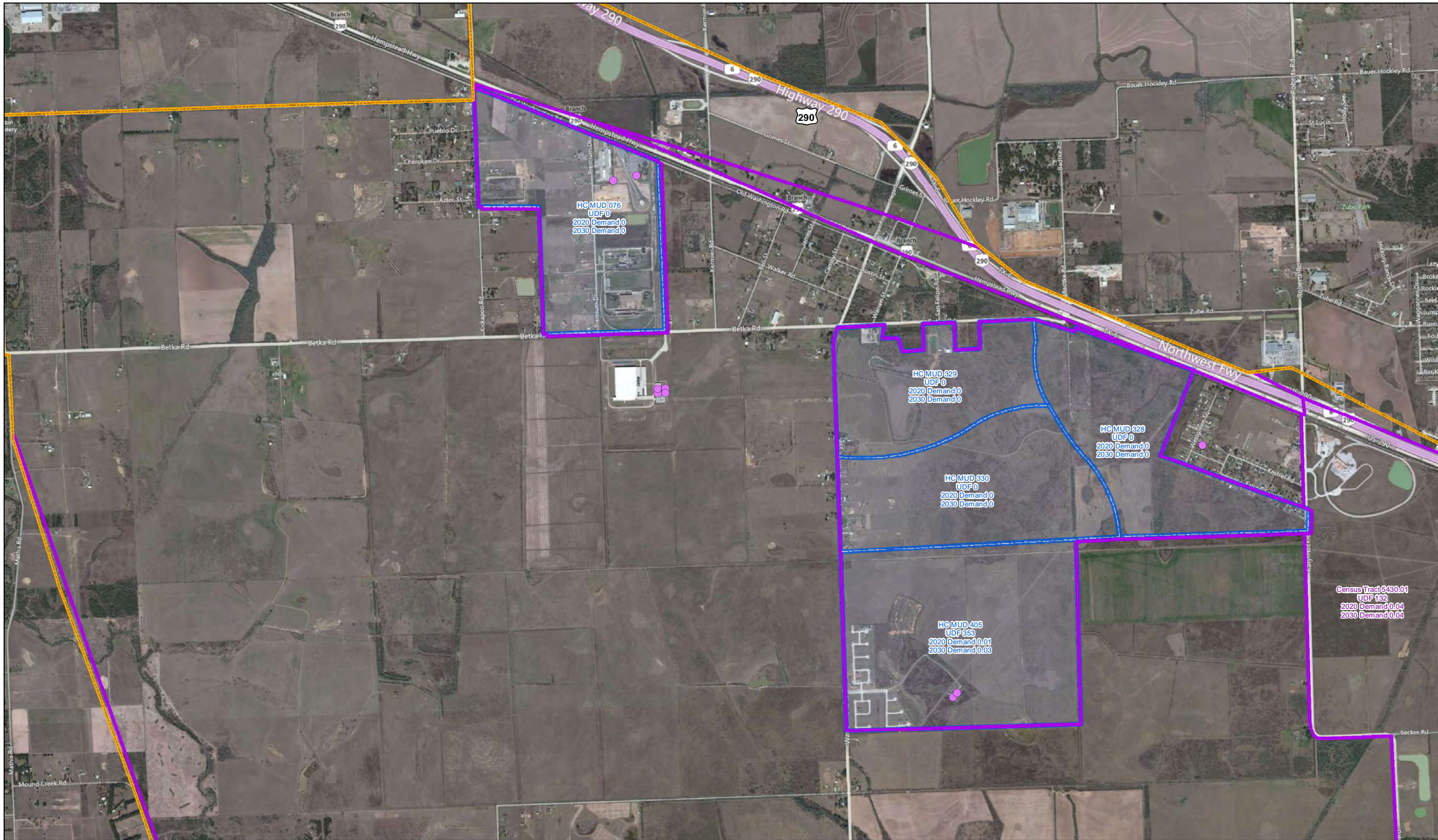




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet A1

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

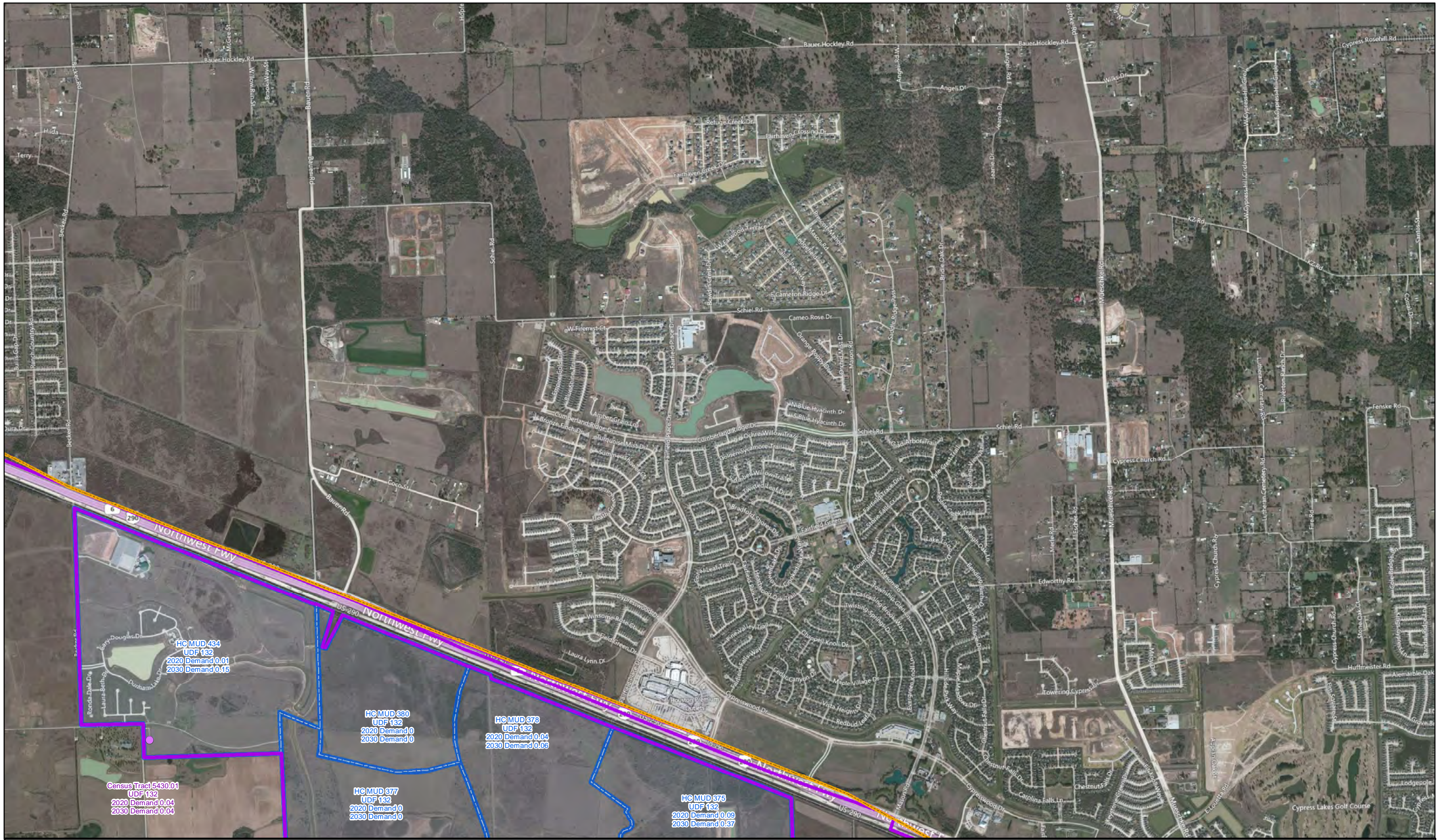


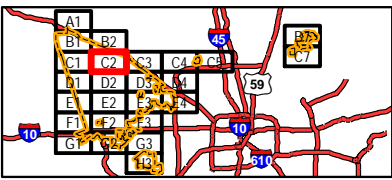
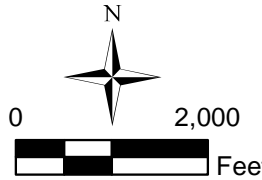
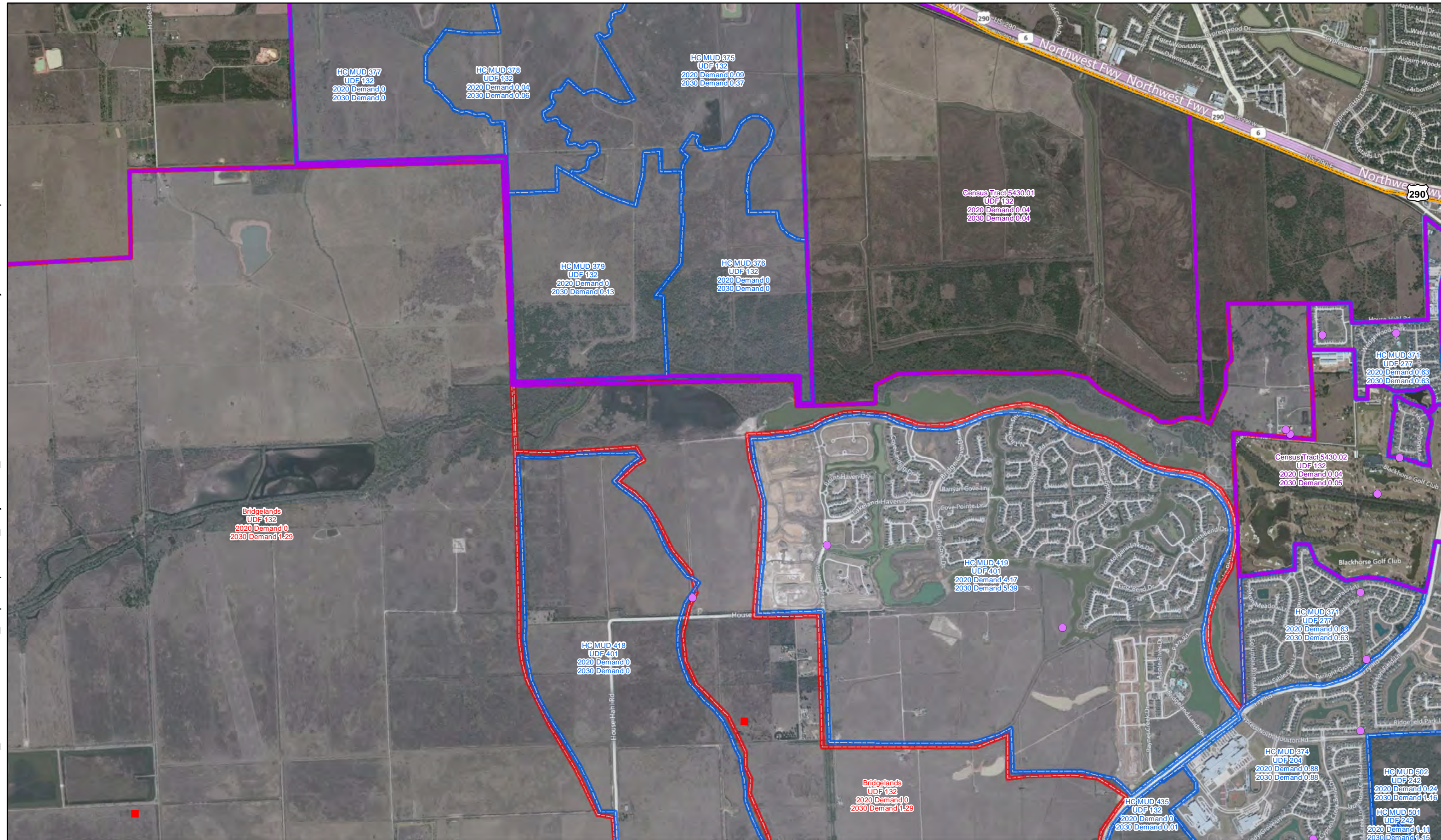


WHCRA 2012 Population Projections Exhibit 4 - Mapbooks Sheet B1

- WHCRA Boundary
- WHCRA MUDs
- Future WHCRA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRA



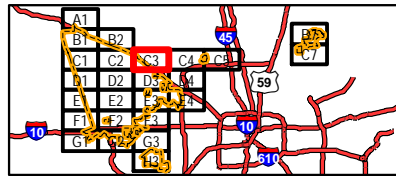
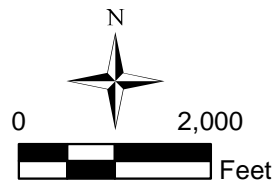
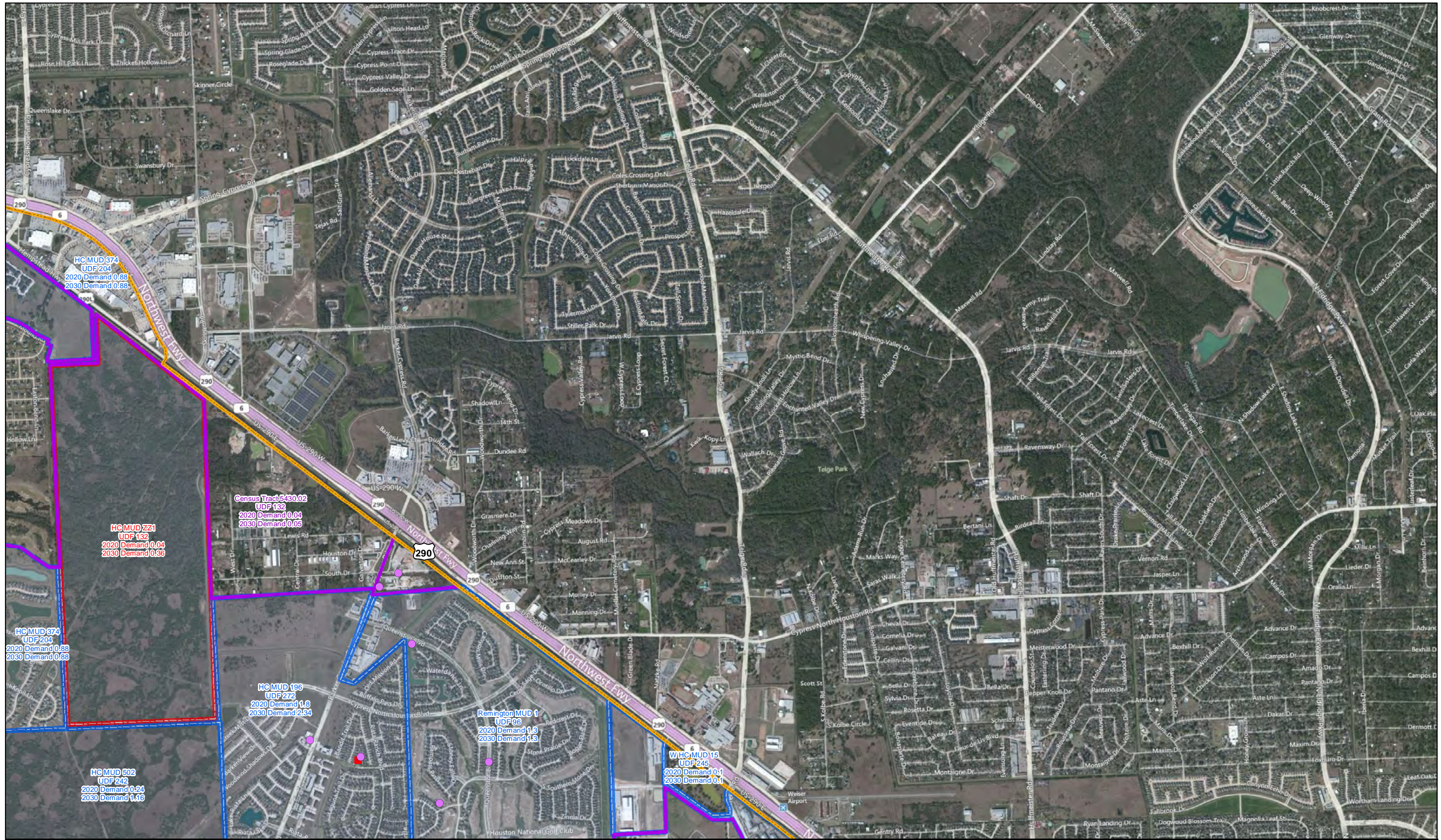




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet C2

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

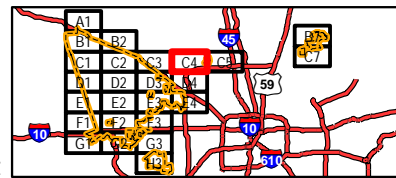
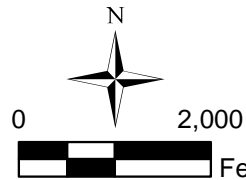
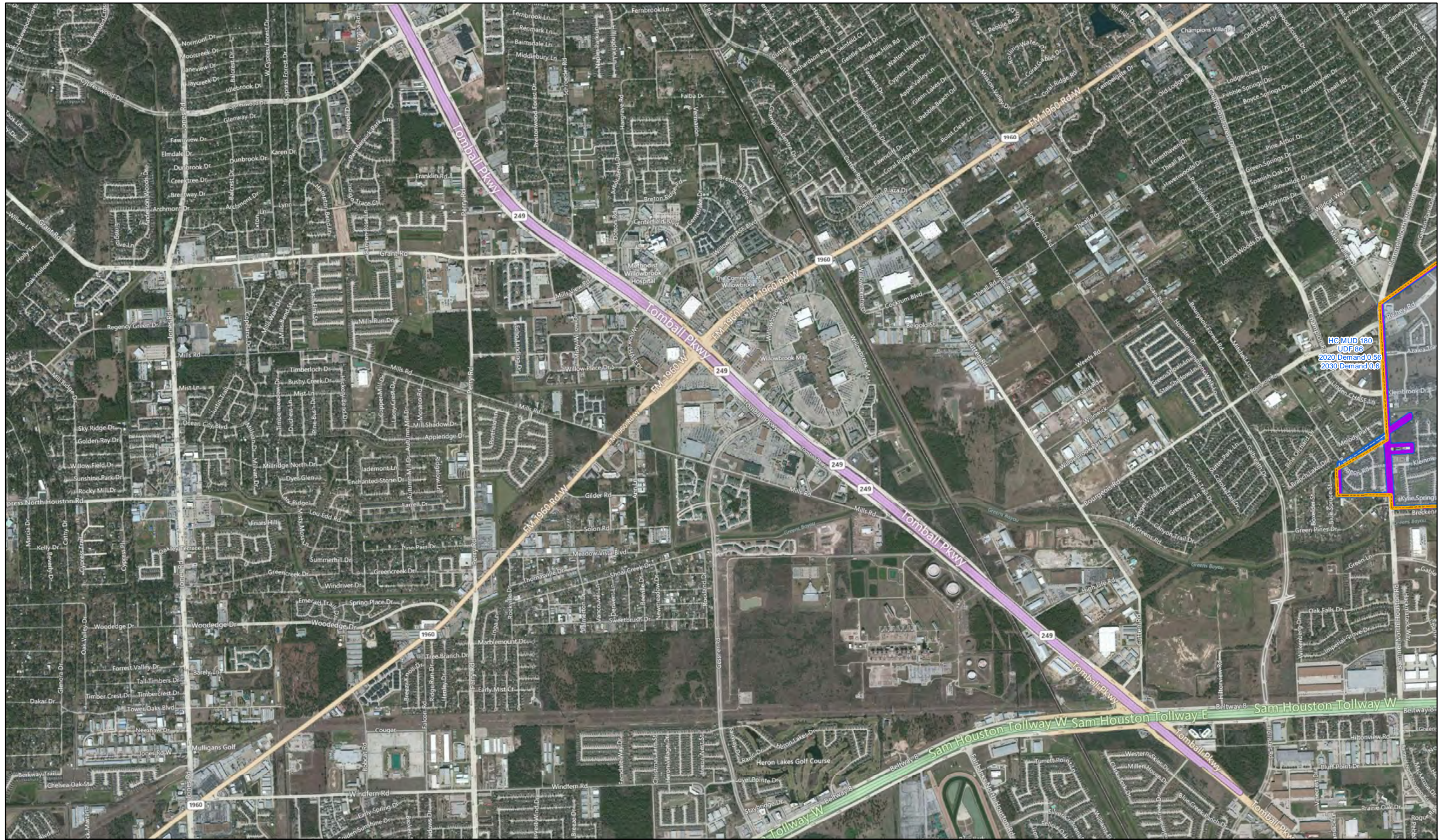




WHCRA 2012 Population Projections Exhibit 4 - Mapbooks Sheet C3

- WHCRA Boundary
- WHCRA MUDs
- Future WHCRA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRA

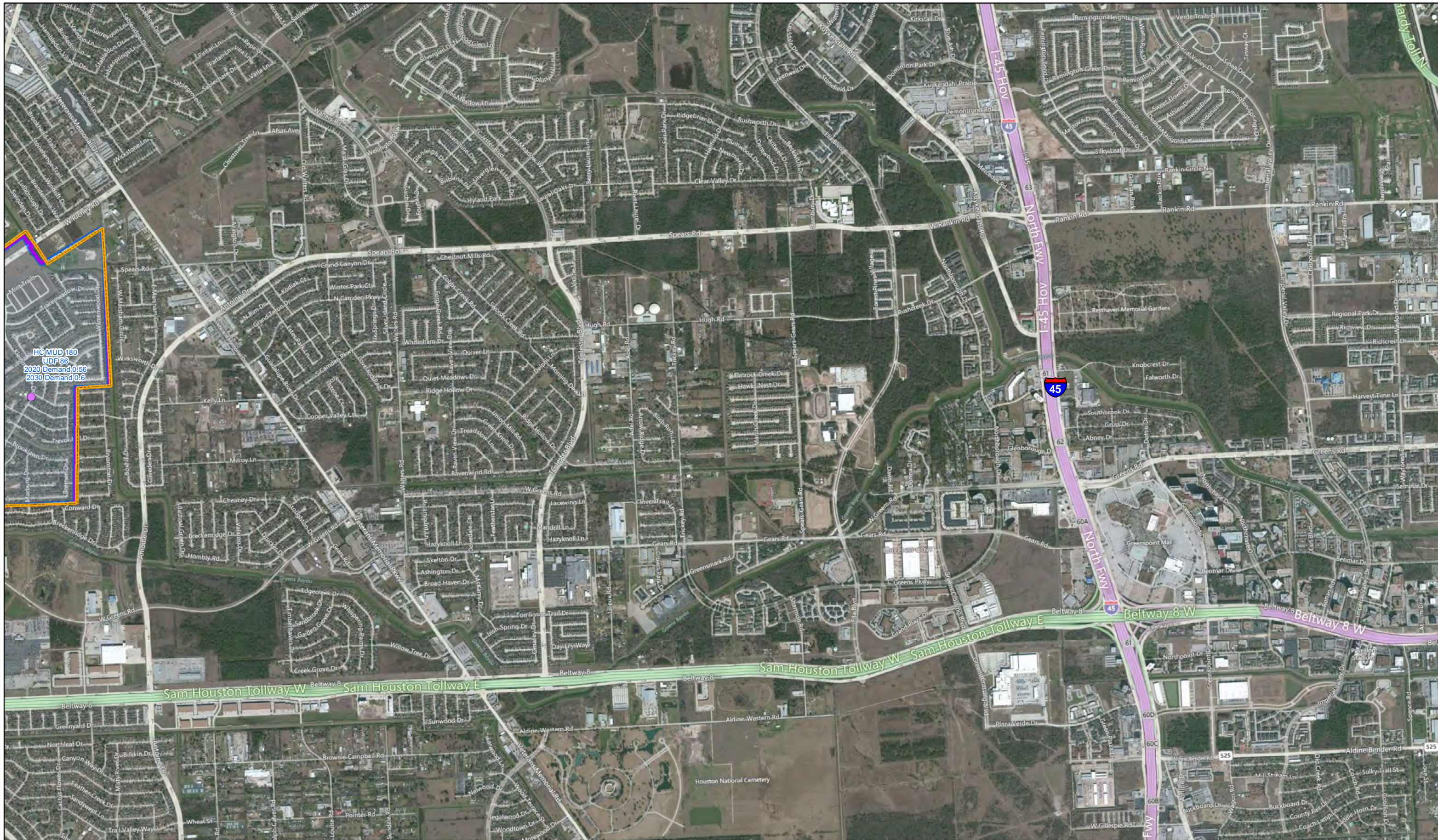




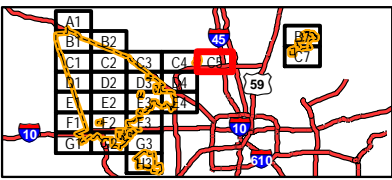
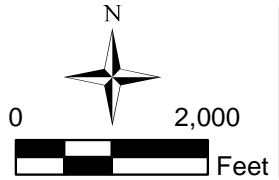
WHCRA 2012 Population Projections Exhibit 4 - Mapbooks Sheet C4

- WHCRA Boundary
- WHCRA MUDs
- Future WHCRA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRA





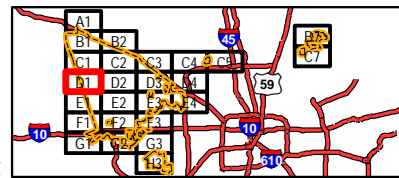
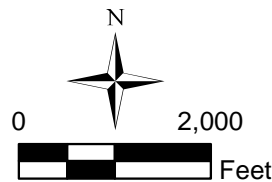
HC MUD 180
UDF 86
2020 Demand 0.56
2030 Demand 0.6



WHCRA 2012 Population Projections Exhibit 4 - Mapbooks Sheet C5

- WHCRA Boundary
- WHCRA MUDs
- Future WHCRA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRA

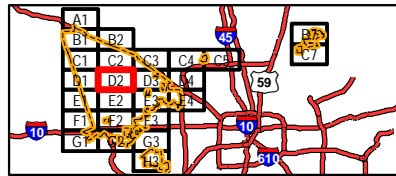
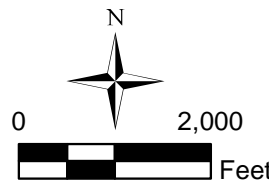
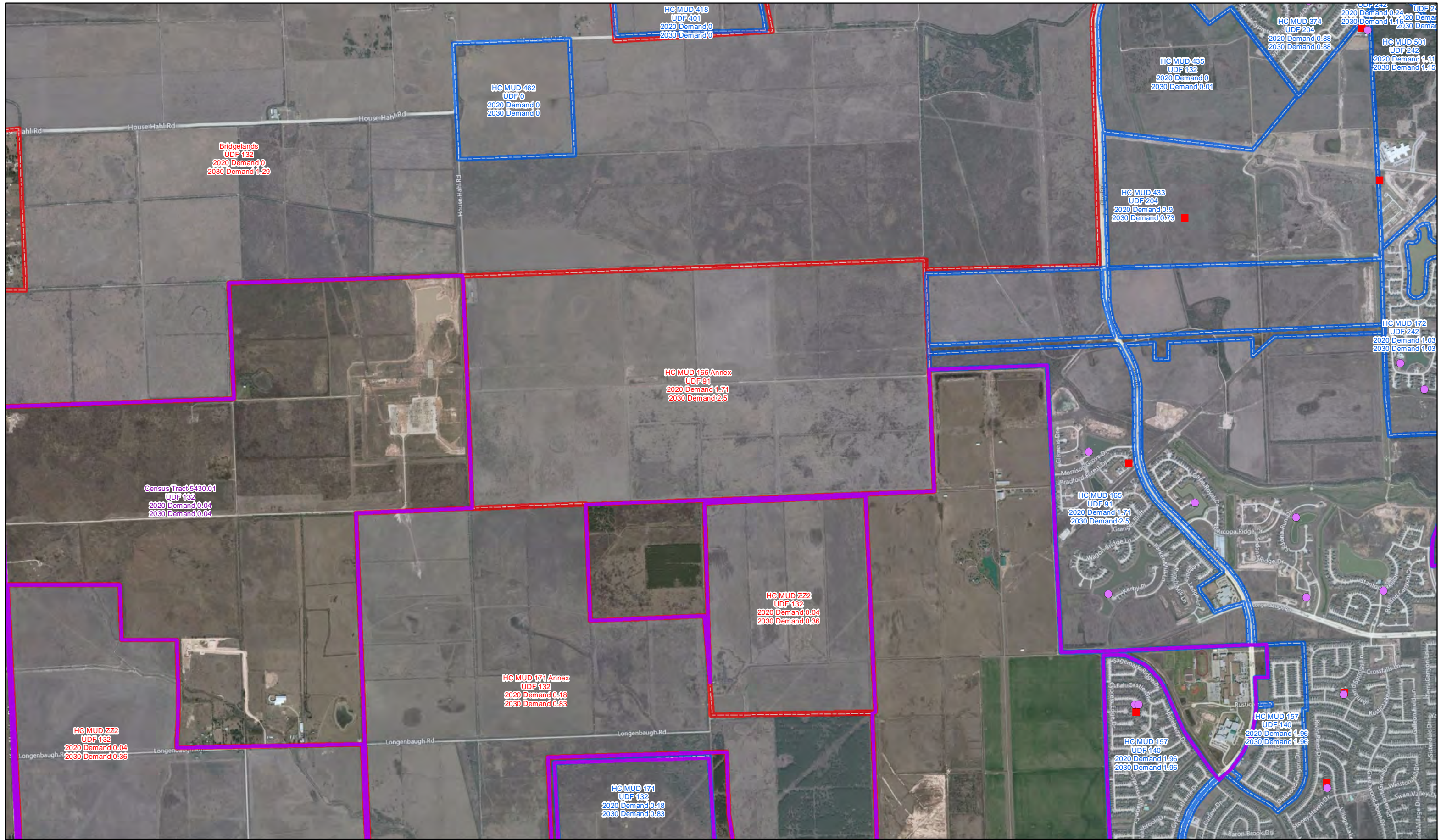




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet D1

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

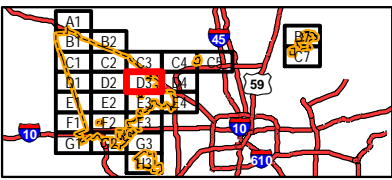
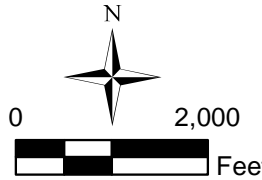
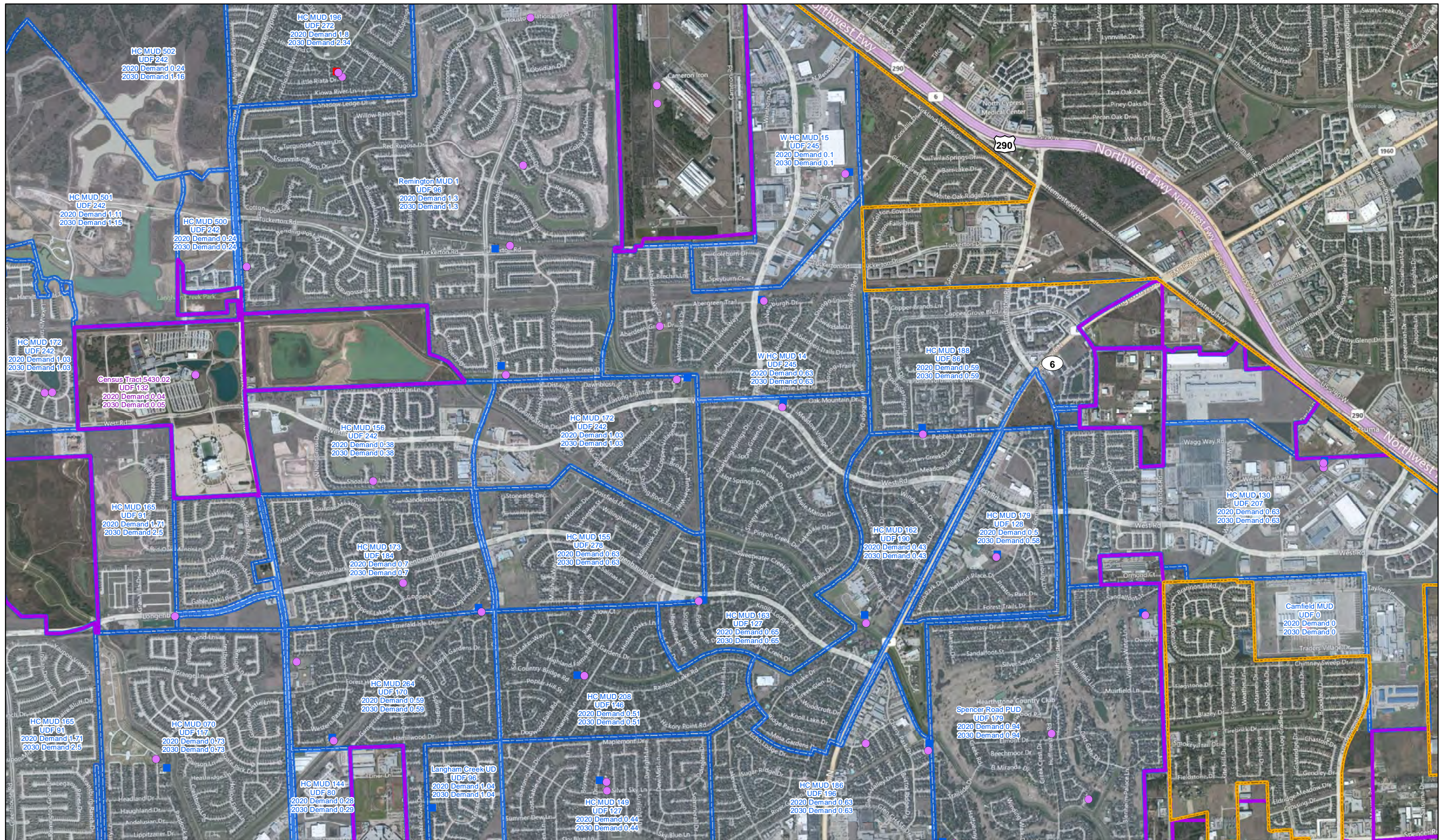




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet D2

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

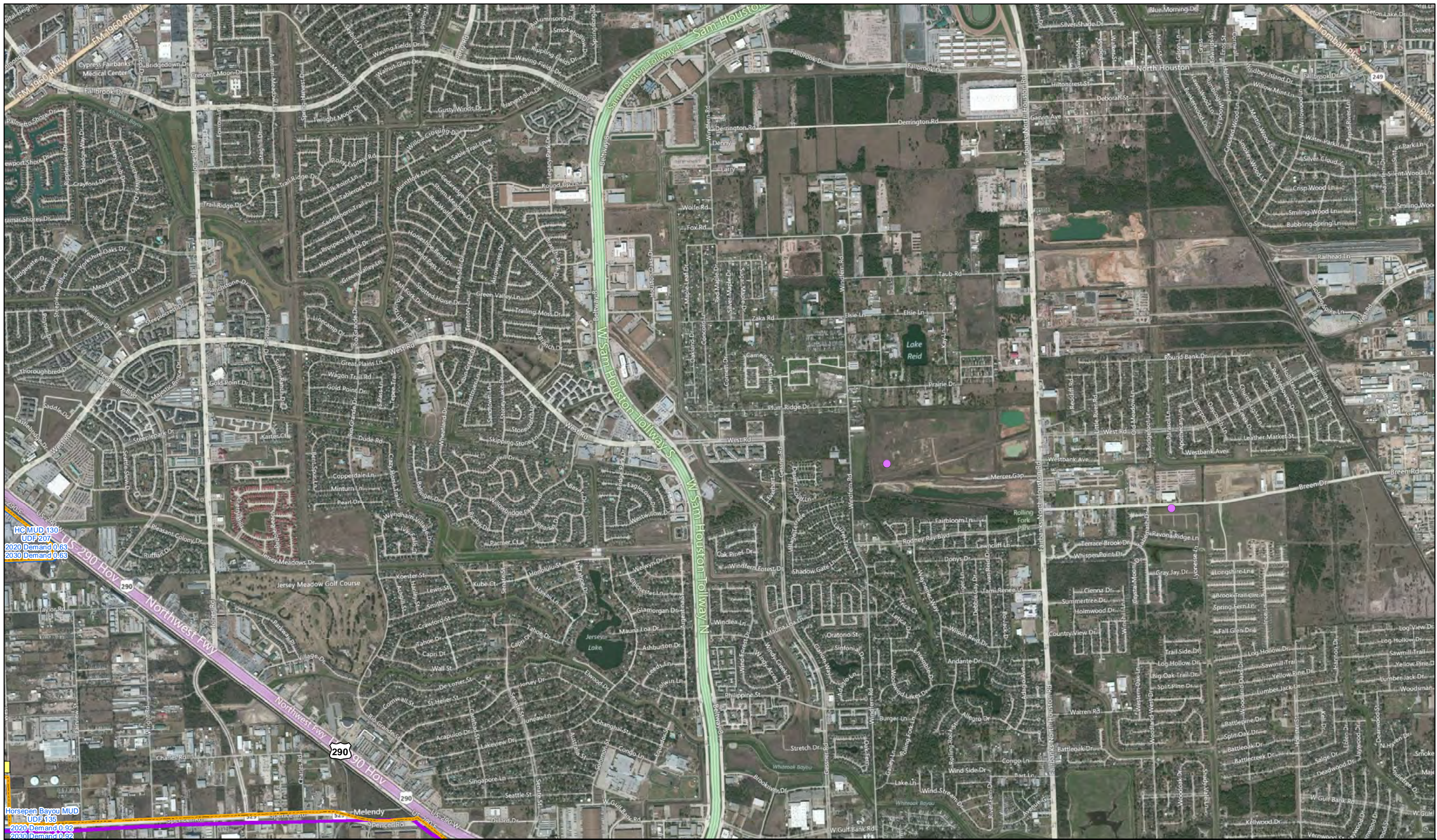




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet D3

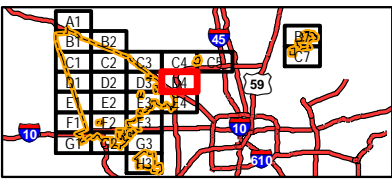
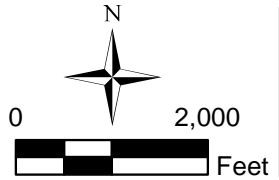
- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

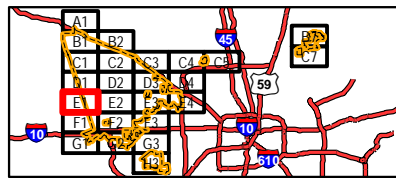
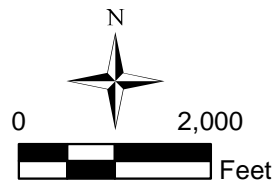
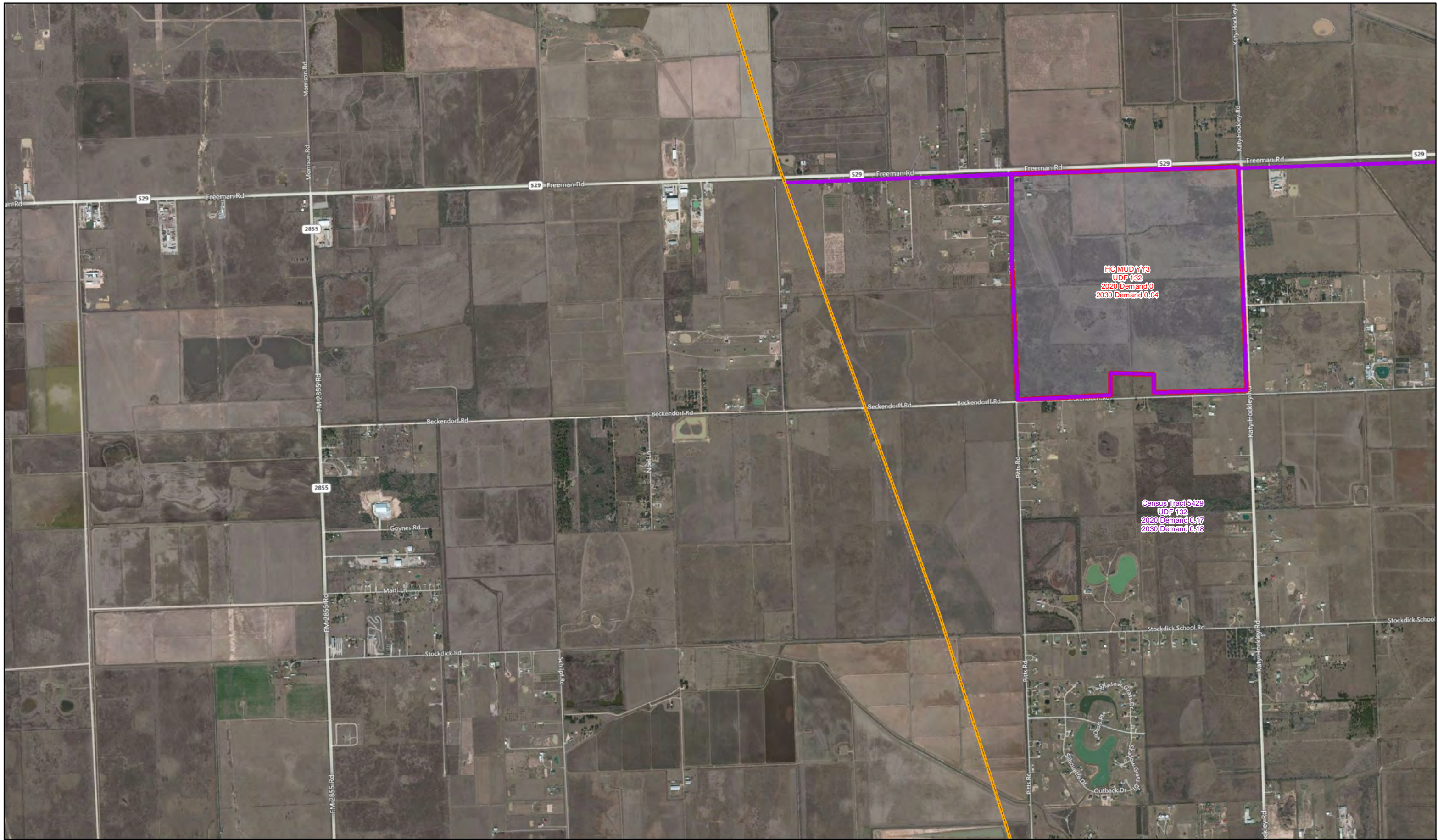




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet D4

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

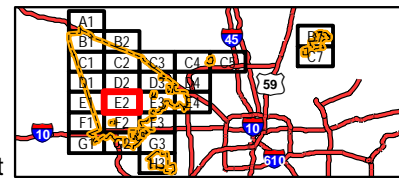
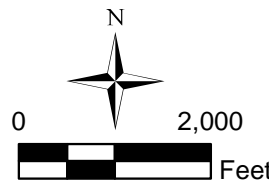
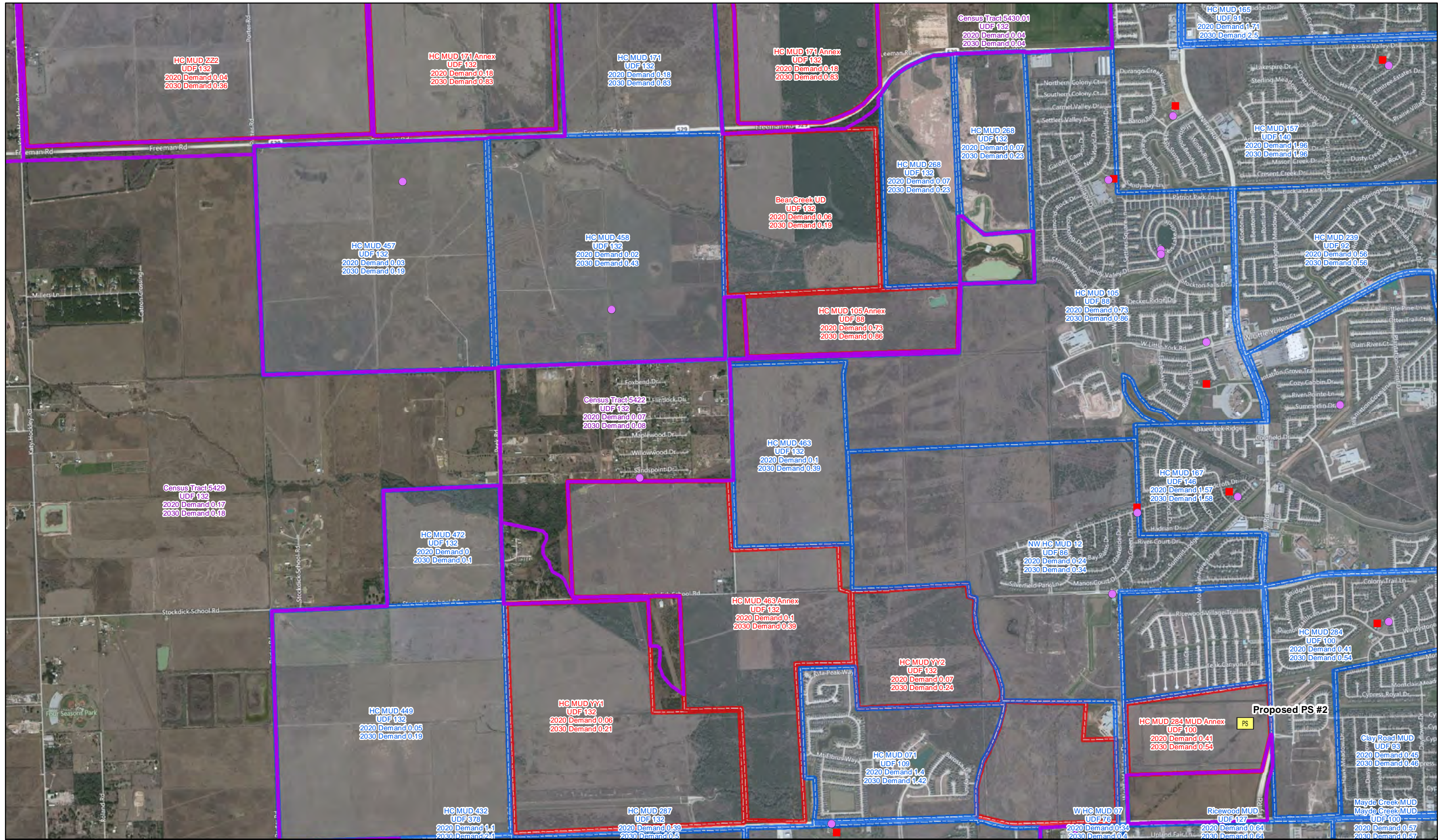




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet E1

- WHCRWA Boundary
- City of Katy
- WP Converted
- WHCRWA MUDs
- WHC Water Wells
- WP Not Converted
- Future WHCRWA MUDs
- WHC Pump Stations
- WP Not in WHCRWA
- Remainder of Census Tracts

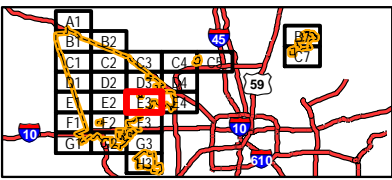
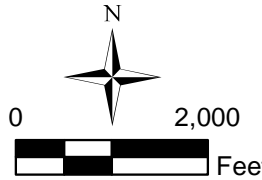
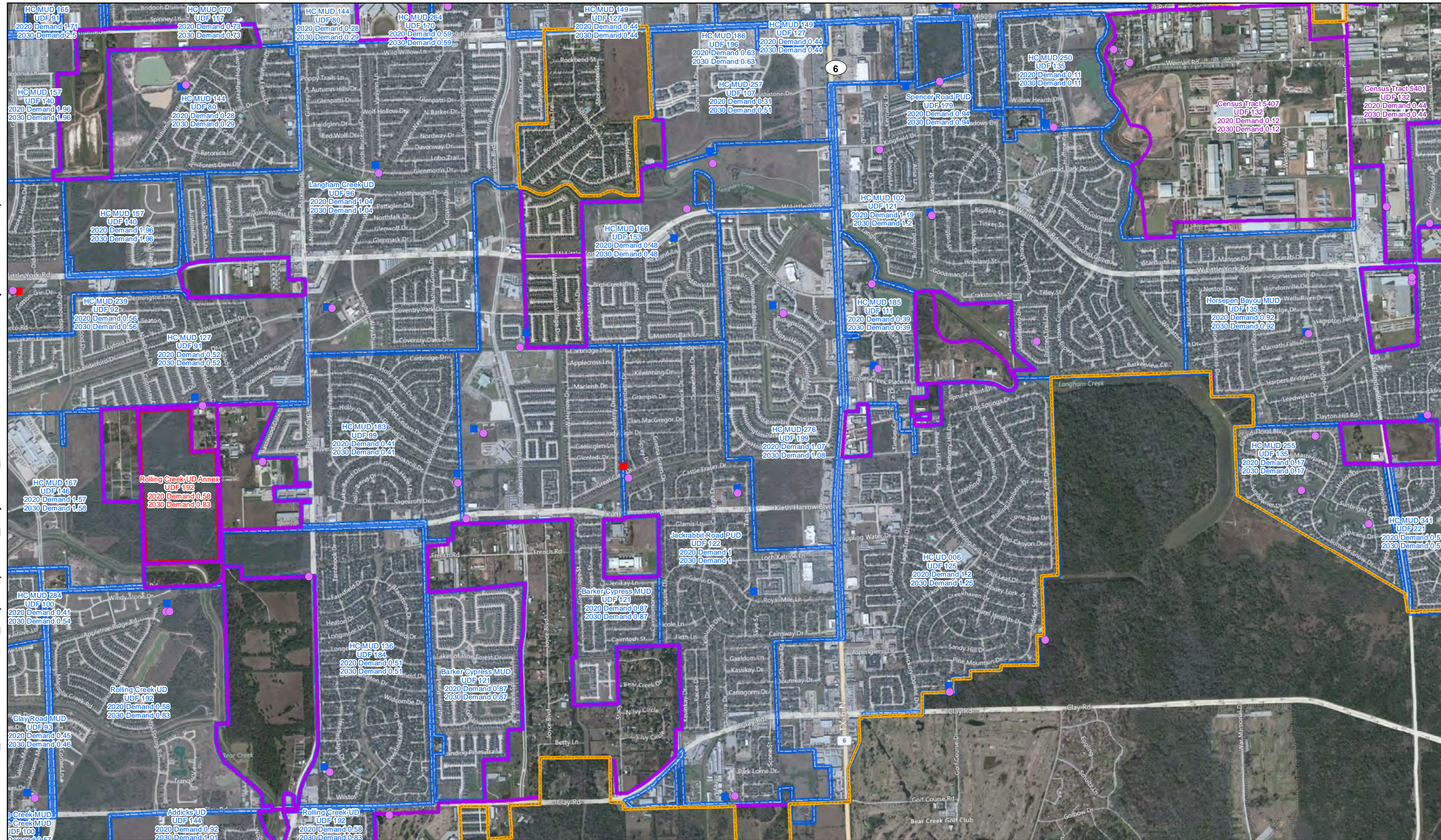




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet E2

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

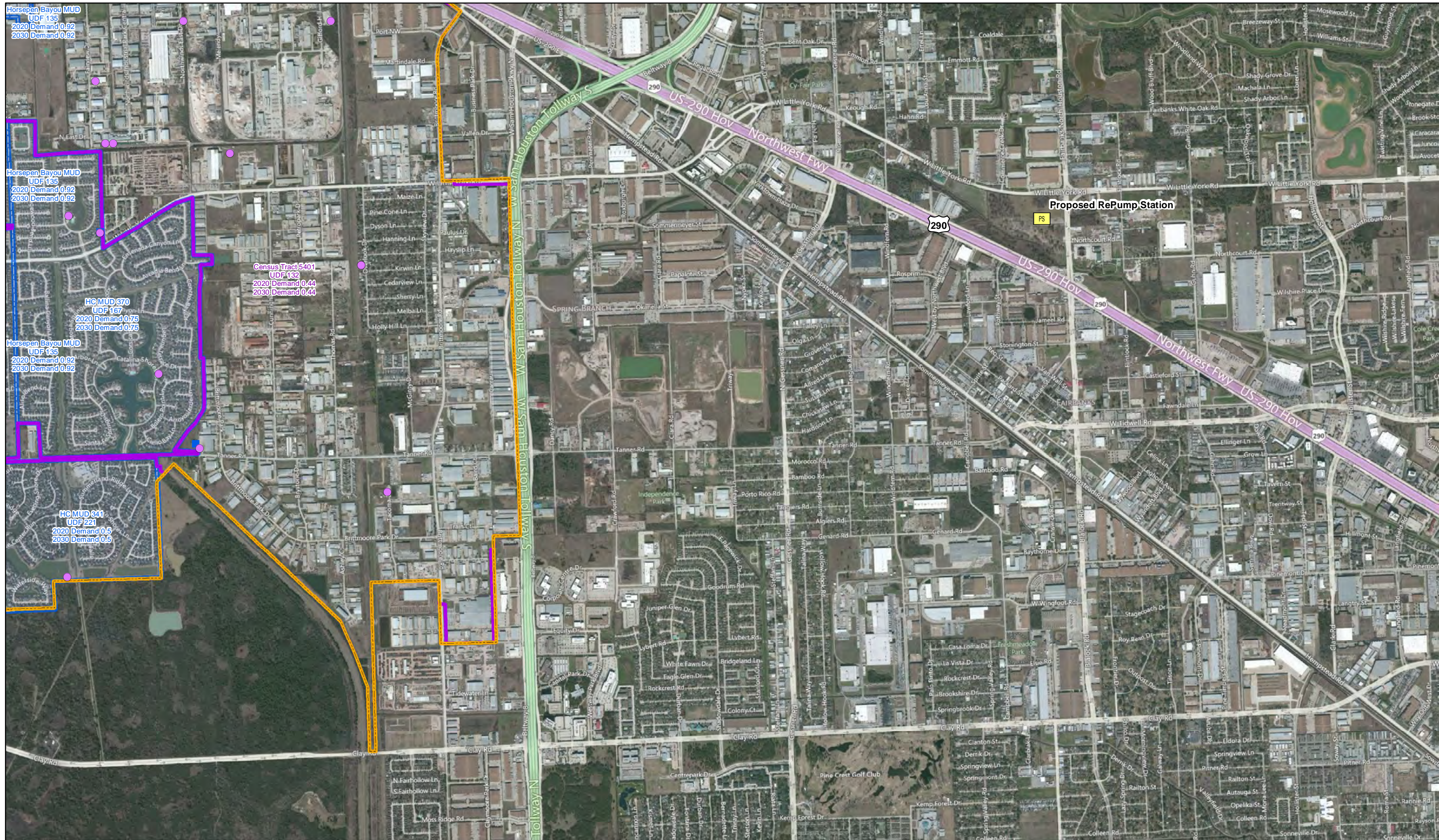




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet E3

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA





Horsepen Bayou MUD
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2020 Demand 0.92
2030 Demand 0.92

Horsepen Bayou MUD
UDF 135
2020 Demand 0.92
2030 Demand 0.92

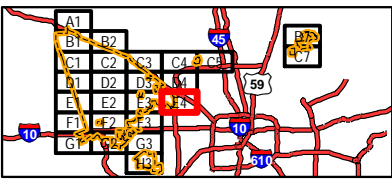
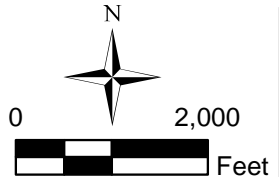
HC MUD 370
UDF 167
2020 Demand 0.75
2030 Demand 0.75

Horsepen Bayou MUD
UDF 135
2020 Demand 0.92
2030 Demand 0.92

HC MUD 341
UDF 221
2020 Demand 0.5
2030 Demand 0.5

Census Tract 5401
UDF 132
2020 Demand 0.44
2030 Demand 0.44

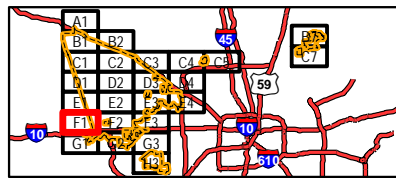
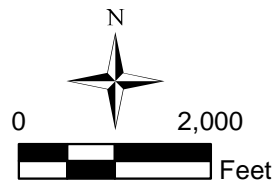
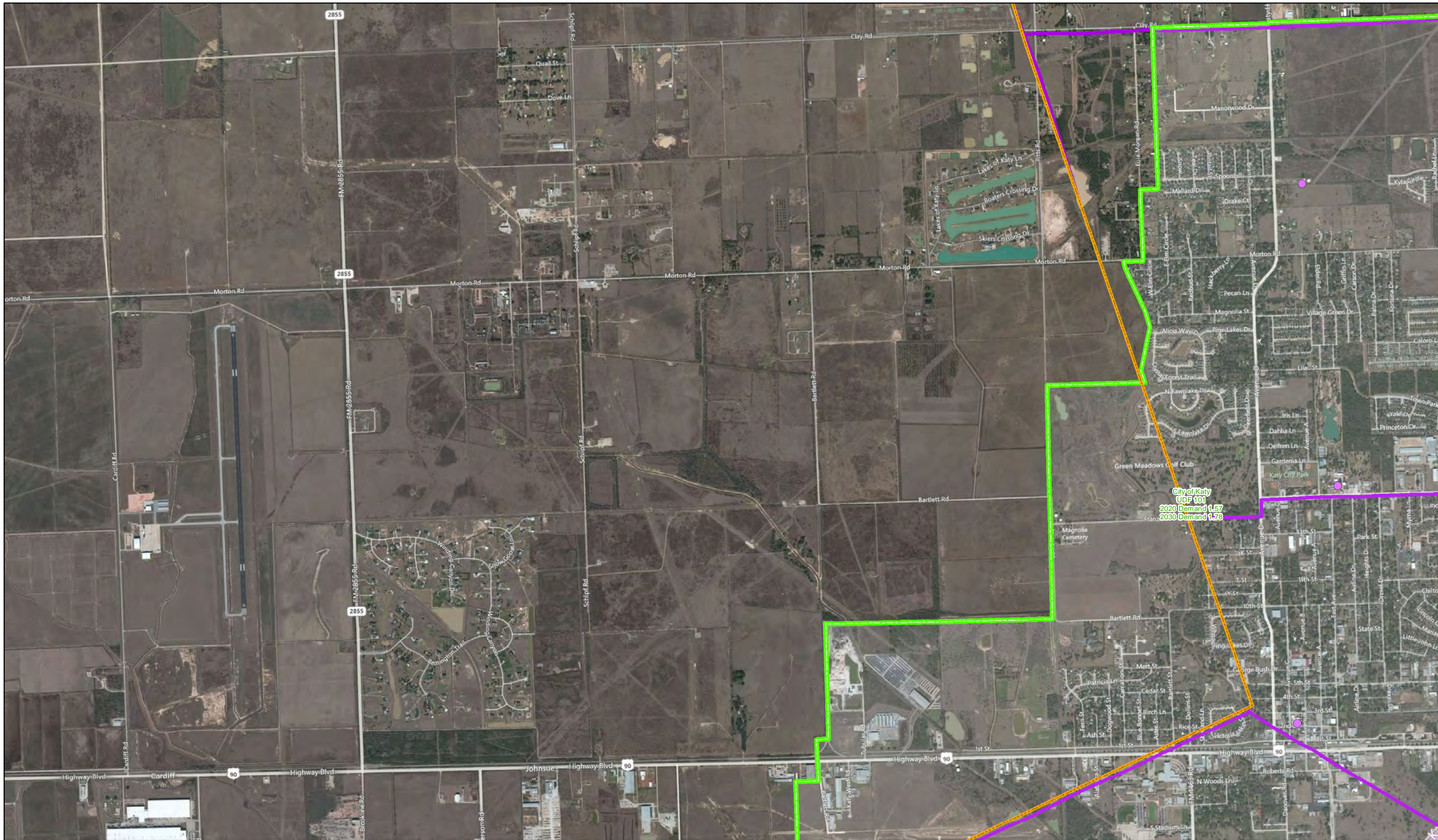
Proposed RePump Station
PS



WHCRA 2012 Population Projections Exhibit 4 - Mapbooks Sheet E4

- WHCRA Boundary
- WHCRA MUDs
- Future WHCRA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRA

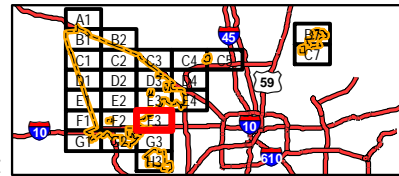
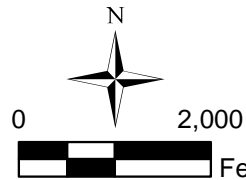
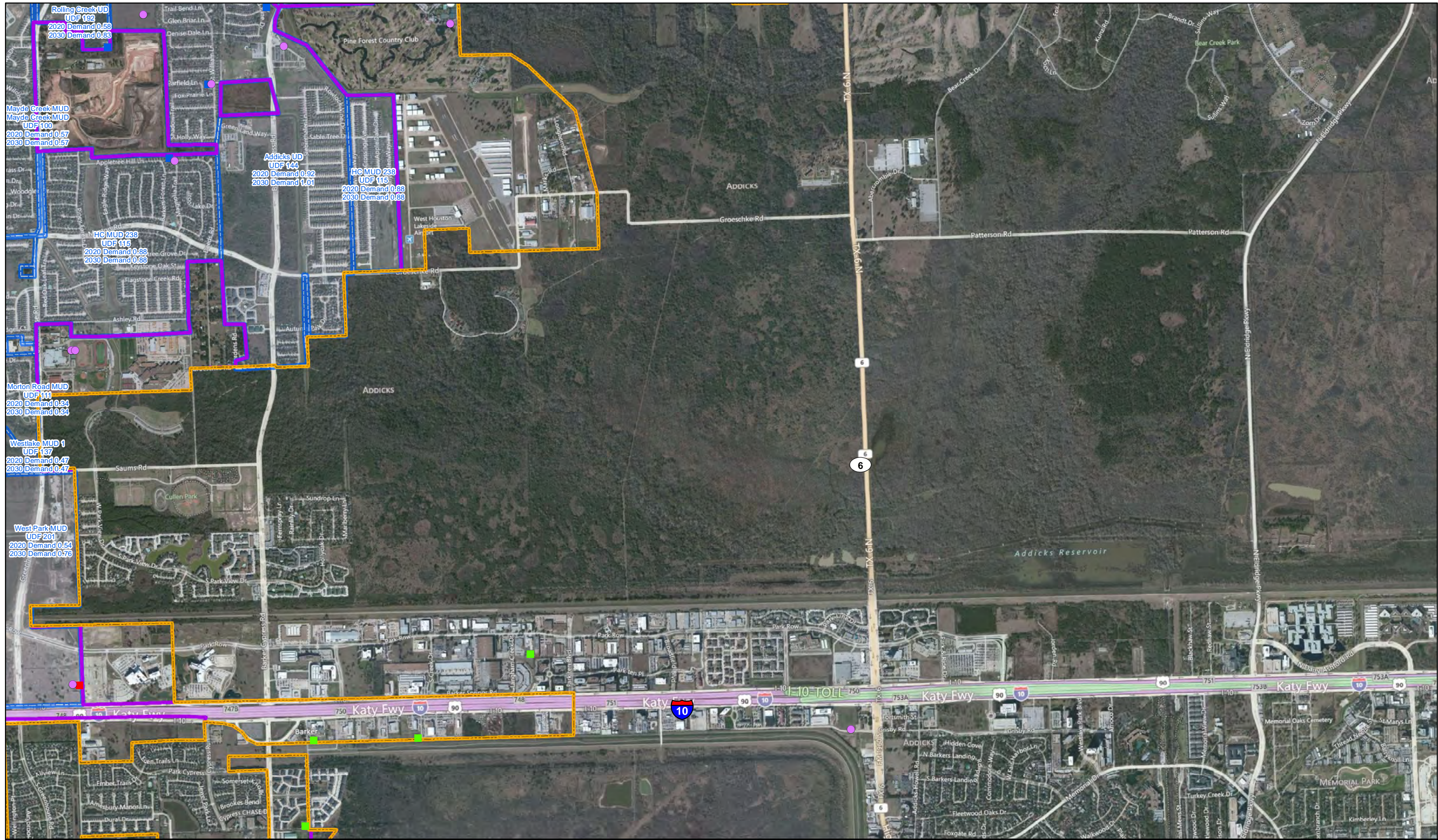




WHCRA 2012 Population Projections Exhibit 4 - Mapbooks Sheet F1

- WHCRA Boundary
- WHCRA MUDs
- Future WHCRA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRA

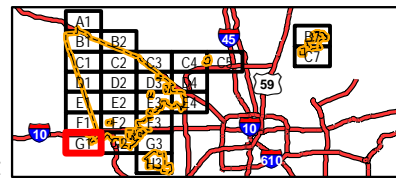
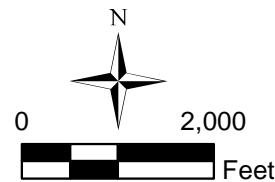
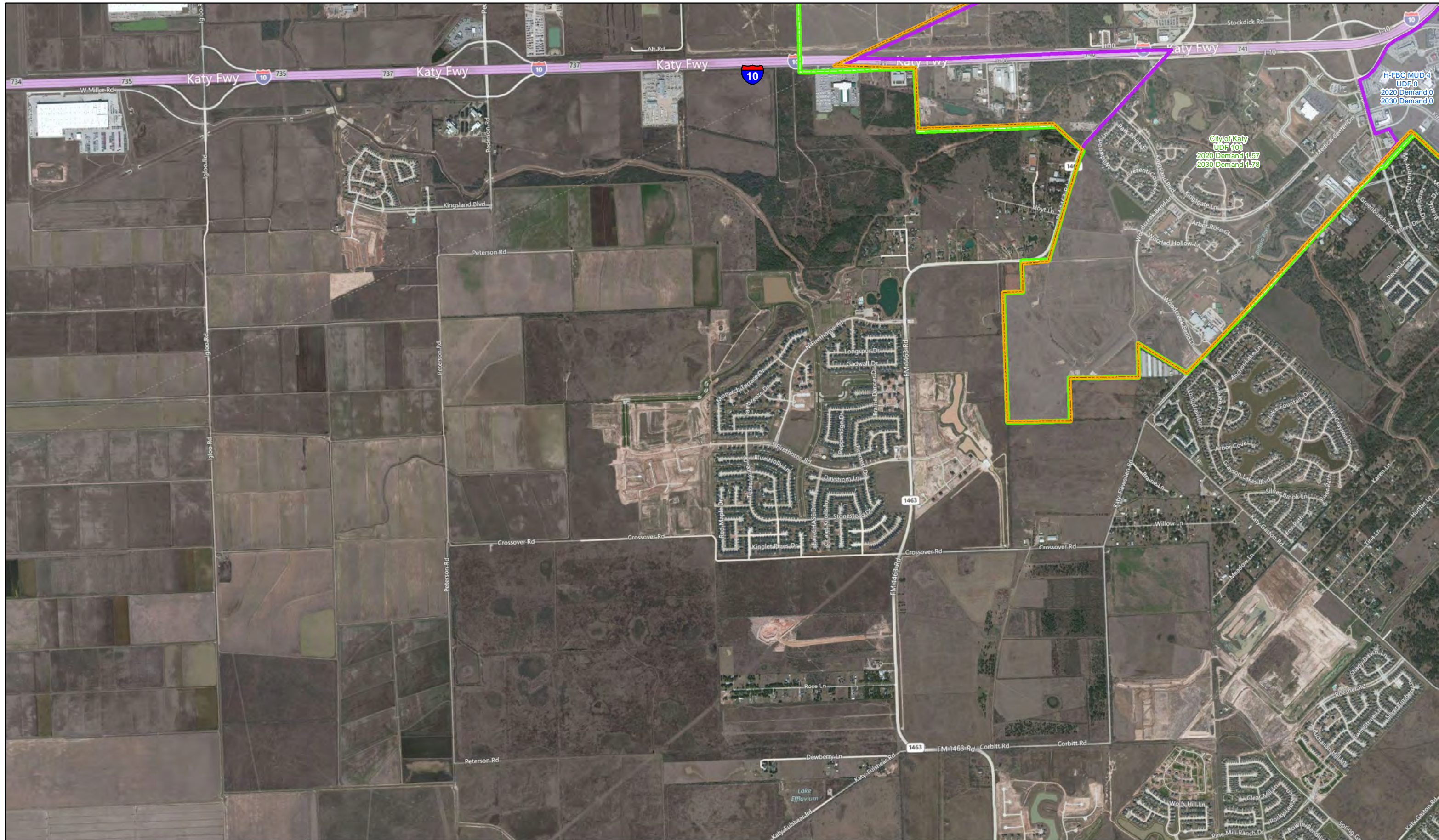




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet F3

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

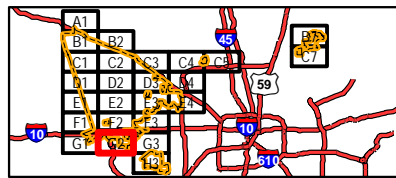
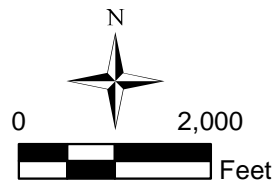
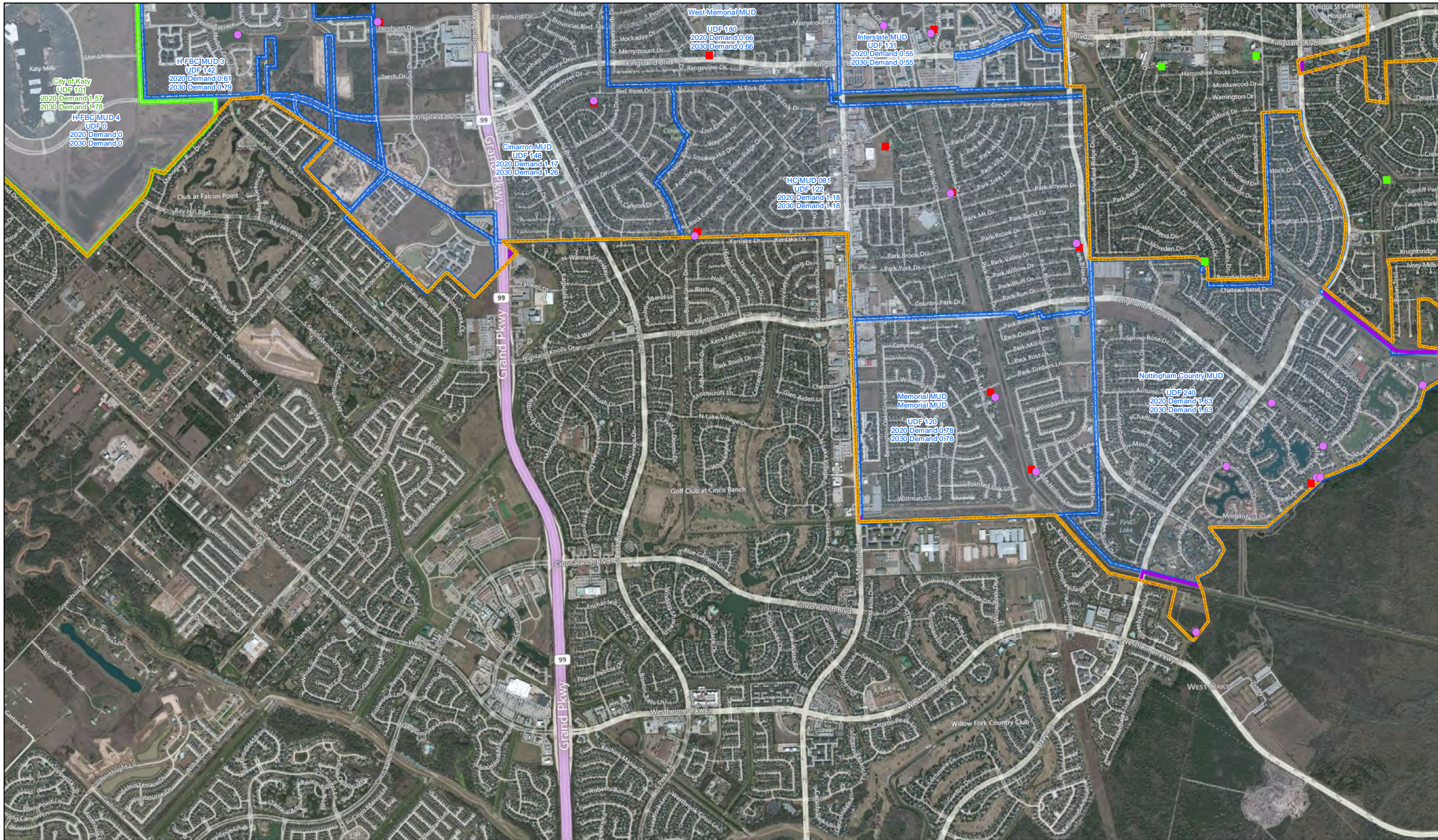




WHCRA 2012 Population Projections Exhibit 4 - Mapbooks Sheet G1

- WHCRA Boundary
- WHCRA MUDs
- Future WHCRA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRA

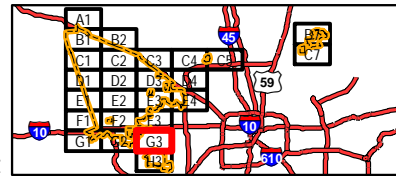
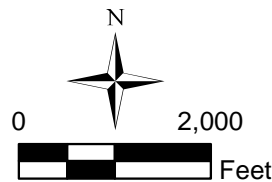
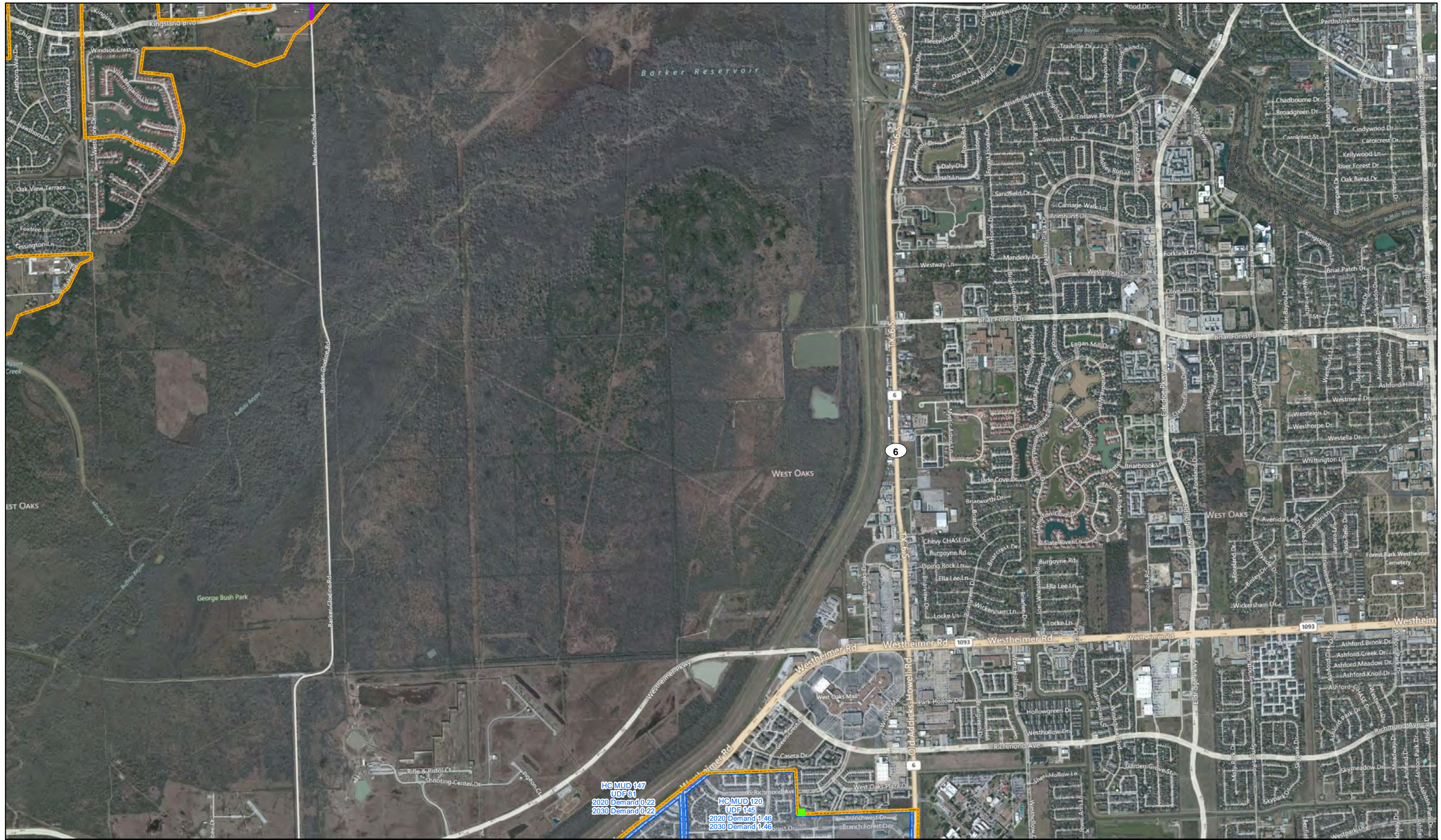




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet G2

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

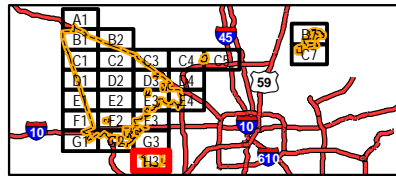
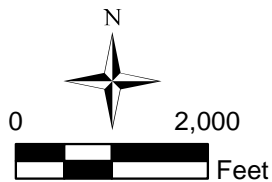
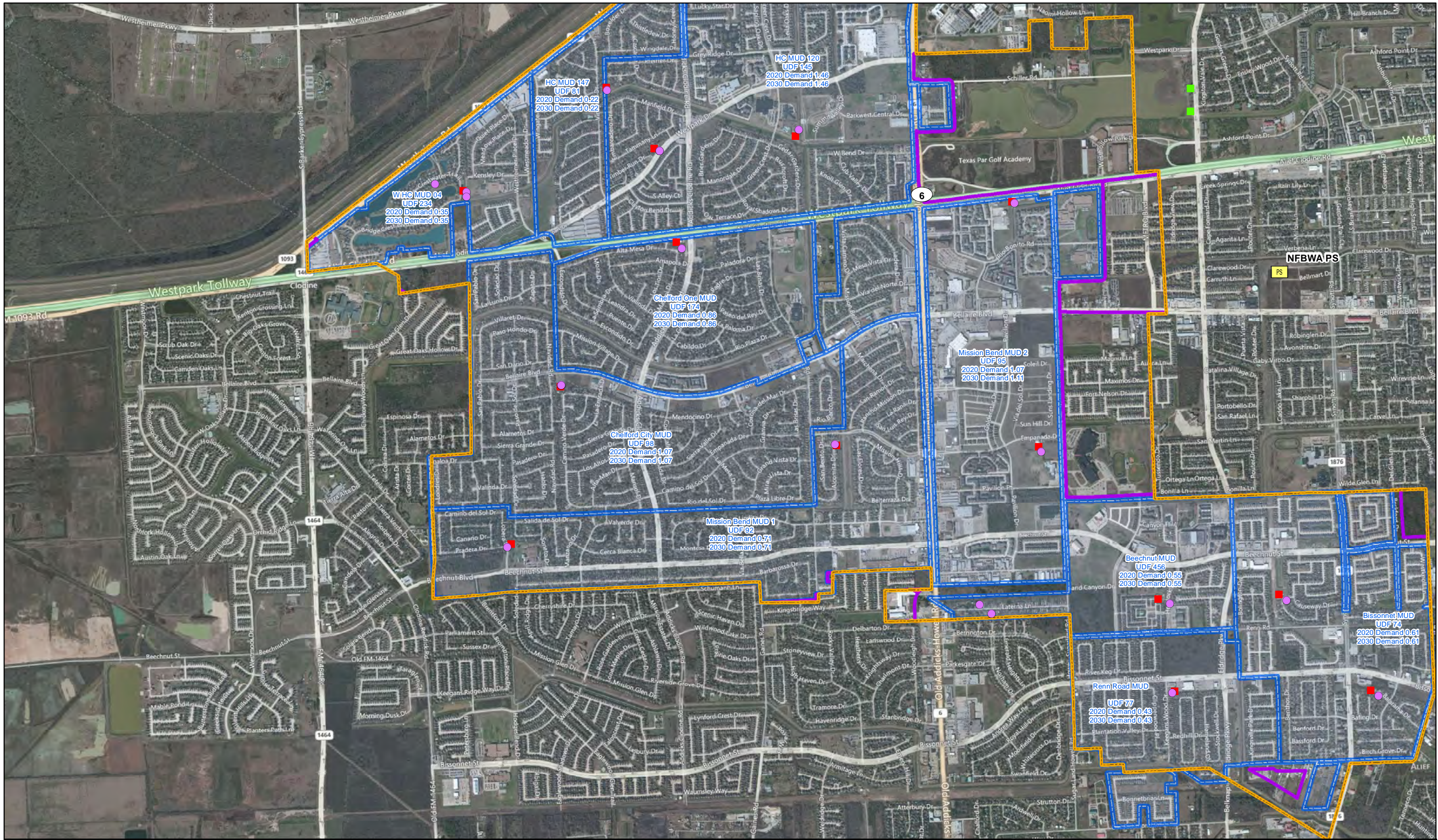




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet G3

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

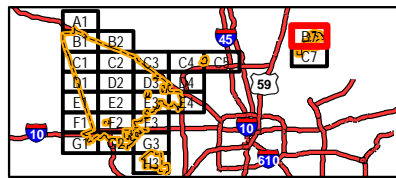
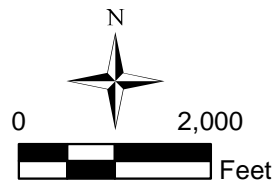
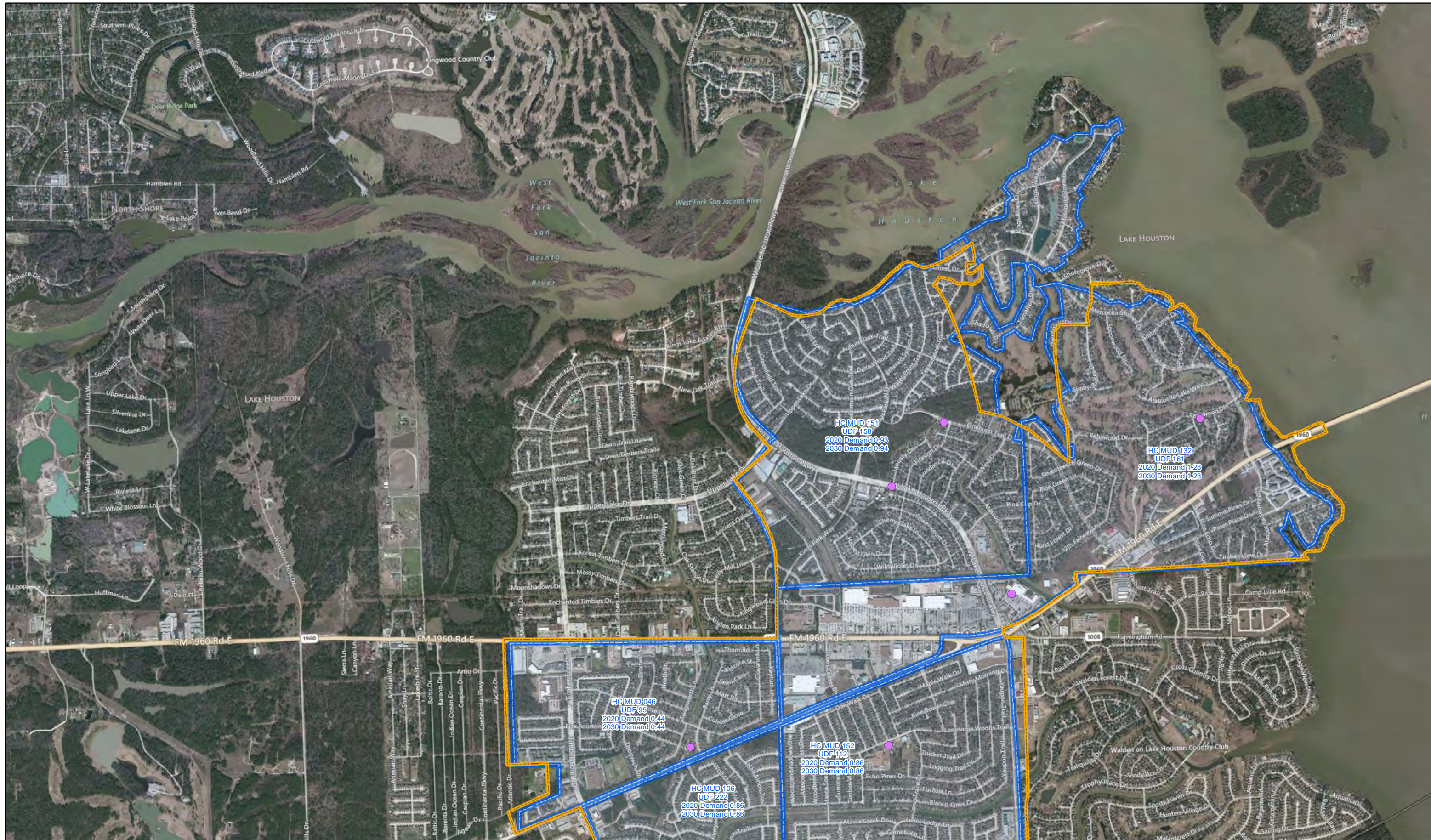




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet H3

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

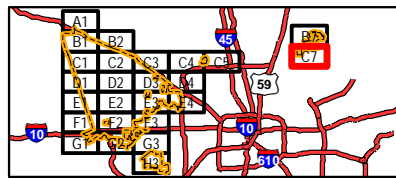
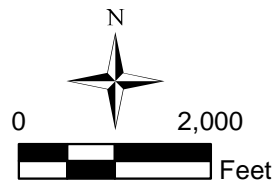
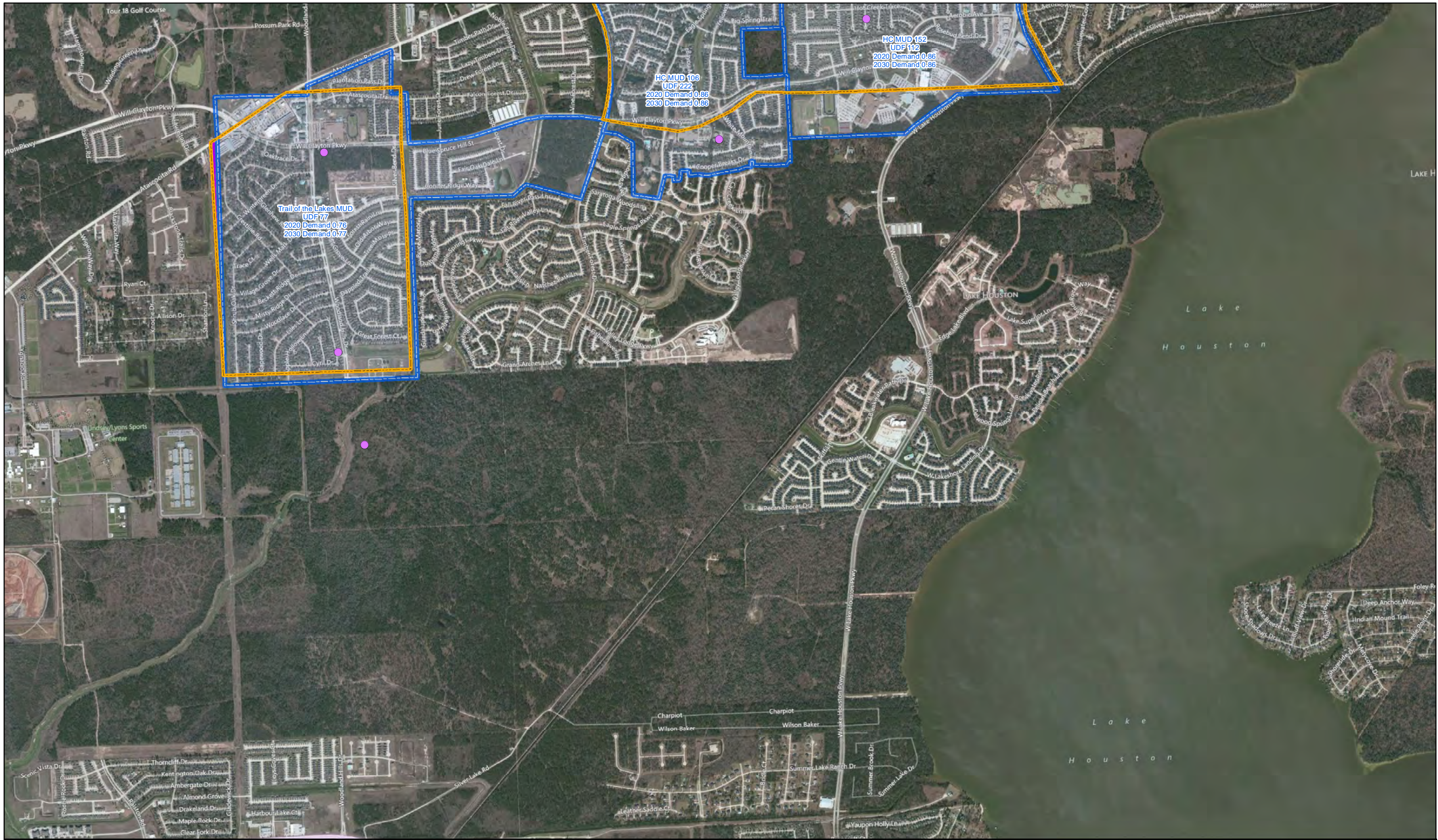




WHCRWA 2012 Population Projections
Exhibit 4 - Mapbooks
Sheet B7

- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

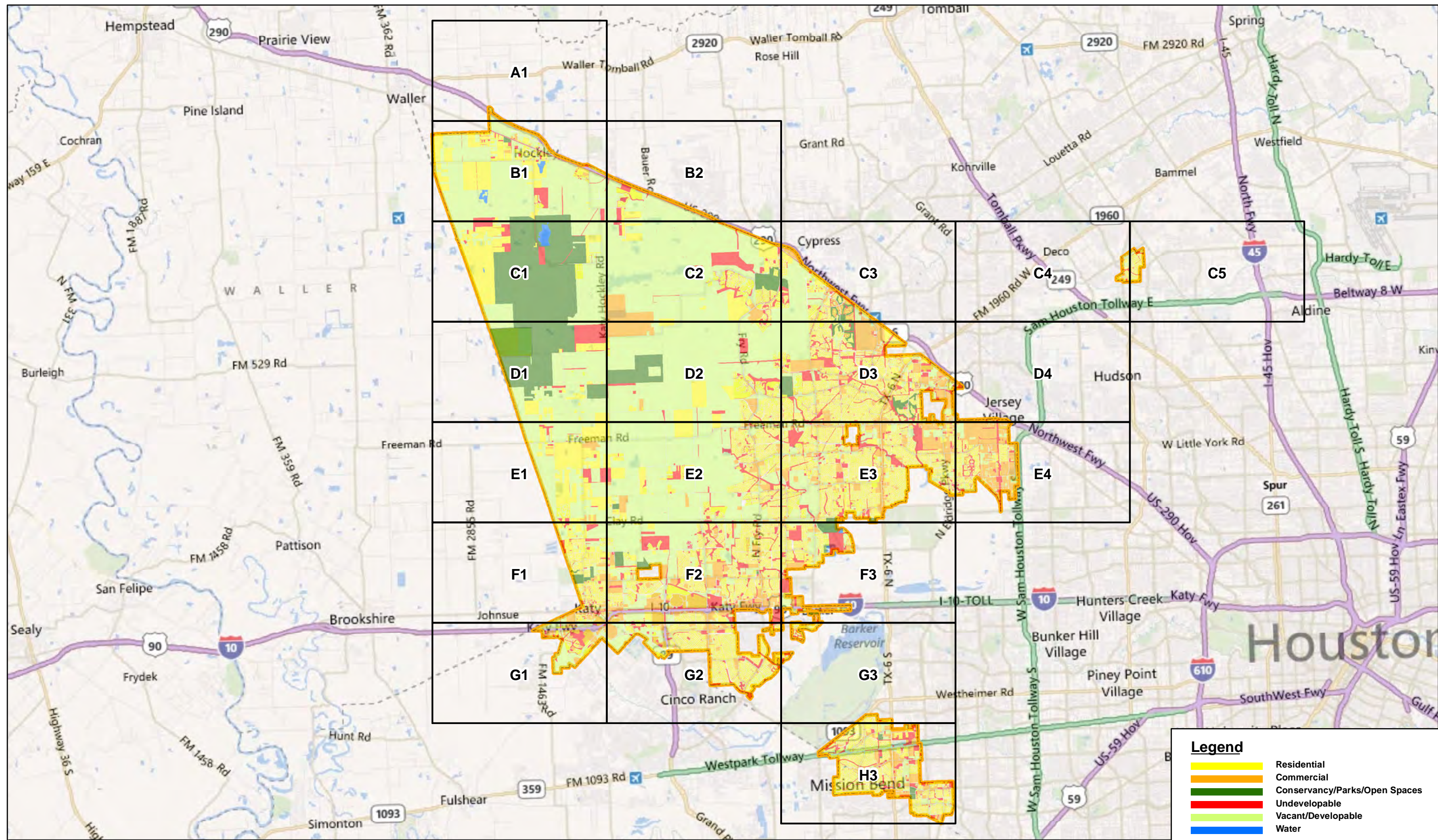




WHCRWA 2012 Population Projections Exhibit 4 - Mapbooks Sheet C7

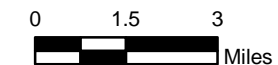
- WHCRWA Boundary
- WHCRWA MUDs
- Future WHCRWA MUDs
- Remainder of Census Tracts
- City of Katy
- WHC Water Wells
- PS WHC Pump Stations
- WP Converted
- WP Not Converted
- WP Not in WHCRWA

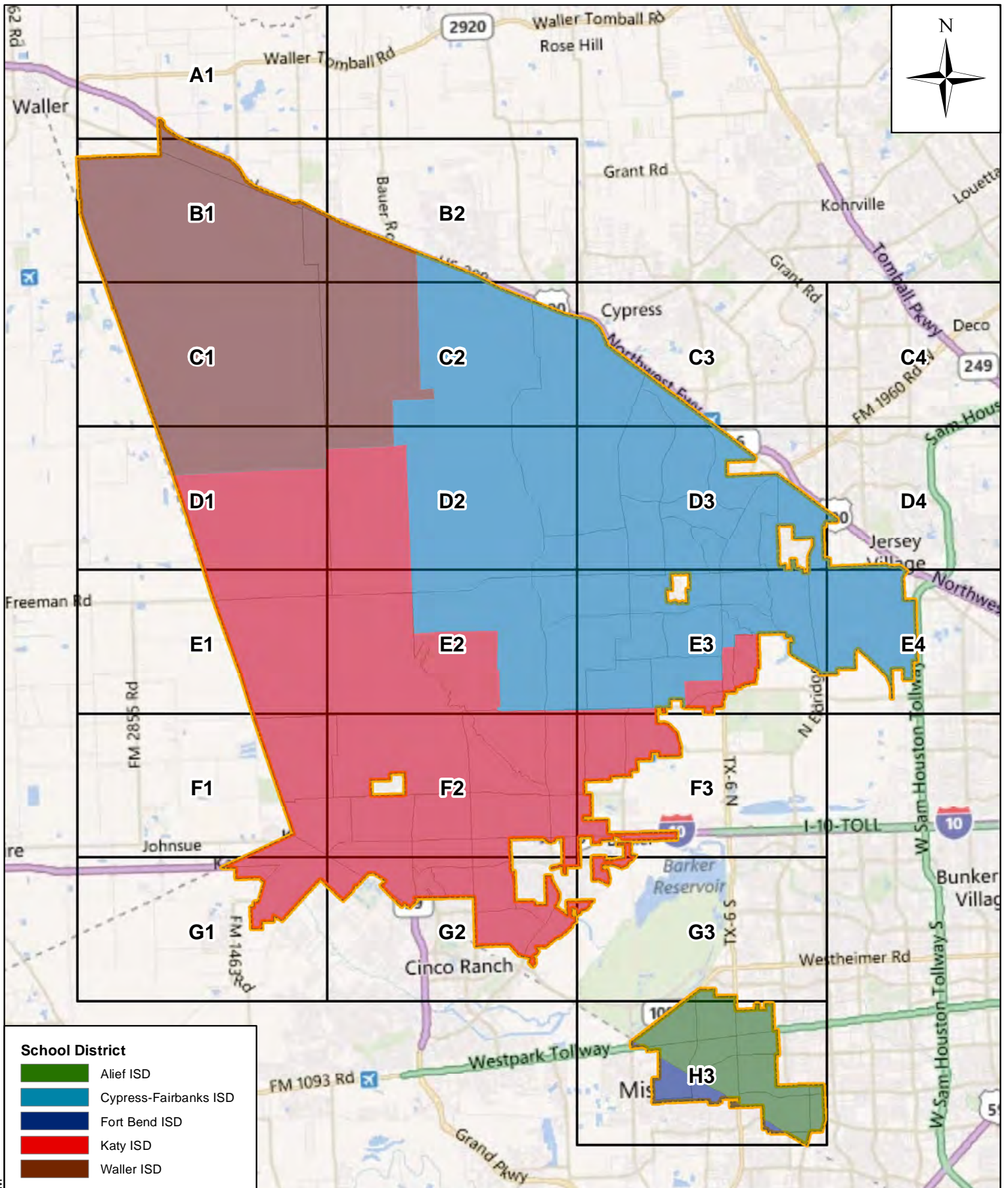




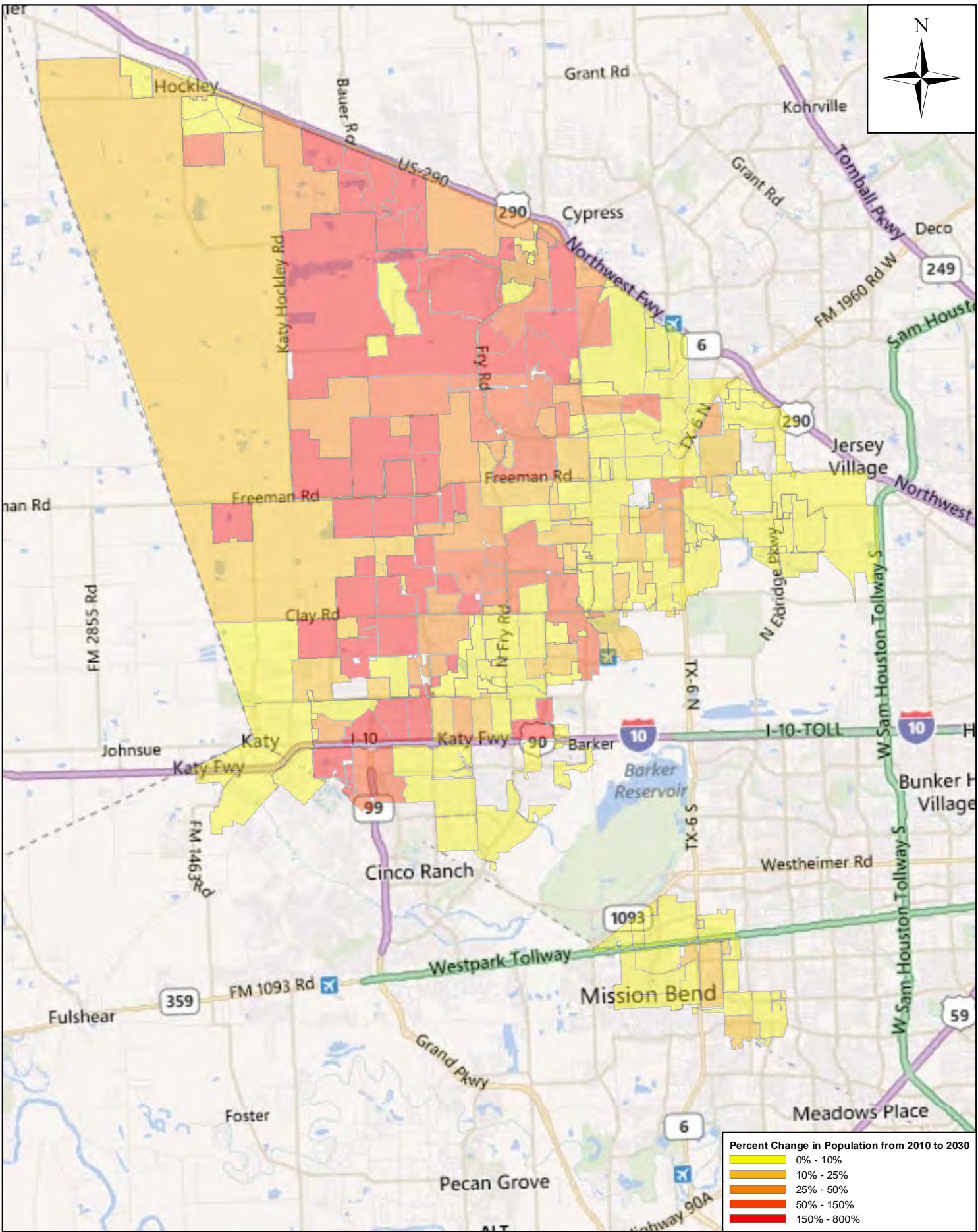
**WHCRWA 2012 Population Projections
Exhibit 5
Land Use Exhibit ***

* Land use information courtesy of Harris Galveston Area Council and US Department of Agriculture



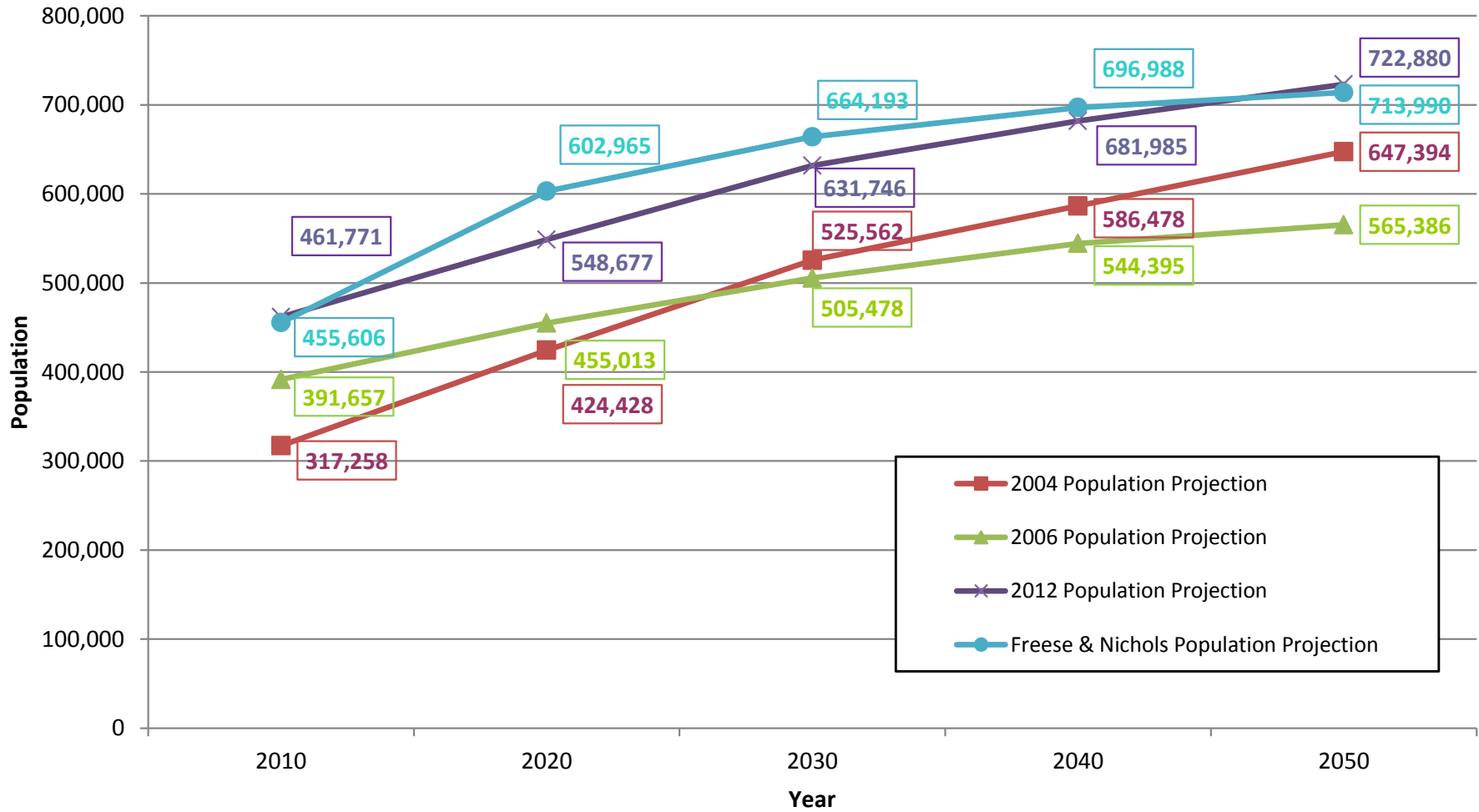


WHCRWA 2012 Population Projections
Exhibit 6
School District Boundaries



WHCRWA 2012 Population Projections Exhibit 7 Population Percent Increase from 2010 to 2030

Exhibit 8 - Population Projections Summary Graph



**Exhibit 9 - Population Projections by MUD
and Remainder Census Tract (Non-MUD Areas) Table**

MUD NAME	Mapbook Page See Exhibit 4	2010	2020	2030	2040	2050
West Harris County Regional Water Authority MUDs:						
Addicks UD	E3, F3	4,210	6,364	7,052	7,052	7,052
Barker Cypress MUD	E3	6,383	7,130	7,130	7,130	7,130
Bear Creek UD	E2	-	457	1,424	2,041	2,041
Beechnut MUD	H3	1,162	1,215	1,215	1,215	1,215
Bissonnet MUD	H3	8,015	8,253	8,253	8,253	8,253
Camfield MUD	D3	-	-	-	-	-
Castlewood MUD	F2	2,041	2,842	2,851	2,851	2,851
Chelford City MUD	H3	10,242	10,906	10,906	10,906	10,906
Chelford One MUD	H3	4,951	4,951	4,951	4,951	4,951
Cimarron MUD	F2, G2	5,607	7,901	8,515	8,515	8,515
City of Katy	F1, F2, G1, G2	13,276	15,539	17,546	18,744	19,043
Clay Road MUD	E2, E3	4,865	4,902	4,909	4,909	4,909
Fry Road MUD	F2	3,606	3,606	3,606	3,606	3,606
H-FBC MUD 3	F2, G2	1,508	4,300	5,544	5,544	5,544
H-FBC MUD 4	F2, G1, G2	-	-	-	-	-
HC MUD 061	F2	1,160	2,505	3,376	3,376	3,376
HC MUD 062	F2	957	2,687	3,252	3,252	3,252
HC MUD 063	F2	-	883	883	883	883
HC MUD 064	F2	4,661	4,883	4,883	4,883	4,883
HC MUD 070	D3, E3	5,129	6,283	6,283	6,283	6,283
HC MUD 071	E2, F2	10,079	12,935	13,084	13,084	13,084
HC MUD 076	B1	-	-	-	-	-
HC MUD 081	G2	10,205	9,646	9,646	9,646	9,646
HC MUD 102	E3	9,732	9,851	9,900	9,900	9,900
HC MUD 105	E2	7,040	8,305	9,769	10,932	12,436
HC MUD 120	G3, H3	9,368	10,049	10,049	10,049	10,049
HC MUD 127	E3	4,930	5,703	5,706	5,706	5,706
HC MUD 130	D3, D4	2,936	3,047	3,047	3,047	3,047
HC MUD 136	E3	2,842	2,783	2,783	2,783	2,783
HC MUD 144	D3, E3	3,404	3,479	3,584	3,584	3,584
HC MUD 147	G3, H3	2,766	2,769	2,769	2,769	2,769
HC MUD 149	D3, E3	3,483	3,483	3,483	3,483	3,483
HC MUD 155	D3	2,269	2,269	2,269	2,269	2,269
HC MUD 156	D3	1,176	1,587	1,587	1,587	1,587
HC MUD 157	D2, E2, E3	11,369	14,009	14,019	14,019	14,019
HC MUD 162	D3	2,317	2,271	2,271	2,271	2,271
HC MUD 163	D3	5,094	5,094	5,094	5,094	5,094
HC MUD 165	D2, D3, E2, E3	12,245	18,735	27,369	33,698	35,205
HC MUD 166	E3	2,386	3,111	3,111	3,111	3,111
HC MUD 167	E2, E3	6,699	10,760	10,797	10,797	10,797
HC MUD 171	D2, E2	-	1,362	6,306	11,545	16,463
HC MUD 172	D2, D3	2,451	4,241	4,246	4,246	4,246
HC MUD 173	D3	3,803	3,833	3,833	3,833	3,833
HC MUD 179	D3	3,410	3,929	4,491	4,491	4,491
HC MUD 183	E3	4,135	4,138	4,138	4,138	4,138
HC MUD 185	E3	3,489	3,489	3,489	3,489	3,489
HC MUD 186	D3, E3	3,197	3,197	3,197	3,197	3,197
HC MUD 188	D3	6,866	6,866	6,866	6,866	6,866
HC MUD 196	C3, D3	5,060	6,624	8,592	8,645	8,645
HC MUD 208	D3	3,504	3,504	3,504	3,504	3,504
HC MUD 238	F2, F3	6,794	7,633	7,633	7,633	7,633
HC MUD 239	E2, E3	6,076	6,137	6,137	6,137	6,137
HC MUD 250	E3	761	841	841	841	841
HC MUD 255	E3	1,262	1,265	1,265	1,265	1,265
HC MUD 257	E3	2,065	2,861	4,748	5,704	5,704

**Exhibit 9 - Population Projections by MUD
and Remainder Census Tract (Non-MUD Areas) Table**

MUD NAME	Mapbook Page See Exhibit 4	2010	2020	2030	2040	2050
HC MUD 264	D3, E3	3,491	3,491	3,491	3,491	3,491
HC MUD 268	E2	-	504	1,769	2,239	2,239
HC MUD 276	E3	3,679	5,348	5,419	5,419	5,419
HC MUD 284	E2, E3	3,406	4,090	5,349	5,471	5,471
HC MUD 287	F2	765	2,934	3,742	3,742	3,742
HC MUD 328	B1	-	-	-	-	-
HC MUD 329	B1	-	-	-	-	-
HC MUD 330	B1	-	-	-	-	-
HC MUD 341	E3, E4	2,261	2,267	2,267	2,267	2,267
HC MUD 370	E4	4,471	4,496	4,496	4,496	4,496
HC MUD 371	C2	2,101	2,281	2,286	2,286	2,286
HC MUD 374	C2, C3, D2	2,821	4,328	4,328	4,328	4,328
HC MUD 375	B2, C2	-	684	2,779	4,275	5,091
HC MUD 376	C2	-	-	-	450	1,288
HC MUD 377	B2, C2	-	-	-	668	1,934
HC MUD 378	B2, C2	-	299	440	1,593	2,852
HC MUD 379	C2	-	-	1,002	1,934	1,934
HC MUD 380	B2	-	-	-	790	1,982
HC MUD 405	B1	34	34	71	693	1,401
HC MUD 418	C2, D2	6	6	6	6	6
HC MUD 419	C2	2,984	10,407	13,440	13,440	13,440
HC MUD 432	F2	181	2,923	5,551	5,871	5,871
HC MUD 433	D2	5	1,491	3,605	3,738	3,738
HC MUD 434	B2	-	112	1,144	1,879	2,162
HC MUD 435	C2, D2	-	5	69	1,289	1,693
HC MUD 449	E2	-	349	1,444	2,257	3,443
HC MUD 457	E2	-	209	1,448	2,369	3,879
HC MUD 458	E2	-	186	3,250	4,320	5,625
HC MUD 462	D2	-	-	-	-	-
HC MUD 463	E2	-	792	2,932	4,091	4,091
HC MUD 476	E2	-	-	750	1,171	1,171
HC MUD 500	D3	983	983	983	983	983
HC MUD 501	C2, D2, D3	35	4,599	4,755	4,755	4,755
HC MUD 502	C2, C3, D2, D3	-	1,005	4,816	5,472	5,472
HC UD 006	E3	9,628	9,653	10,001	10,001	10,001
HC WCID 157	C2	-	-	-	-	-
Horsepen Bayou MUD	D4, E3, E4	6,808	6,812	6,812	6,812	6,812
Interstate MUD	F2, G2	4,153	4,237	4,237	4,237	4,237
Jackrabbit Road PUD	E3	8,239	8,242	8,242	8,242	8,242
Langham Creek UD	D3, E3	9,999	10,810	10,810	10,810	10,810
Mayde Creek MUD	E3, F2, F3	5,707	5,707	5,707	5,707	5,707
Memorial MUD	G2	6,470	6,470	6,470	6,470	6,470
Mission Bend MUD 1	H3	7,615	7,653	7,653	7,653	7,653
Mission Bend MUD 2	H3	9,970	11,236	11,745	11,802	11,802
Morton Road MUD	F2, F3	3,103	3,103	3,103	3,103	3,103
Nottingham Country MUD	G2	6,714	6,791	6,800	6,800	6,800
NW HC MUD 12	E2	2,395	2,816	4,012	4,396	4,396
Remington MUD 1	C3, D3	13,343	13,551	13,551	13,551	13,551
Renn Road MUD	H3	4,551	5,513	5,513	5,513	5,513
Ricewood MUD	F2	5,073	5,073	5,073	5,073	5,073
Rolling Creek UD	E3, F3	2,079	2,997	4,336	5,326	6,699
Spencer Road PUD	D3, E3	4,393	5,248	5,248	5,248	5,248
W HC MUD 02	F2	3,829	3,829	4,701	4,701	4,701
W HC MUD 04	H3	1,511	1,511	1,511	1,511	1,511
W HC MUD 05	F2	530	1,400	2,716	2,716	2,716
W HC MUD 07	F2	3,961	4,437	5,256	5,279	5,279

**Exhibit 9 - Population Projections by MUD
and Remainder Census Tract (Non-MUD Areas) Table**

MUD NAME	Mapbook Page See Exhibit 4	2010	2020	2030	2040	2050
W HC MUD 14	D3	2,543	2,546	2,546	2,546	2,546
W HC MUD 15	C3, D3	408	408	408	408	408
W HC MUD 17	F2	2,701	2,708	2,708	2,708	2,708
West Memorial MUD	F2, G2	3,634	3,646	3,646	3,646	3,646
West Park MUD	F2, F3	1,365	2,666	3,778	3,778	3,778
Westlake MUD 1	F2, F3	3,439	3,439	3,439	3,439	3,439
Weston MUD	F2	5,873	6,436	6,852	6,852	6,852
Authority MUD Sub-Total (2012):		408,247	488,173	550,708	581,866	602,235
Authority MUD Sub-Total (2006):		307,350	350,221	382,747	403,792	416,737

Remainder of Census Tracts (Non-MUD Areas):						
451800	G3, H3	5	5	5	5	5
453700	N/A	3	3	3	3	3
453900	H3	349	376	417	452	472
454300	G3	7	10	10	15	24
454500	F2, F3	30	30	30	30	30
455300	F2, G2	25	25	25	25	25
540100	D4, E3, E4	3,257	3,342	3,342	3,342	3,342
540500	E3	7	7	7	7	7
540600	E3	3	3	3	3	3
540700	E3	818	882	882	882	882
540800	D3, D4, E3	9	9	9	9	9
540900	D3, E3	18	18	18	18	18
541500	E3	32	35	35	35	35
541600	E3	330	333	333	333	333
541700	E3, F3	55	66	66	66	66
541700	E3, F3	41	41	41	41	41
541800	F2, F3	2	2	2	2	2
541900	E3, F3	80	80	80	80	80
542100	E2, E3	41	51	51	51	51
542200	E2	530	566	610	679	778
542200 - HC MUD YY2	E2	-	504	1,822	2,816	3,455
542300	E2, F3	1,225	1,225	1,225	1,225	1,225
542900	E1, E2, F1, F2	1,239	1,311	1,385	1,743	2,098
542900 - Harris Co MUD XXX	F2	-	616	2,423	3,690	5,786
542900 - HC MUD YY1	E2	-	458	1,575	2,441	3,306
542900 - HC MUD YY3	E1	-	-	292	1,280	2,402
543000	B1, B2, C1, C2, C3, D1, D2, D3, E2, E3	513	588	664	739	814
543001 - HC MUD ZZ2	D2, E2	-	652	3,206	5,075	8,156
543001 - Other Bridgelands	C1, C2, D1, D2	-	-	9,775	19,825	30,046
543002 - HC MUD ZZ1	C3	-	295	2,732	4,840	6,506
543100 & 555800	B1, B2, C1, D1, D2, E1, E2	2,306	2,556	2,806	3,055	3,305
CT Remainder Sub-Total (2012):		10,925	14,090	33,874	52,808	73,307
CT Remainder Sub-Total (2006):		33,119	38,459	41,345	53,835	56,530

Authority Sub-Total (2012):	419,172	502,262	584,582	634,673	675,542
Authority Sub-Total (2006):	346,238	404,065	449,092	482,626	498,267

Contract MUDs:						
HC MUD 046	B7	4,656	4,656	4,656	4,656	4,656
HC MUD 106	B7, C7	3,890	3,890	3,890	3,890	3,890
HC MUD 132	B7	6,969	7,932	7,972	8,032	8,053

**Exhibit 9 - Population Projections by MUD
and Remainder Census Tract (Non-MUD Areas) Table**

MUD NAME	Mapbook Page See Exhibit 4	2010	2020	2030	2040	2050
HC MUD 151	B7	5,849	5,884	5,927	5,968	5,973
HC MUD 152	B7, C7	7,646	7,652	7,652	7,652	7,652
HC MUD 180	C4, C5	5,235	6,511	7,017	7,063	7,063
Trail of the Lakes MUD	C7	8,355	9,889	10,050	10,050	10,050
Authority Sub-Total (2012):		42,600	46,414	47,165	47,311	47,338
Authority Sub-Total (2006):		45,419	50,948	56,386	61,769	67,119
Total Authority GRP (2012):		461,771	548,677	631,746	681,985	722,880
Total Authority GRP (2006):		391,657	455,013	505,478	544,395	565,386

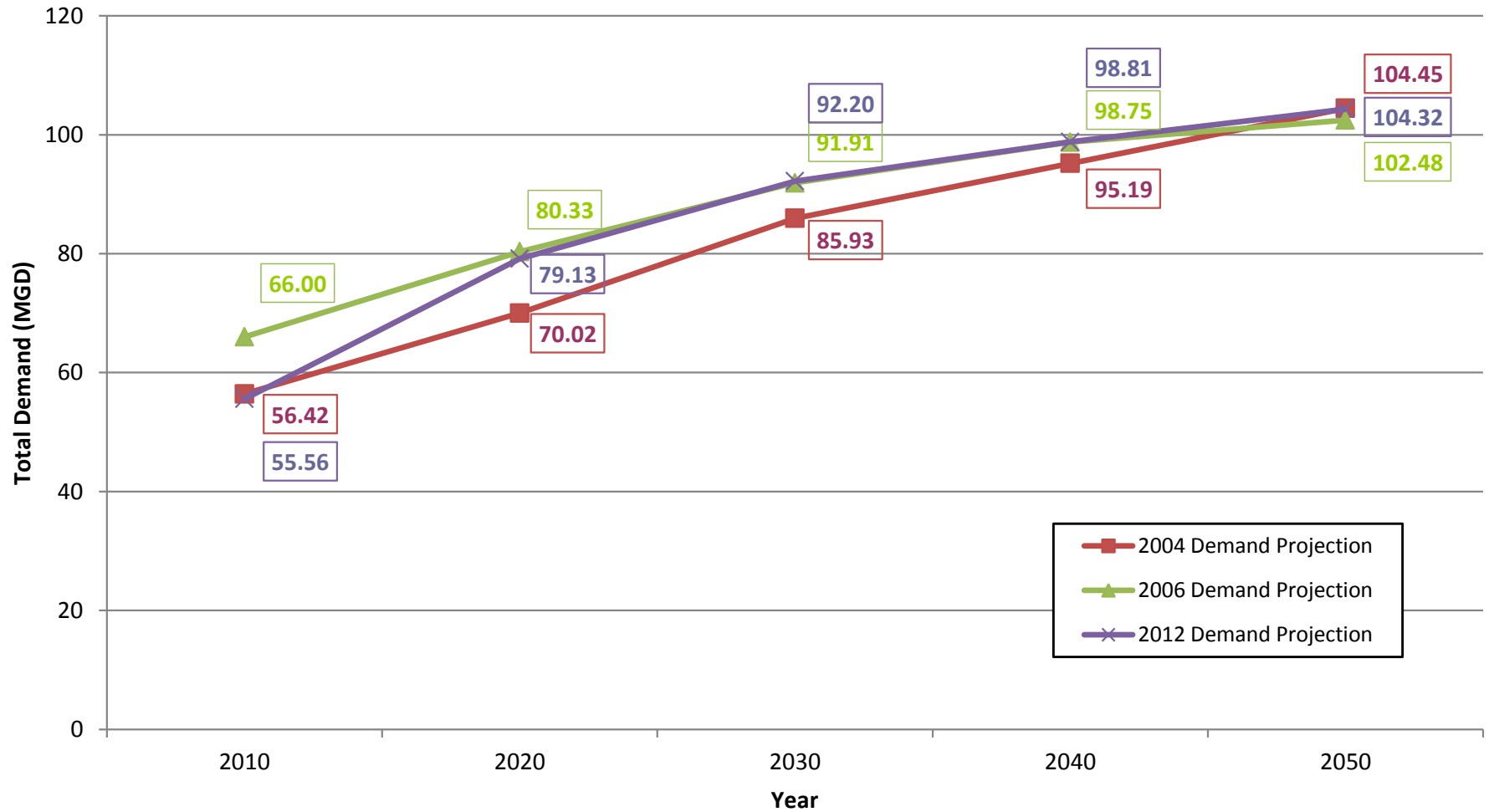
**EXHIBIT 10
WHCRWA HISTORIC WATER PUMPAGE (2005 - 2011)**

Groundwater Pumpage (MG)													
	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
2005	981.6	842.4	1,080.5	1,430.1	1,741.7	2,186.9	1,867.0	1,790.6	1,830.7	1,750.7	1,311.2	1,122.9	17,936.1
2006	1,167.8	1,013.2	1,362.2	1,668.9	1,793.1	1,749.2	1,548.3	1,854.0	1,709.1	1,384.6	1,288.8	1,129.9	17,669.2
2007	1,039.6	976.2	1,298.9	1,229.3	1,336.5	1,347.6	1,183.8	1,530.2	1,549.8	1,515.3	1,305.9	1,138.5	15,451.4
2008	1,098.6	974.8	1,178.8	1,411.0	1,822.0	2,019.7	1,964.9	1,735.1	1,682.4	1,456.1	1,156.5	1,073.7	17,573.6
2009	1,139.7	1,087.5	1,229.6	1,171.0	1,538.3	2,534.2	2,357.4	1,991.7	1,484.8	1,016.6	982.5	854.1	17,387.3
2010	918.9	730.4	871.6	1,172.8	1,594.3	1,469.9	1,228.1	1,593.1	1,163.3	1,408.2	1,054.0	979.0	14,183.6
2011	785.8	804.6	1,113.4	1,503.6	1,841.1	2,185.8	2,027.6	2,406.3	1,986.0	1,331.1	1,107.4	859.3	17,951.8

Surface Water Pumpage (MG)													
	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
2005													
2006	14.7	41.0	40.4	31.7	55.8	55.8	58.3	70.8	61.1	66.3	62.6	58.9	617.5
2007	55.0	50.3	71.1	85.4	99.9	111.1	131.2	166.5	158.2	182.8	142.3	132.5	1,386.3
2008	127.2	130.3	158.5	180.2	203.1	183.9	263.2	240.4	259.1	265.6	278.2	262.5	2,552.1
2009	254.0	229.5	279.6	266.2	328.4	394.0	423.0	518.8	394.6	326.2	324.0	352.8	4,091.1
2010	331.8	308.5	380.3	447.9	548.4	621.4	517.9	732.7	578.3	684.9	496.6	394.8	6,043.5
2011	393.7	396.3	543.6	725.7	826.3	796.1	779.2	854.3	808.3	714.6	572.0	471.0	7,881.0

Total Water Pumpage (MG)													
	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
2005	981.6	842.4	1,080.5	1,430.1	1,741.7	2,186.9	1,867.0	1,790.6	1,830.7	1,750.7	1,311.2	1,122.9	17,936.1
2006	1,182.5	1,054.2	1,402.6	1,700.6	1,848.9	1,805.0	1,606.6	1,924.8	1,770.3	1,450.9	1,351.5	1,188.9	18,286.7
2007	1,094.6	1,026.5	1,370.0	1,314.7	1,436.4	1,458.7	1,314.9	1,696.7	1,708.0	1,698.1	1,448.2	1,270.9	16,837.7
2008	1,225.8	1,105.0	1,337.4	1,591.2	2,025.1	2,203.5	2,228.0	1,975.5	1,941.6	1,721.7	1,434.7	1,336.2	20,125.7
2009	1,393.6	1,317.1	1,509.2	1,437.3	1,866.7	2,928.1	2,780.4	2,510.5	1,879.4	1,342.8	1,306.5	1,206.9	21,478.5
2010	1,250.7	1,038.9	1,251.9	1,620.8	2,142.6	2,091.3	1,746.0	2,325.9	1,741.6	2,093.1	1,550.6	1,373.8	20,227.1
2011	1,179.4	1,200.9	1,657.0	2,229.2	2,667.5	2,981.8	2,806.8	3,260.6	2,794.2	2,045.7	1,679.4	1,330.2	25,832.8

Exhibit 11 - Water Demand Projections Graph



**Exhibit 12 - Water Demand Projections by MUD and
Remainder Census Tract (Non-MUD Areas) Table**

MUD NAME	Mapbook Page See Exhibit 4	Demand Factor (gpcd)	2020 (MGD)	2030 (MGD)	2040 (MGD)	2050 (MGD)
West Harris County Regional Water Authority MUDs:						
Addicks UD	E3, F3	144	0.92	1.01	1.01	1.01
Barker Cypress MUD	E3	121	0.87	0.87	0.87	0.87
Bear Creek UD	E2	132	0.06	0.19	0.27	0.27
Beechnut MUD	H3	456	0.55	0.55	0.55	0.55
Bissonnet MUD	H3	74	0.61	0.61	0.61	0.61
Camfield MUD	D3	0	-	-	-	-
Castlewood MUD	F2	109	0.31	0.31	0.31	0.31
Chelford City MUD	H3	98	1.07	1.07	1.07	1.07
Chelford One MUD	H3	174	0.86	0.86	0.86	0.86
Cimarron MUD	F2, G2	148	1.17	1.26	1.26	1.26
City of Katy	F1, F2, G1, G2	101	1.57	1.78	1.90	1.93
Clay Road MUD	E2, E3	93	0.45	0.46	0.46	0.46
Fry Road MUD	F2	137	0.50	0.50	0.50	0.50
H-FBC MUD 3	F2, G2	142	0.61	0.79	0.79	0.79
H-FBC MUD 4	F2, G1, G2	0	-	-	-	-
HC MUD 061	F2	192	0.48	0.65	0.65	0.65
HC MUD 062	F2	192	0.51	0.62	0.62	0.62
HC MUD 063	F2	315	0.28	0.28	0.28	0.28
HC MUD 064	F2	116	0.57	0.57	0.57	0.57
HC MUD 070	D3, E3	117	0.73	0.73	0.73	0.73
HC MUD 071	E2, F2	109	1.40	1.42	1.42	1.42
HC MUD 076	B1	0	-	-	-	-
HC MUD 081	G2	122	1.18	1.18	1.18	1.18
HC MUD 102	E3	121	1.19	1.20	1.20	1.20
HC MUD 105	E2	88	0.73	0.86	0.96	1.10
HC MUD 120	G3, H3	145	1.46	1.46	1.46	1.46
HC MUD 127	E3	91	0.52	0.52	0.52	0.52
HC MUD 130	D3, D4	207	0.63	0.63	0.63	0.63
HC MUD 136	E3	184	0.51	0.51	0.51	0.51
HC MUD 144	D3, E3	80	0.28	0.29	0.29	0.29
HC MUD 147	G3, H3	81	0.22	0.22	0.22	0.22
HC MUD 149	D3, E3	127	0.44	0.44	0.44	0.44
HC MUD 155	D3	278	0.63	0.63	0.63	0.63
HC MUD 156	D3	242	0.38	0.38	0.38	0.38
HC MUD 157	D2, E2, E3	140	1.96	1.96	1.96	1.96
HC MUD 162	D3	190	0.43	0.43	0.43	0.43
HC MUD 163	D3	127	0.65	0.65	0.65	0.65
HC MUD 165	D2, D3, E2, E3	91	1.71	2.50	3.08	3.21
HC MUD 166	E3	153	0.48	0.48	0.48	0.48
HC MUD 167	E2, E3	146	1.57	1.58	1.58	1.58
HC MUD 171	D2, E2	132	0.18	0.83	1.53	2.18
HC MUD 172	D2, D3	242	1.03	1.03	1.03	1.03
HC MUD 173	D3	184	0.70	0.70	0.70	0.70
HC MUD 179	D3	128	0.50	0.58	0.58	0.58
HC MUD 183	E3	99	0.41	0.41	0.41	0.41
HC MUD 185	E3	111	0.39	0.39	0.39	0.39
HC MUD 186	D3, E3	196	0.63	0.63	0.63	0.63
HC MUD 188	D3	86	0.59	0.59	0.59	0.59
HC MUD 196	C3, D3	272	1.80	2.34	2.35	2.35
HC MUD 208	D3	146	0.51	0.51	0.51	0.51
HC MUD 238	F2, F3	115	0.88	0.88	0.88	0.88
HC MUD 239	E2, E3	92	0.56	0.56	0.56	0.56
HC MUD 250	E3	135	0.11	0.11	0.11	0.11
HC MUD 255	E3	135	0.17	0.17	0.17	0.17
HC MUD 257	E3	107	0.31	0.51	0.61	0.61
HC MUD 264	D3, E3	170	0.59	0.59	0.59	0.59
HC MUD 268	E2	132	0.07	0.23	0.30	0.30
HC MUD 276	E3	199	1.07	1.08	1.08	1.08
HC MUD 284	E2, E3	100	0.41	0.54	0.55	0.55
HC MUD 287	F2	132	0.39	0.50	0.50	0.50

**Exhibit 12 - Water Demand Projections by MUD and
Remainder Census Tract (Non-MUD Areas) Table**

MUD NAME	Mapbook Page See Exhibit 4	Demand Factor (gpcd)	2020 (MGD)	2030 (MGD)	2040 (MGD)	2050 (MGD)
HC MUD 328	B1	0	-	-	-	-
HC MUD 329	B1	0	-	-	-	-
HC MUD 330	B1	0	-	-	-	-
HC MUD 341	E3, E4	221	0.50	0.50	0.50	0.50
HC MUD 370	E4	167	0.75	0.75	0.75	0.75
HC MUD 371	C2	277	0.63	0.63	0.63	0.63
HC MUD 374	C2, C3, D2	204	0.88	0.88	0.88	0.88
HC MUD 375	B2, C2	132	0.09	0.37	0.57	0.67
HC MUD 376	C2	132	-	-	0.06	0.17
HC MUD 377	B2, C2	132	-	-	0.09	0.26
HC MUD 378	B2, C2	132	0.04	0.06	0.21	0.38
HC MUD 379	C2	132	-	0.13	0.26	0.26
HC MUD 380	B2	132	-	-	0.10	0.26
HC MUD 405	B1	353	0.01	0.03	0.24	0.49
HC MUD 418	C2, D2	401	0.00	0.00	0.00	0.00
HC MUD 419	C2	401	4.17	5.39	5.39	5.39
HC MUD 432	F2	378	1.10	2.10	2.22	2.22
HC MUD 433	D2	204	0.30	0.73	0.76	0.76
HC MUD 434	B2	132	0.01	0.15	0.25	0.29
HC MUD 435	C2, D2	132	0.00	0.01	0.17	0.22
HC MUD 449	E2	132	0.05	0.19	0.30	0.46
HC MUD 457	E2	132	0.03	0.19	0.31	0.51
HC MUD 458	E2	132	0.02	0.43	0.57	0.74
HC MUD 462	D2	0	-	-	-	-
HC MUD 463	E2	132	0.10	0.39	0.54	0.54
HC MUD 472	E2	132	-	0.10	0.15	0.15
HC MUD 500	D3	242	0.24	0.24	0.24	0.24
HC MUD 501	C2, D2, D3	242	1.11	1.15	1.15	1.15
HC MUD 502	C2, C3, D2, D3	242	0.24	1.16	1.32	1.32
HC UD 006	E3	125	1.20	1.25	1.25	1.25
HC WCID 157	C2	401	-	-	-	-
Horsepen Bayou MUD	D4, E3, E4	135	0.92	0.92	0.92	0.92
Interstate MUD	F2, G2	131	0.55	0.55	0.55	0.55
Jackrabbit Road PUD	E3	122	1.00	1.00	1.00	1.00
Langham Creek UD	D3, E3	96	1.04	1.04	1.04	1.04
Mayde Creek MUD	E3, F2, F3	100	0.57	0.57	0.57	0.57
Memorial MUD	G2	120	0.78	0.78	0.78	0.78
Mission Bend MUD 1	H3	92	0.71	0.71	0.71	0.71
Mission Bend MUD 2	H3	95	1.07	1.11	1.12	1.12
Morton Road MUD	F2, F3	111	0.34	0.34	0.34	0.34
Nottingham Country MUD	G2	240	1.63	1.63	1.63	1.63
NW HC MUD 12	E2	86	0.24	0.34	0.38	0.38
Remington MUD 1	C3, D3	96	1.30	1.30	1.30	1.30
Renn Road MUD	H3	77	0.43	0.43	0.43	0.43
Ricewood MUD	F2	127	0.64	0.64	0.64	0.64
Rolling Creek UD	E3, F3	192	0.58	0.83	1.02	1.29
Spencer Road PUD	D3, E3	179	0.94	0.94	0.94	0.94
W HC MUD 02	F2	91	0.35	0.43	0.43	0.43
W HC MUD 04	H3	234	0.35	0.35	0.35	0.35
W HC MUD 05	F2	315	0.44	0.86	0.86	0.86
W HC MUD 07	F2	76	0.34	0.40	0.40	0.40
W HC MUD 14	D3	245	0.63	0.63	0.63	0.63
W HC MUD 15	C3, D3	245	0.10	0.10	0.10	0.10
W HC MUD 17	F2	157	0.43	0.43	0.43	0.43
West Memorial MUD	F2, G2	180	0.66	0.66	0.66	0.66
West Park MUD	F2, F3	201	0.54	0.76	0.76	0.76
Westlake MUD 1	F2, F3	137	0.47	0.47	0.47	0.47
Weston MUD	F2	132	0.85	0.90	0.90	0.90
Authority MUD Sub-Total (2012):			69.19	79.57	83.66	86.45
Authority MUD Sub-Total (2006):			59.87	67.29	72.12	74.44
Authority MUD Sub-Total (2004):			53.92	65.45	N/A	80.85
2002 GRP Total			50.98	63.43	N/A	79.06

**Exhibit 12 - Water Demand Projections by MUD and
Remainder Census Tract (Non-MUD Areas) Table**

MUD NAME	Mapbook Page See Exhibit 4	Demand Factor (gpcd)	2020 (MGD)	2030 (MGD)	2040 (MGD)	2050 (MGD)
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Remainder of Census Tracts (Non-MUD Areas):						
451800	G3, H3	132	0.00	0.00	0.00	0.00
453700	N/A	132	0.00	0.00	0.00	0.00
453900	H3	132	0.05	0.06	0.06	0.06
454300	G3	132	0.00	0.00	0.00	0.00
454500	F2, F3	132	0.00	0.00	0.00	0.00
455300	F2, G2	132	0.00	0.00	0.00	0.00
540100	D4, E3, E4	132	0.44	0.44	0.44	0.44
540500	E3	132	0.00	0.00	0.00	0.00
540600	E3	132	0.00	0.00	0.00	0.00
540700	E3	132	0.12	0.12	0.12	0.12
540800	D3, D4, E3	132	0.00	0.00	0.00	0.00
540900	D3, E3	132	0.00	0.00	0.00	0.00
541500	E3	132	0.00	0.00	0.00	0.00
541600	E3	132	0.04	0.04	0.04	0.04
541700	E3, F3	132	0.01	0.01	0.01	0.01
541700	E3, F3	132	0.01	0.01	0.01	0.01
541800	F2, F3	132	0.00	0.00	0.00	0.00
541900	E3, F3	132	0.01	0.01	0.01	0.01
542100	E2, E3	132	0.01	0.01	0.01	0.01
542200	E2	132	0.07	0.08	0.09	0.10
542200 - HC MUD YY2	E2	132	0.07	0.24	0.37	0.46
542300	E2, F3	132	0.16	0.16	0.16	0.16
542900	E1, E2, F1, F2	132	0.11	0.12	0.17	0.21
542900	E1, E2, F1, F2	132	0.06	0.06	0.06	0.06
542900 - Harris Co MUD XXX	F2	132	0.08	0.32	0.49	0.77
542900 - HC MUD YY1	E2	132	0.06	0.21	0.32	0.44
542900 - HC MUD YY3	E1	132	-	0.04	0.17	0.32
543000	B1, B2, C1, C2, C3, D1, D2, D3, E2, E3	132	0.08	0.09	0.10	0.11
543001 - HC MUD ZZ2	D2, E2	132	0.09	0.42	0.67	1.08
543001 - Other Bridgelands	C1, C2, D1, D2	132	-	1.29	2.62	3.97
543002 - HC MUD ZZ1	C3	132	0.04	0.36	0.64	0.86
543100 & 555800	B1, B2, C1, D1, D2, E1, E2	132	0.34	0.37	0.40	0.44
CT Remainder Sub-Total (2012):			1.86	4.48	6.99	9.70
CT Remainder Sub-Total (2006):			8.09	9.62	10.70	11.18
CT Remainder Sub-Total (2004):			7.95	10.66	N/A	13.78
2002 GRP Total			7.95	10.66	N/A	13.78

Individual Wells:						
Britmore Utility Aqua Texas	N/A	N/A	0.57	0.57	0.57	0.57
Campbell Concrete & Materials	N/A	N/A	0.04	0.04	0.04	0.04
Chemical Lime Co.	N/A	N/A	0.02	0.02	0.02	0.02
CLW Longenbaugh	N/A	N/A	-	-	-	-
DMV Stainless USA, Inc.	N/A	N/A	0.02	0.02	0.02	0.02
Bill English; 290 Golf Ltd.	N/A	N/A	0.37	0.37	0.37	0.37
529 #35 Ltd.; Northwoods	N/A	N/A	0.10	0.10	0.10	0.10
Frontier Materials Concrete (Lattimore)	N/A	N/A	0.01	0.01	0.01	0.01
Greenland/West Green Water System (Millennium)	N/A	N/A	0.03	0.03	0.03	0.03
Harris County - Katy Park	N/A	N/A	-	-	-	-
Harris County Water Corp (Millennium)	N/A	N/A	-	-	-	-
Hewlett Packard (Holder Const. Group)	N/A	N/A	0.02	0.02	0.02	0.02
Katy - Hockley Corporation	N/A	N/A	-	-	-	-
Katy I.S.D.	N/A	N/A	0.12	0.12	0.12	0.12
Koy Concrete, Inc. (Kesh, Inc.)	N/A	N/A	0.01	0.01	0.01	0.01
Nguyen, Loc	N/A	N/A	0.02	0.02	0.02	0.02

**Exhibit 12 - Water Demand Projections by MUD and
Remainder Census Tract (Non-MUD Areas) Table**

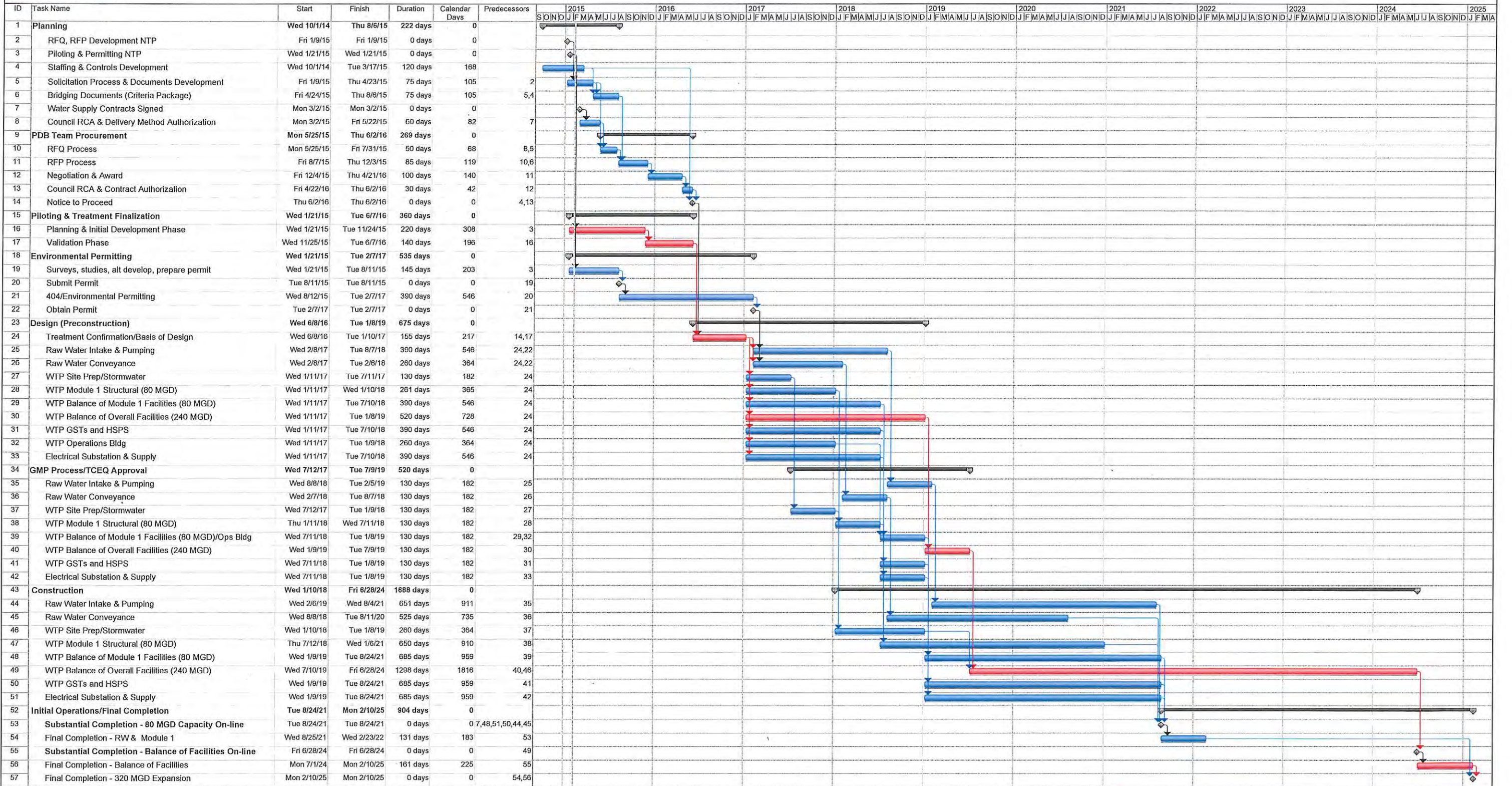
MUD NAME	Mapbook Page See Exhibit 4	Demand Factor (gpcd)	2020 (MGD)	2030 (MGD)	2040 (MGD)	2050 (MGD)
North Harris Mont. Comm. College/Lone Star College	N/A	N/A	0.09	0.09	0.09	0.09
P.D. Rushing Park #1 (Harris County)	N/A	N/A	-	-	-	-
Peek Road (Britmore)	N/A	N/A	0.06	0.06	0.06	0.06
Rouse Houston	N/A	N/A	-	-	-	-
Stonegate HOA (Pulte)	N/A	N/A	0.25	0.25	0.25	0.25
Pine Forest Country Club	N/A	N/A	0.22	0.22	0.22	0.22
Quadvest LP	N/A	N/A	0.00	0.00	0.00	0.00
Thrustmaster (529 Industrial)	N/A	N/A	-	-	-	-
TXI Operations, LP	N/A	N/A	-	-	-	-
Toshiba International	N/A	N/A	0.03	0.03	0.03	0.03
Varco Shaffer, Inc. & Natl. Oilwell Varco	N/A	N/A	0.03	0.03	0.03	0.03
Villa Toscana Apts.	N/A	N/A	0.01	0.01	0.01	0.01
Villages of Cypress Lakes C.A.	N/A	N/A	-	-	-	-
VDC Matthew Ridge Ltd.	N/A	N/A	-	-	-	-
West Houston Mobile Home	N/A	N/A	0.03	0.03	0.03	0.03
Western Pines (Tex-Sun Parks)	N/A	N/A	0.12	0.12	0.12	0.12
Windhaven POA	N/A	N/A	0.04	0.04	0.04	0.04
Windsor Park Lakes	N/A	N/A	0.06	0.06	0.06	0.06
Wyman/Gordon Forgings, Inc.	N/A	N/A	0.11	0.11	0.11	0.11
Individual Wells Sub-Total (2012):			2.39	2.39	2.39	2.39
Individual Wells Sub-Total (2006):			N/A	N/A	N/A	N/A
Individual Wells Sub-Total (2004):			N/A	N/A	N/A	N/A

Authority Sub-Total (2012):	73.45	86.44	93.04	98.54
Authority Sub-Total (2006):	70.63	81.26	87.17	89.97
Authority Sub-Total (2004):	64.55	80.46	N/A	98.98

Contract MUDs:						
HC MUD 046	B7	95	0.44	0.44	0.44	0.44
HC MUD 106	B7, C7	222	0.86	0.86	0.86	0.86
HC MUD 132	B7	161	1.28	1.28	1.29	1.30
HC MUD 151	B7	158	0.93	0.94	0.94	0.95
HC MUD 152	B7, C7	112	0.86	0.86	0.86	0.86
HC MUD 180	C4, C5	86	0.56	0.60	0.60	0.60
Trail of the Lakes MUD	C7	77	0.76	0.77	0.77	0.77
Authority Sub-Total (2012):			5.68	5.75	5.77	5.78
Authority Sub-Total (2006):			9.70	10.64	11.58	12.51
Authority Sub-Total (2004):			5.47	5.47	N/A	5.47

Total Demand Authority GRP (2012):	79.13	92.20	98.81	104.32
Total Demand Authority GRP (2006):	80.33	91.91	98.75	102.48
Total Demand Authority GRP (2004):	70.02	85.93	95.19	104.45

NEWPP EXPANSION PROJECT
 BASELINE SCHEDULE
 DRAFT VERSION 1.1A



Project: NEWPP Expansion
 Date: Mon 2/9/15

█ Critical Task
█ Progress
 Summary
 Project Summary
█ External Tasks
 External Milestone
 Deadline
 Critical Split
 Split
 Milestone
 Rolled Up Critical
 Rolled Up Critical
 External Milestone

PROJECT BUDGET - WHCRWA for City of Houston NEWPP					
Uses	TWDB Funds Series 1	TWDB Funds Series 2	Total TWDB Cost	Other Funds	Total Cost
Construction					
Construction	\$0	\$0	\$0	\$0	\$0
Subtotal Construction	\$0	\$0	\$0	\$0	\$0
Basic Engineering Fees					
Planning +	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Construction Engineering	\$0	\$0	\$0	\$0	\$0
Basic Engineering Other **	\$0	\$0	\$0	\$0	\$0
Subtotal Basic Engineering Fees	\$0	\$0	\$0	\$0	\$0
Special Services					
Application	\$0	\$0	\$0	\$0	\$0
Environmental	\$0	\$0	\$0	\$0	\$0
Water Conservation Plan	\$0	\$0	\$0	\$0	\$0
I/I Studies/Sewer	\$0	\$0	\$0	\$0	\$0
Surveying	\$0	\$0	\$0	\$0	\$0
Geotechnical	\$0	\$0	\$0	\$0	\$0
Testing	\$0	\$0	\$0	\$0	\$0
Permits	\$0	\$0	\$0	\$0	\$0
Inspection	\$0	\$0	\$0	\$0	\$0
O&M Manual	\$0	\$0	\$0	\$0	\$0
Project Management (by engineer)	\$0	\$0	\$0	\$0	\$0
Pilot Testing	\$0	\$0	\$0	\$0	\$0
Water Distribution	\$0	\$0	\$0	\$0	\$0
Special Services Other **	\$0	\$0	\$0	\$0	\$0
Subtotal Special Services	\$0	\$0	\$0	\$0	\$0
Other					
Administration	\$0	\$0	\$0	\$0	\$0
Land/Easements	\$0	\$0	\$0	\$0	\$0
Water Rights Purchase (If Applicable)	\$0	\$0	\$0	\$0	\$0
Capacity Buy-In (If Applicable)	\$50,000,000	\$0	\$50,000,000	\$0	\$50,000,000
Project Legal Expenses	\$0	\$0	\$0	\$0	\$0
Other **	\$0	\$0	\$0	\$0	\$0
Subtotal Other Services	\$50,000,000	\$0	\$50,000,000	\$0	\$50,000,000
Fiscal Services					
Financial Advisor	\$0	\$0	\$0	\$0	\$0
Bond Counsel	\$0	\$0	\$0	\$0	\$0
Issuance Cost	\$0	\$0	\$0	\$0	\$0
Bond Insurance/Surety	\$0	\$0	\$0	\$0	\$0
Fiscal/Legal	\$0	\$0	\$0	\$0	\$0
Capitalized Interest	\$0	\$0	\$0	\$0	\$0
Bond Reserve Fund	\$0	\$0	\$0	\$0	\$0
Loan Origination Fee	\$0	\$0	\$0	\$0	\$0
Other **	\$0	\$0	\$0	\$0	\$0
Subtotal Fiscal Services	\$0	\$0	\$0	\$0	\$0
Contingency					
Contingency	\$0	\$0	\$0	\$0	\$0
Subtotal Contingency	\$0	\$0	\$0	\$0	\$0
TOTAL COSTS	\$50,000,000	\$0	\$50,000,000	\$0	\$50,000,000

Other ** description must be entered

+ For Planning applications under the EDAP Program, please break down Planning costs as follows:

Category A				0
Category B				0
Category C				0
Category D				0
Total Planning Costs			0	0

Texas Water Development Board Water Project Information							
A. Project Name		B. Project No.		C. County		D. Regional Planning Group (A-P)	
E. Program(s)		F. Loan <input type="checkbox"/> / Grant <input type="checkbox"/> Amount:		G. Loan Term:			
H. Water Project Description: (Multiphase project, new or expansion; plant, well, storage, pump station, distribution system, etc)							
Attach map of service area affected by Project or other documentation.							
I. Is an Inter Basin Transfer potentially involved? Yes <input type="checkbox"/> No <input type="checkbox"/>				J. Is project located in a Groundwater District (If yes, identify District by name)? Yes <input type="checkbox"/> No <input type="checkbox"/>			
K. Projected Population from application for at least a 20 year period. Attach justification and list service area populations if different from Planning Area.	Year	Reference Year	2010	2020	2030	2040	
	Population Projection						
Project Design Year				Design Population			
L. Is the proposed project included in a current Regional Water Plan? Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know <input type="checkbox"/> (If Yes, please specify on what page in the Regional Water Plan - Regional Water Plan Page Number: _____)							
M. What type of water source is associated directly with the proposed project ? Surface Water <input type="checkbox"/> Groundwater <input type="checkbox"/> Reuse <input type="checkbox"/>							
N. Will the project increase the volume of water supply? Yes <input type="checkbox"/> No <input type="checkbox"/>							
O. What volume of water is the project anticipated to deliver/ treat per year? _____ Acre-Feet/Year							
P. Current Water Supply Information							
Surface Water Supply Source / Provider Names		Certificate No.		Source County		Annual Volume and Unit	
Groundwater Source Aquifer		Well Field location		Source County		Annual Volume and Unit	
Q. Proposed Water Supply Associated Directly with the Proposed Project							
Surface Water Supply Source / Provider Names		Certificate No.		Source County		Annual Volume and Unit	
Groundwater Source Aquifer		Well Field location:		Source County		Annual Volume and Unit	
R. Consulting Engineer Name			Telephone No.		E-mail address		
S. Applicant Contact Name, Title			Telephone No.		E-mail address		

PROJECT DESCRIPTION

WHCRWA - City Of Houston

TREATMENT EXPANSION (NEWPP)

Expansion of City of Houston (COH) treatment capacity to meet Harris Galveston Subsidence District Regulations as increasing customer demands and increased regional population. The COH is among the largest providers of surface water to customers in Region H. COH currently treats water originating in the Lake Houston and Livingston in three treatment plants prior to distribution to its customers. The three plants are the Northeast Water Purification Plant (NEWPP), the East water Purification Plant (EWPP), and the Southeast Water Purification Plant (SEWPP). Over the course of RWP planning period, increasing COH and customer demands as well as Harris Galveston Subsidence District Requirements will drive the need for additional surface water treatment. This water treatment plant expansion will accommodate Houston customers including four regional Water Authority demand. The expanded NEWPP plant will be built in four 80 MGD modules for a total potable water capacity of 320 MGD.

This project is listed in the TWDB Water Plan under the COH. The project is being developed by the COH but will serve WHCRWA as well as other water Authorities. WHCRWA is funding their pro-rata share of the project which is approximately 26% based on water demand allocation of the overall project. Costs attached only reflect WHCRWA's obligations, including internal WHCRWA costs, and were based on the COH's schedule and budget for cash calls to the WHCRWA. The project is anticipated to be a design build project.

Part E

STATE OF TEXAS §
COUNTIES OF HARRIS AND FORT BEND §

SURFACE WATER AFFIDAVIT

Before me, the undersigned notary, on this day personally appeared Bruce Parker, a person whose identity is known to me. After I administered an oath to him/her, upon his/her oath he/she said:

- 1. I am over 18 years of age, of sound mind, and capable of making this affidavit. The facts stated in this affidavit are within my personal knowledge and are true and correct.
- 2. I am an authorized representative of West Harris County Regional Water Authority, an entity that has filed an application for financial assistance with the Texas Water Development Board for a project that proposes the development of a new surface water supply source.
- 3. Does the applicant possess a Certificate of Adjudication and/or Water Rights Permit(s) issued by the Texas Commission on Environmental Quality or a predecessor agency authorizing the appropriation and use of the surface water needed for the Project?

Yes No

Please attach a copy of the Certificate(s) of Adjudication and Water Rights Permit(s).

Item attached: Yes No

- 4. Does the applicant have the contractual right to use the surface water from an entity that enjoys the right to appropriate and use the surface water needed for the project?

Yes No

Please attach a copy of any draft or executed water supply contract, lease or other legal instrument providing contractual authorization to use the surface water needed for the Project.

Item attached: Yes No

Please identify the Certificate of Adjudication(s) and Water Rights Permit(s) possessed by the wholesale water provider pursuant to which the contract, lease or other legal instrument has been or will be executed.

Certificate of Adjudications:

Item attached: Yes No

Water Rights Permit(s):

Item attached: Yes No

Signed the 12th day of April, 2017.



Name: Bruce Parker

President
Title: President

Sworn to and subscribed before me by Bruce Parker on April 12,
2017



[SEAL]


Notary Public in and for the State of Texas

My Commission expires: June 26, 2019



BERG ♦ OLIVER ASSOCIATES, INC.
Environmental Science, Engineering & Land Use Consultants
14701 St. Mary's Lane, Suite 400
Houston, Texas 77079
(281) 589-0898 fax: (281) 589-0007

August 20, 2012

Mr. John Davidson
Unit Leader - Compliance Unit
U.S. Army Corps of Engineers
2000 Fort Point Road
Galveston, Texas 77550

RE: Jurisdictional Determination – 0.33 acre Remnant Irrigation Ditch - Fry Road
Harris County, Texas – BOA JN 8449

Dear Mr. Davidson,

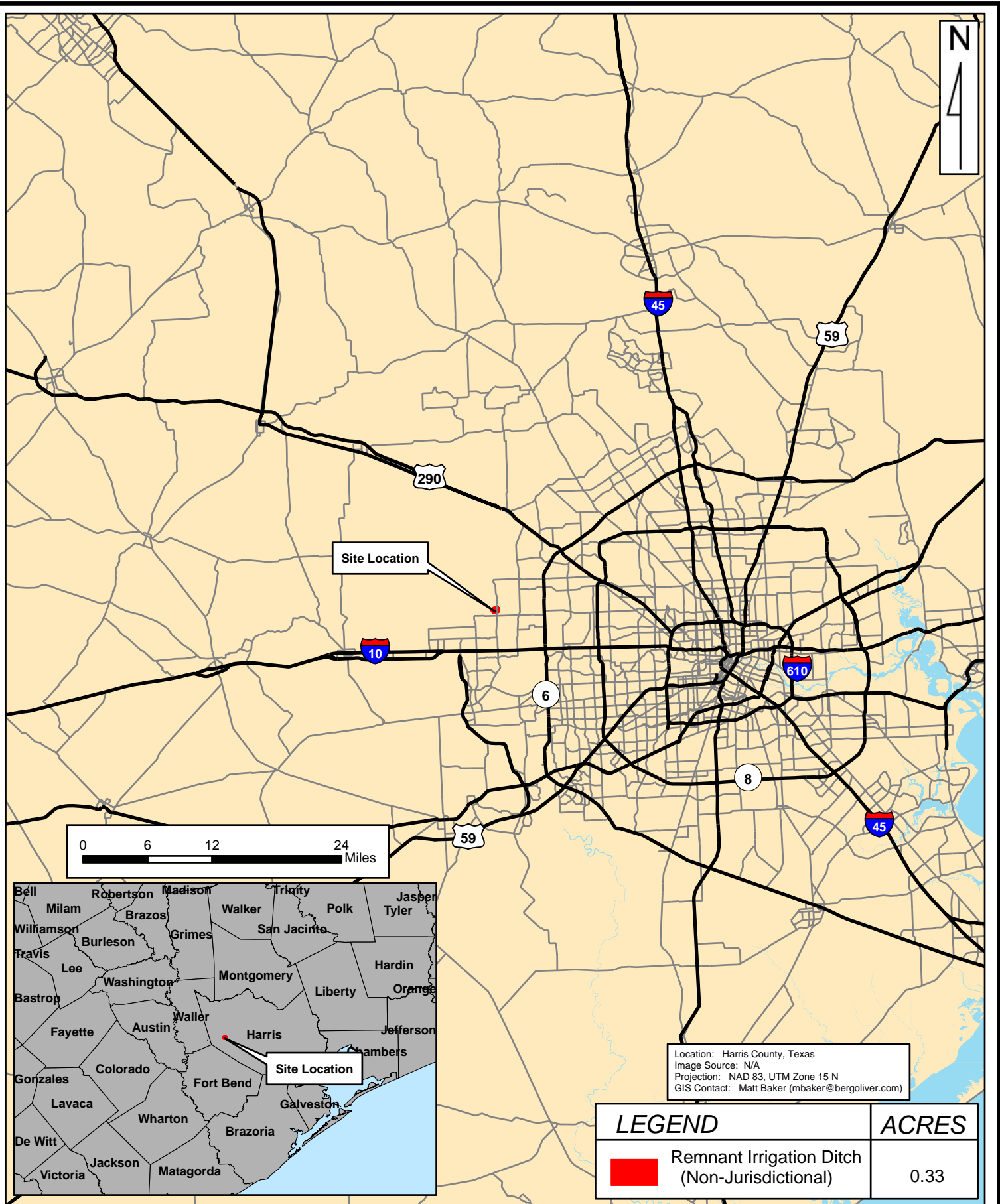
Berg-Oliver Associates, Inc. is requesting a jurisdictional determination for a 0.33 acre remnant irrigation ditch located 0.5 miles north of Clay Road adjacent to and west of Fry Road in northwest Harris County, Texas. The tract is centered at Lat / Long coordinates 29.838614; -95.721019 and NAD 83, UTM Zone 15 N coordinates: 237,107.291 meters E; 3,304,009.408 meters N.

Based upon an assessment of the historical aerial photographs, USGS maps, and site reconnaissance conducted on July 31, 2012 by Berg-Oliver Associates, it is the opinion of Berg-Oliver Associates that the ditch is a non-jurisdictional remnant irrigation ditch. This assessment was based upon the fact that the 1944 historical aerial photograph indicates that the land use within the vicinity of the ditch appeared to have been rice cultivation. The ditch appears to have been connected to a network of irrigation ditches used to flood fields for rice production. In addition, the 1995 USGS map indicates that one well is located near the northern terminus of the ditch and that another well located west of the ditch appears to have been used to pump ground water into the ditches for rice cultivation. Based upon site conditions on July 31, 2012, no direct surface hydrological connection was observed connecting the ditch to a tributary or Traditional Navigable Waterway.


If you have any questions or require additional information, please contact me at the above number.

Sincerely,

David Sherrill
Director of Land Use and Permitting



Location: Harris County, Texas
 Image Source: N/A
 Projection: NAD 83, UTM Zone 15 N
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Remnant Irrigation Ditch (Non-Jurisdictional)	0.33

SITE VICINITY MAP

Project #: 8449
 For: Dannenbaum Engineering
 Location: Northwest of Clay Rd and Fry Rd
Harris County, Texas

REVISIONS
Aug. 20, 2012 by MDE

BERG•OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE, ENGINEERING
 & LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400
 HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>



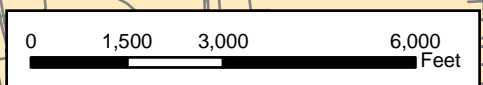


W. Little York Rd.

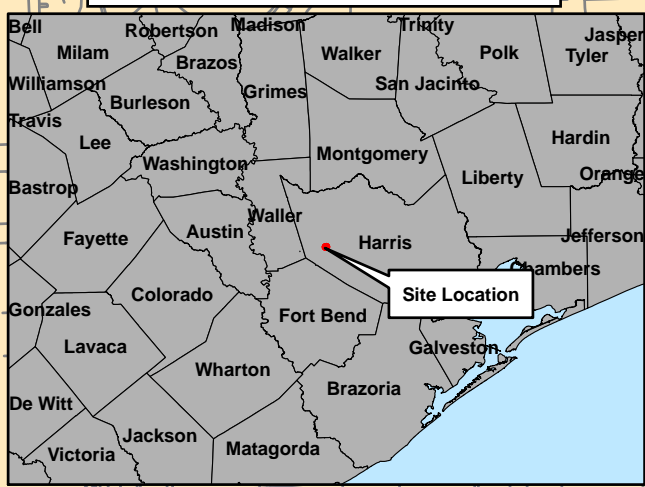
Site Location

Fry Rd.


Clay Rd.



Morton Rd.



Location: Harris County, Texas
Image Source: N/A
Projection: NAD 83, UTM Zone 15 N
GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND		ACRES
	Remnant Irrigation Ditch (Non-Jurisdictional)	0.33

SITE LOCATION MAP

Project #: 8449
 For: Dannenbaum Engineering
 Location: Northwest of Clay Rd and Fry Rd
Harris County, Texas


REVISIONS
Aug. 20, 2012 by MDE

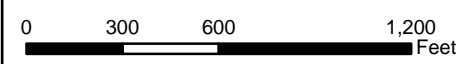
BERG•OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE, ENGINEERING
 & LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400
 HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>





Location: Harris County, Texas
 Image Source: USGS (Addicks)
 Projection: NAD 83, UTM Zone 15 N
 GIS Contact: Matt Baker (mbaker@bergoliver.com)

LEGEND	ACRES
 Remnant Irrigation Ditch (Non-Jurisdictional)	0.33



1995 USGS TOPOGRAPHIC MAP - ADDICKS QUAD

Project #: 8449
 For: Dannenbaum Engineering
 Location: Northwest of Clay Rd and Fry Rd
Harris County, Texas

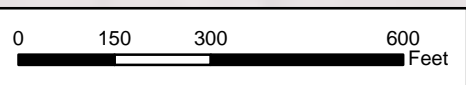
REVISIONS
Aug. 20, 2012 by MDE


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 HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>





Location: Harris County, Texas
 Image Source: USGS (Addicks)
 Projection: NAD 83, UTM Zone 15 N
 GIS Contact: Matt Baker (mbaker@bergoliver.com)



LEGEND		ACRES
	Remnant Irrigation Ditch (Non-Jurisdictional)	0.33

1995 USGS TOPOGRAPHIC MAP - ADDICKS QUAD

Project #: 8449
 For: Dannenbaum Engineering
 Location: Northwest of Clay Rd and Fry Rd
Harris County, Texas

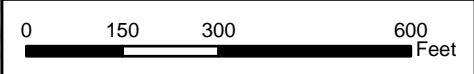
REVISIONS
Aug. 20, 2012 by MDE


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 & LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400
 HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>





Location: Harris County, Texas
 Image Source: GLO (1944)
 Projection: NAD 83, UTM Zone 15 N
 GIS Contact: Matt Baker (mbaker@bergoliver.com)



LEGEND		ACRES
	Remnant Irrigation Ditch (Non-Jurisdictional)	0.33

1944 GLO AERIAL

Project #: 8449
For: Dannenbaum Engineering
Location: Northwest of Clay Rd and Fry Rd
Harris County, Texas

REVISIONS
Aug. 20, 2012 by MDE

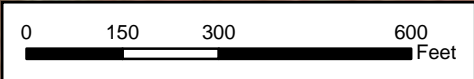
BERG•OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE, ENGINEERING
 & LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400
 HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>






Fry Rd.

Location: Harris County, Texas
Image Source: TXDOQQ (1995)
Projection: NAD 83, UTM Zone 15 N
GIS Contact: Matt Baker (mbaker@bergoliver.com)



LEGEND		ACRES
	Remnant Irrigation Ditch (Non-Jurisdictional)	0.33

1995 TXDOQQ INFRARED AERIAL

Project #: 8449
 For: Dannenbaum Engineering
 Location: Northwest of Clay Rd and Fry Rd
Harris County, Texas

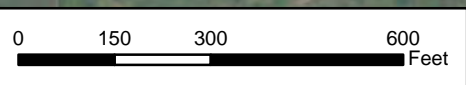
REVISIONS
Aug. 20, 2012 by MDE


BERG•OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE, ENGINEERING
 & LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400
 HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>





Location: Harris County, Texas
 Image Source: NAIP (2010)
 Projection: NAD 83, UTM Zone 15 N
 GIS Contact: Matt Baker (mbaker@bergoliver.com)



LEGEND		ACRES
	Remnant Irrigation Ditch (Non-Jurisdictional)	0.33

2010 NAIP AERIAL

Project #: 8449
 For: Dannenbaum Engineering
 Location: Northwest of Clay Rd and Fry Rd
Harris County, Texas

REVISIONS
Aug. 20, 2012 by MDE

BERG•OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE, ENGINEERING
 & LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400
 HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>





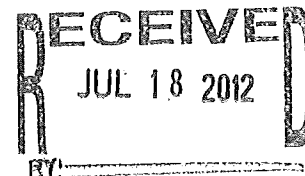
DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

June 26, 2012

REPLY TO
ATTENTION OF:

Evaluation Section

SUBJECT: Permit No. SWG-2012-00388; Nationwide Permit Verification



Bruce Parker
West Harris County Regional Water Authority
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027-7537

Dear Mr. Parker:

Your April 27, 2012, request, submitted on your behalf by Terracon Consultants, Inc., to temporarily discharge fill material into 15.45 acres of freshwater emergent wetlands as part of the project to install a 29.5-mile-long, 96-inch-diameter surface water distribution pipeline is verified by Nationwide Permit (NWP) 12 pursuant to Section 404 of the Clean Water Act (CWA). This NWP verification is valid provided the activity is compliant with the enclosed NWP General/Regional Conditions and the Texas Commission on Environmental Quality's Best Management Practice Guidelines. The project site spans 29.5 miles, and is within an existing pipeline easement that runs from Peek Road to the north of the City of Katy to just east of Halls Bayou at Tidwell Park in Houston, Harris County, Texas.

Nationwide Permit 12 authorizes discharges of fill material for backfill or bedding of pipelines provided the site is restored to pre-construction contours. Material resulting from trench excavation may be temporarily sidecast, up to 3 months, into the adjacent areas provided the material is not placed in such a manner that currents or other forces disperse it. The wetland areas disturbed must be limited to the minimum necessary to construct the pipeline. All heavy equipment working in wetlands must be placed on mats or other measures must be taken to minimize soil disturbance.

This verification expires 2 years from the date of this letter. A copy of your plans in 10 sheets is enclosed. The following special condition has been added to your authorization:

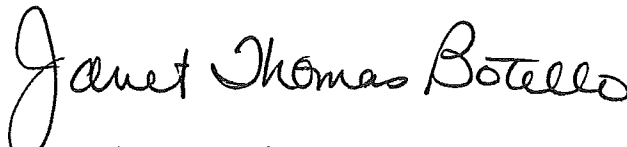
When structures or work authorized by this permit are determined by the Corps of Engineers (Corps) to have become abandoned, obstructive to navigation, or cease to be used for the purpose for which they were permitted, such structures or other work must be removed, the area cleared of all obstructions, and written notice given to the Chief of Compliance, Galveston District, Regulatory Branch, within 30 calendar days of removal.

The impacts to waters of the United States (U.S.) associated with this NWP verification are based on a preliminary jurisdictional determination (JD) for your subject site. If you wish, you may request an approved JD (which may be appealed) by submitting a written request to us within 30 days from the date of this letter. Please note that if you request an approved JD and then decide to appeal it, the appeal will not be accepted if any work has started in waters of the U.S. or that would alter the hydrology of waters of the U.S.

Corps determinations are conducted to identify the limits of the Corps CWA jurisdiction for particular sites. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

If you have any question regarding this verification please contact Mr. Jeffrey F. Pinsky at the letterhead address or by telephone at 409-766-3087. Please notify the Chief of the Compliance in the Galveston District Regulatory Branch, in writing at the letterhead address, upon completion of the authorized project.

FOR THE DISTRICT COMMANDER:



Janet Thomas Botello
Leader, North Evaluation Unit

Enclosures:

Copies Furnished:

Eighth Coast Guard District, New Orleans, LA

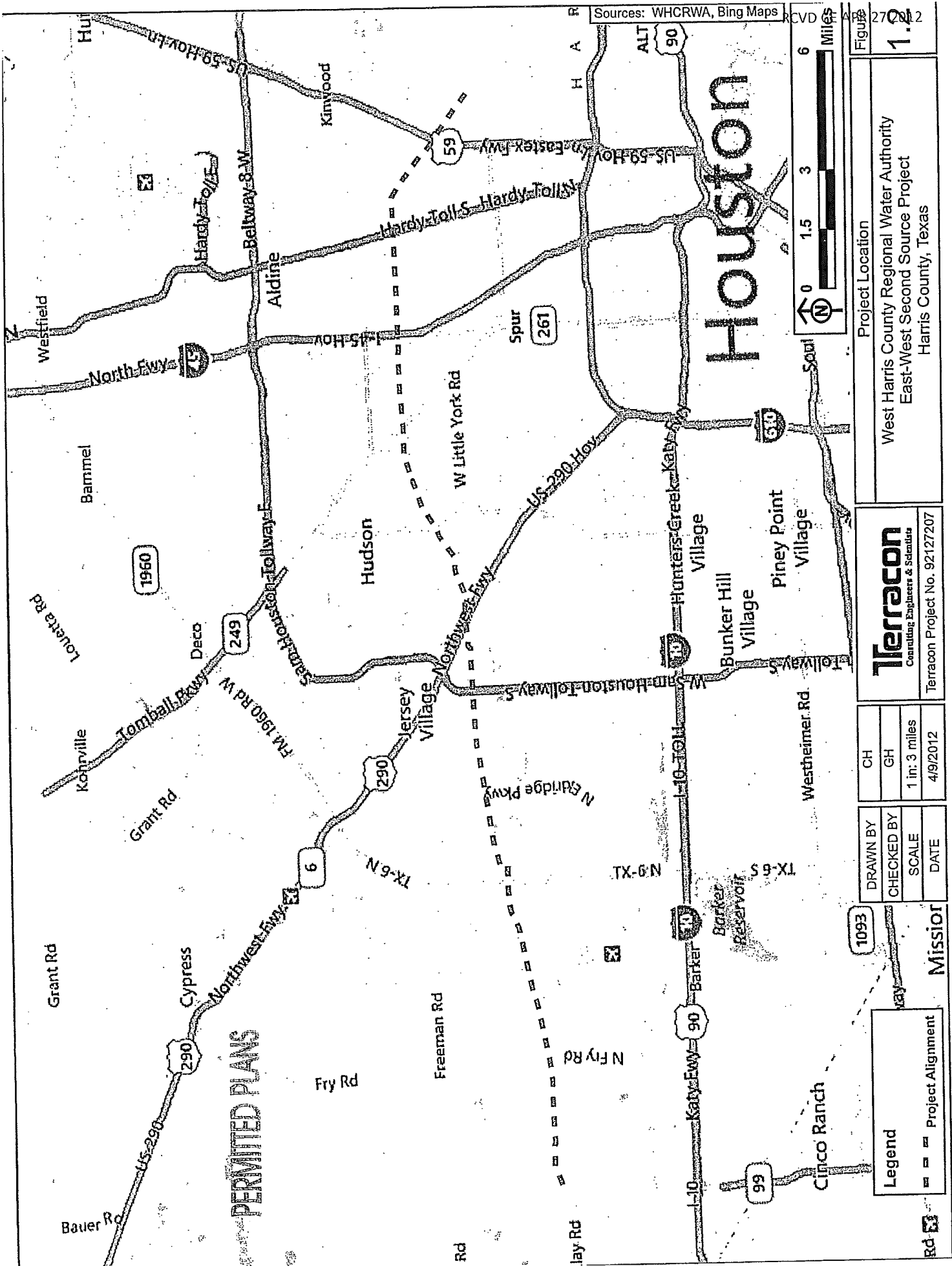
Texas General Land Office, La Porte, TX

Texas General Land Office, Austin, TX

U.S. Fish and Wildlife Service, Houston, TX

Houston/Galveston Resident Office, Galveston, TX

Ginger Horn, Terracon Consultants, Inc., 11555 Clay Rd., Ste. 100, Houston, TX 77043-1239



Sources: WHCRWA, Bing Maps

Figure 1.2

Project Location
 West Harris County Regional Water Authority
 East-West Second Source Project
 Harris County, Texas

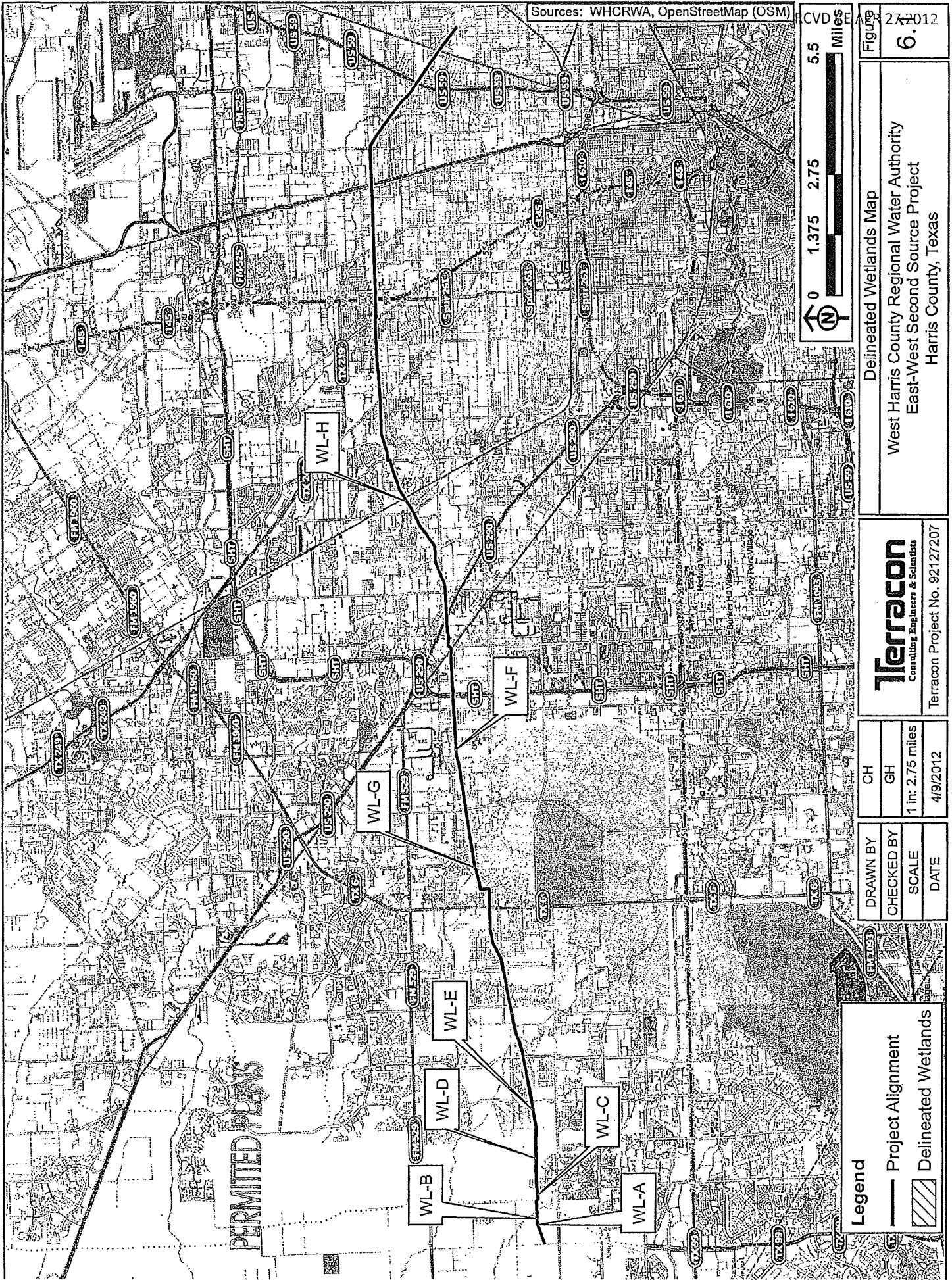
Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127207

CH	
GH	
SCALE	1 in: 3 miles
DATE	4/9/2012

1093	Missior
Legend	Project Alignment

PERMITTED PLANS

SWG-2012-00388; WHCRWA; Page 1 of 10



Sources: WHCRWA, OpenStreetMap (OSM)



Figure 6
 27-2012
 Delinicated Wetlands Map
 West Harris County Regional Water Authority
 East-West Second Source Project
 Harris County, Texas

Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127207

CH	
GH	
SCALE	1 in: 2.75 miles
DATE	4/9/2012

Legend	
— Project Alignment	
▨ Delinicated Wetlands	

SWG-2012-00388; WHCRWA; Page 2 of 10

PERMITTED PLANS

Sources: WHCRWA, OpenStreetMap (OSM)



Figure 27.2012
6.9

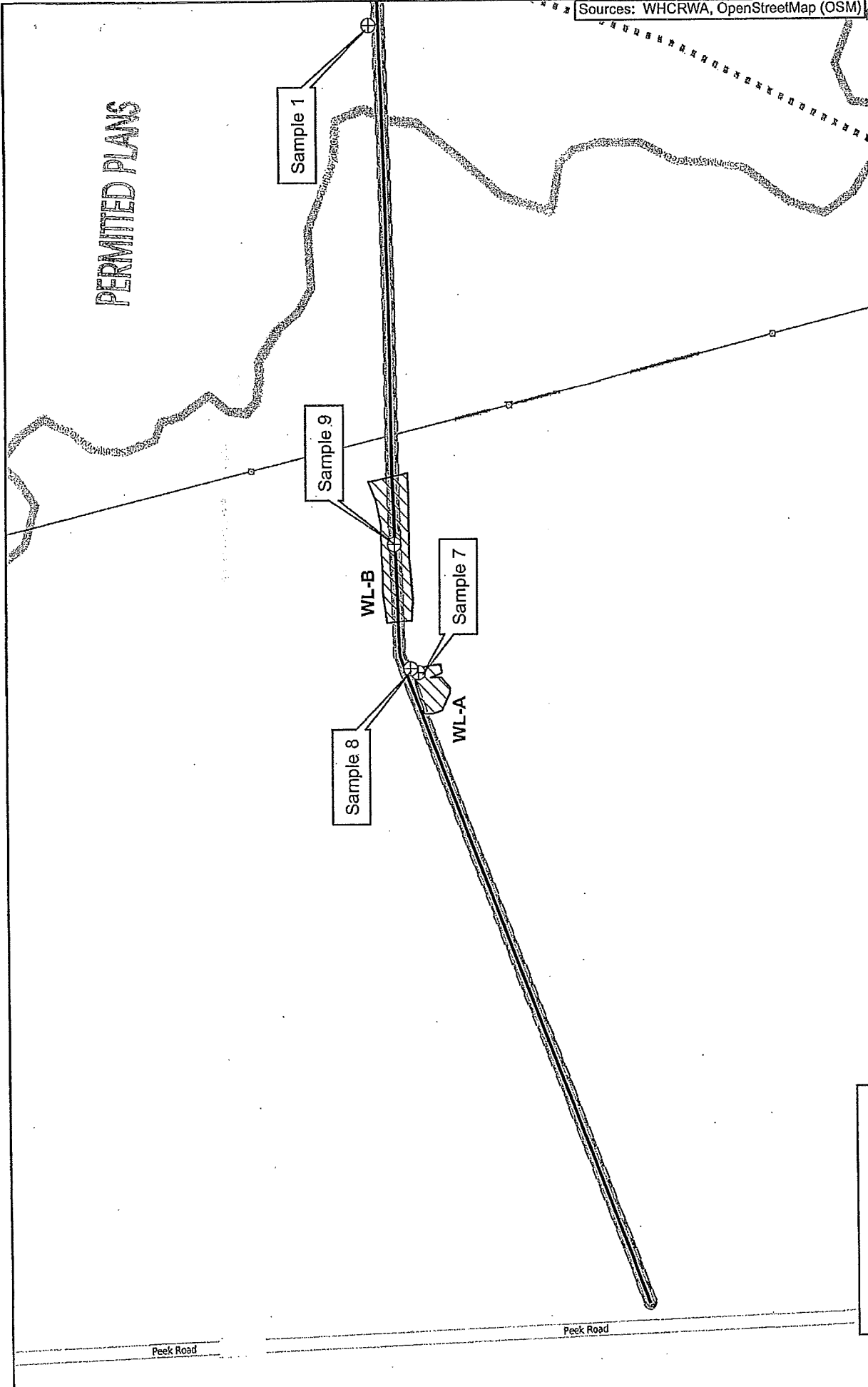
Delineated Wetlands Map
West Harris County Regional Water Authority
East-West Second Source Project
Harris County, Texas

Terracon
Consulting Engineers & Scientists
Terracon Project No. 92127207

CH	
GH	
SCALE	1 in: 500 ft
DATE	4/9/2012

Legend

⊕	Hole
—	Project Alignment
▨	50-ft Easement
▩	Delineated Wetlands



SWG-2012-00388; WHCRWA; Page 3 of 10

PERMITTED PLANS

Sources: WHCRWA, OpenStreetMap (OSM)

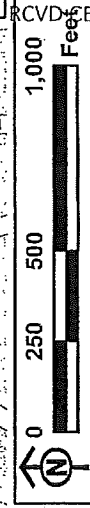
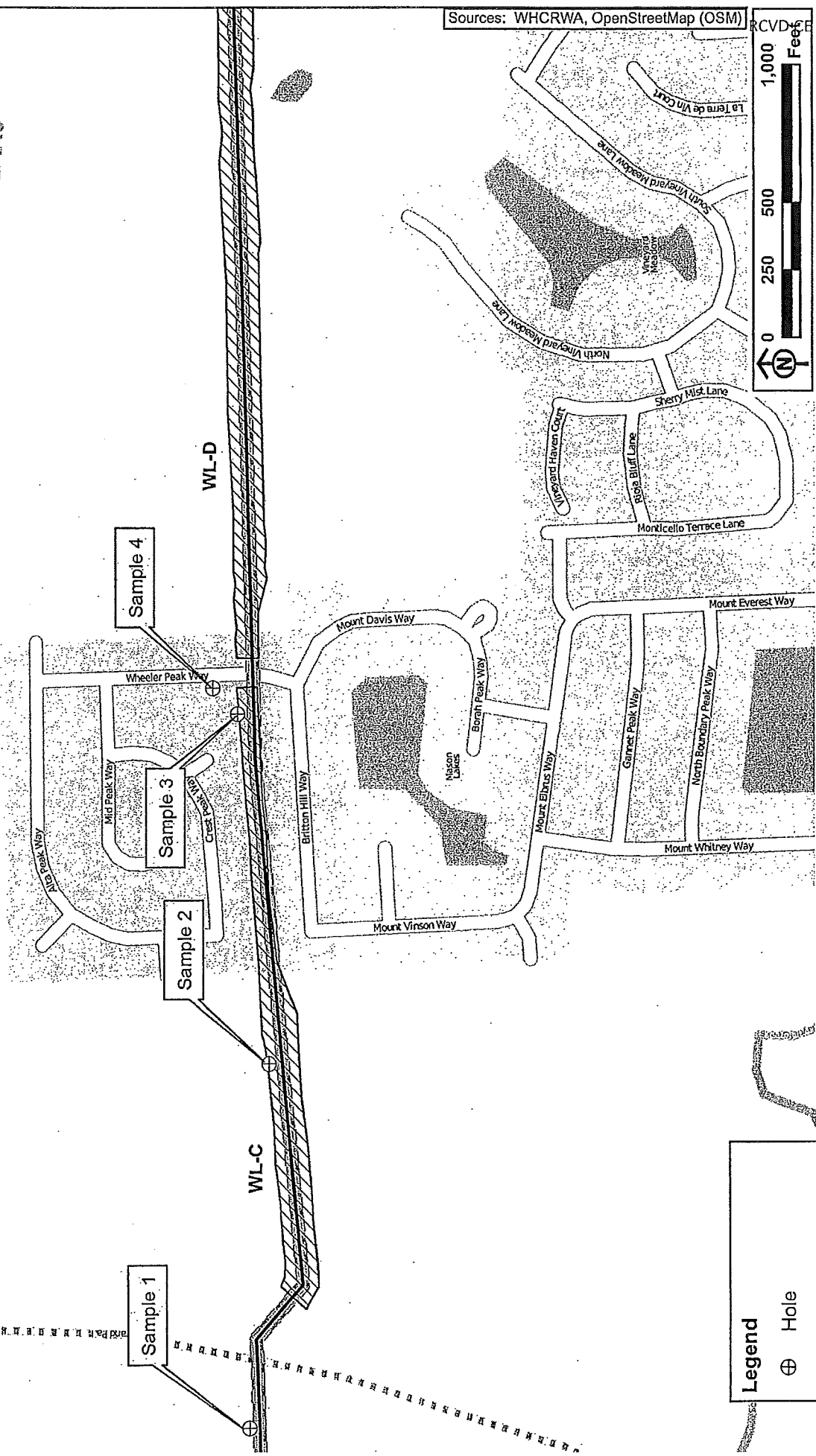


Figure: 2012
6.3



Delimited Wetlands Map
West Harris County Regional Water Authority
East-West Second Source Project
Harris County, Texas

Terracon
Consulting Engineers & Scientists
Terracon Project No. 92127207

DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 500 ft
DATE	4/9/2012

Legend

- ⊕ Hole
- Project Alignment
- ▨ 50-ft Easement
- ▤ Delineated Wetlands

SWG-2012-00388; WHCRWA; Page 4 of 10

PERMITTED PLANS

Sources: WHCRWA, OpenStreetMap (OSM)



Figure 6
27 of 112

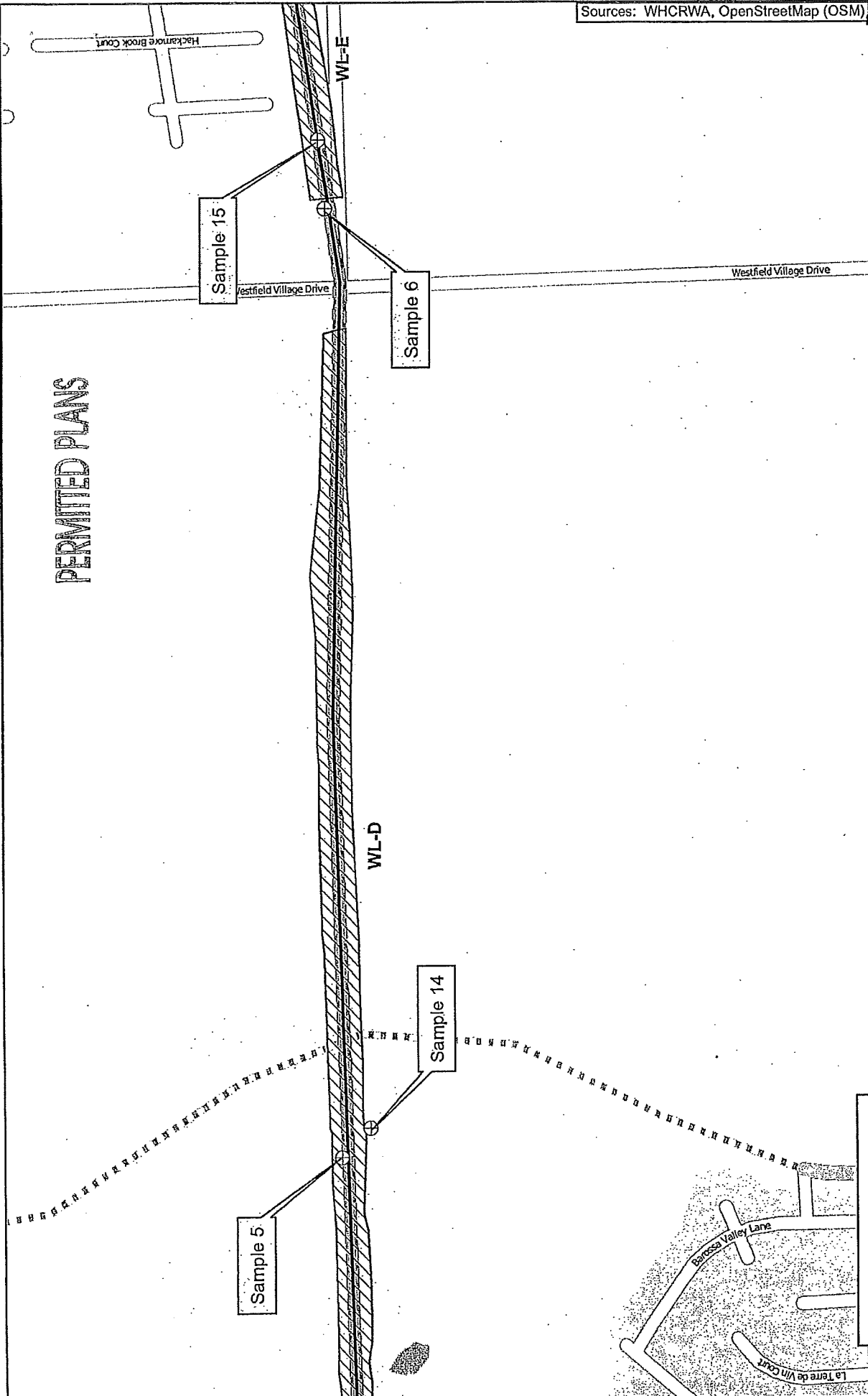
Delineated Wetlands Map
West Harris County Regional Authority
East-West Second Source Project
Harris County, Texas

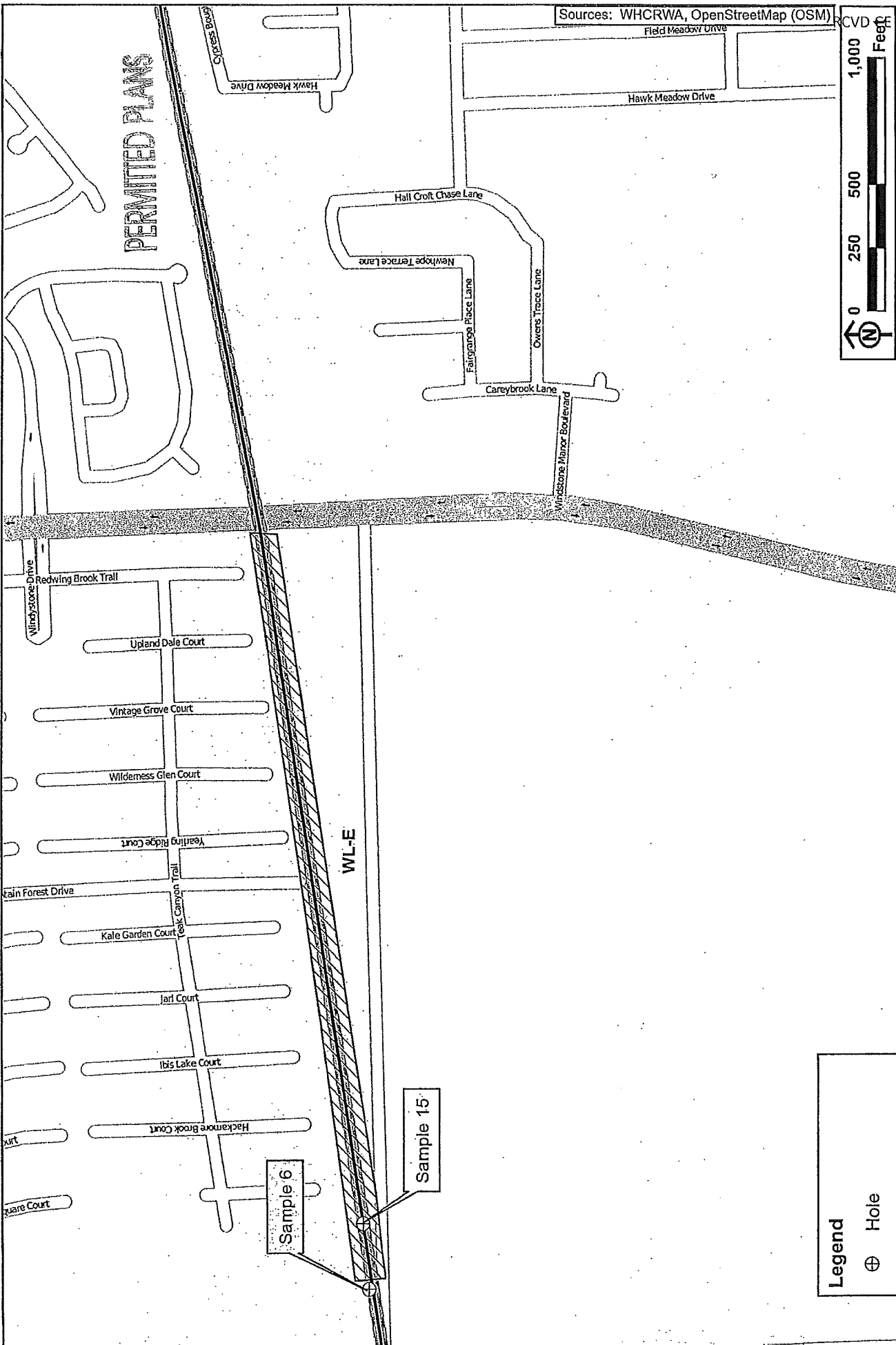
Terracon
Consulting Engineers & Scientists
Terracon Project No. 92127207

DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 500 ft
DATE	4/9/2012

Legend

- ⊕ Hole
- Project Alignment
- ▨ 50-ft Easement
- ▩ Delineated Wetlands





Sources: WHCRWA, OpenStreetMap (OSM)

Scale: 0 250 500 1,000 Feet

North Arrow

Figure No. 2712012
6.5

Delineated Wetlands Map
West Harris County Regional Authority
East-West Second Source Project
Harris County, Texas

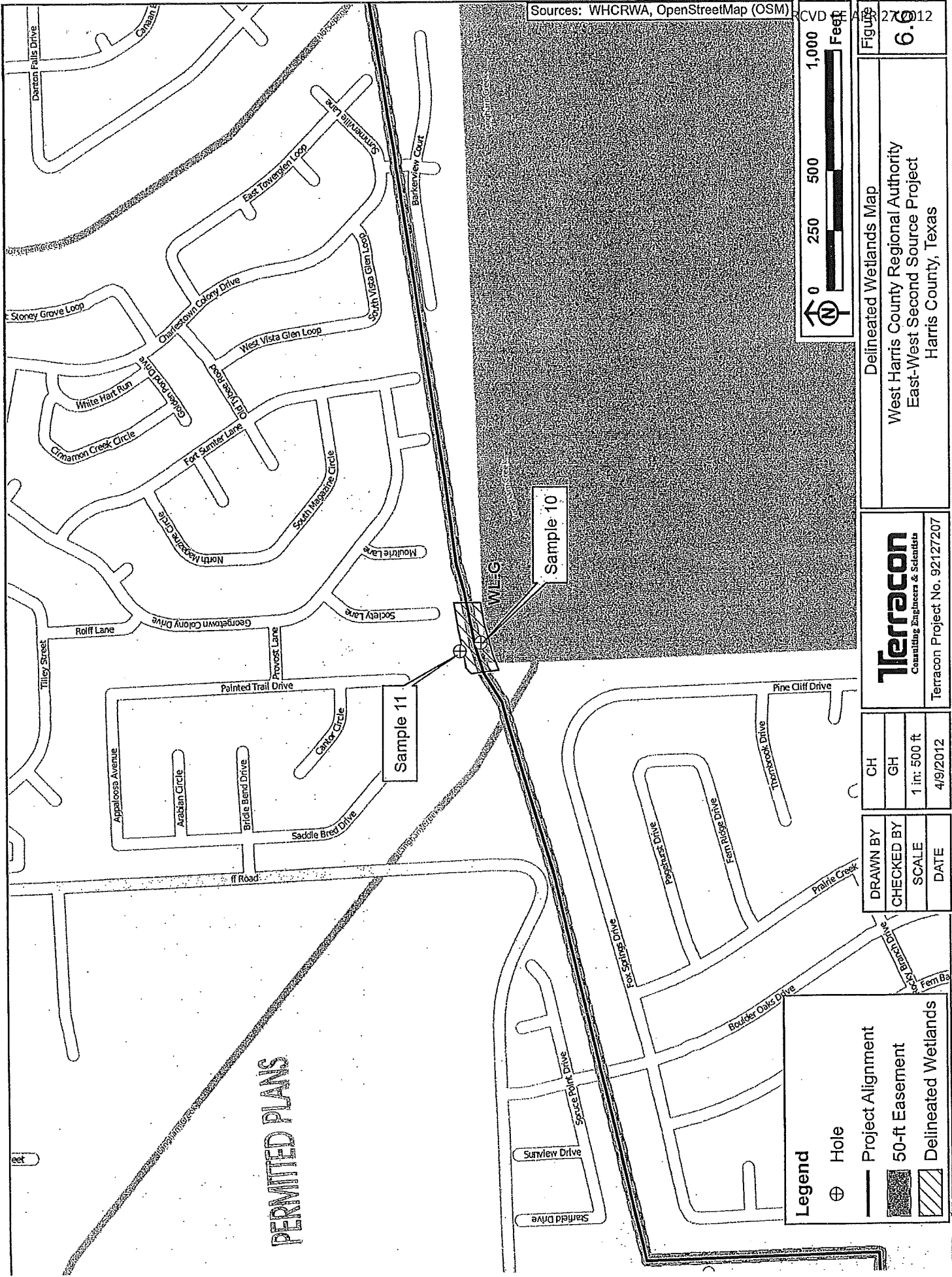
Terracon
Consulting Engineers & Scientists
Terracon Project No. 92127207

CH	4/9/2012
GH	1 in: 500 ft
SCALE	DATE
CHECKED BY	DATE
DRAWN BY	DATE

Legend

- ⊕ Hole
- Project Alignment
- ▨ 50-ft Easement
- ▩ Delineated Wetlands

SWG-2012-00388; WHCRWA; Page 6 of 10



Sources: WHCROWA, OpenStreetMap (OSM)



Figure 6
27 of 12

Delineated Wetlands Map
West Harris County Regional Authority
East-West Second Source Project
Harris County, Texas

Terracon
Consulting Engineers & Scientists
Terracon Project No. 92127207

DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 500 ft
DATE	4/9/2012

Legend	
⊕	Hole
—	Project Alignment
▨	50-ft Easement
▩	Delineated Wetlands

SWG-2012-00388; WHCROWA; Page 7 of 10



Sources: WHCRWA, OpenStreetMap (OSM)

RCD 278012



Figure 6.1

Delineated Wetlands Map
 West Harris County Regional Authority
 East-West Second Source Project
 Harris County, Texas

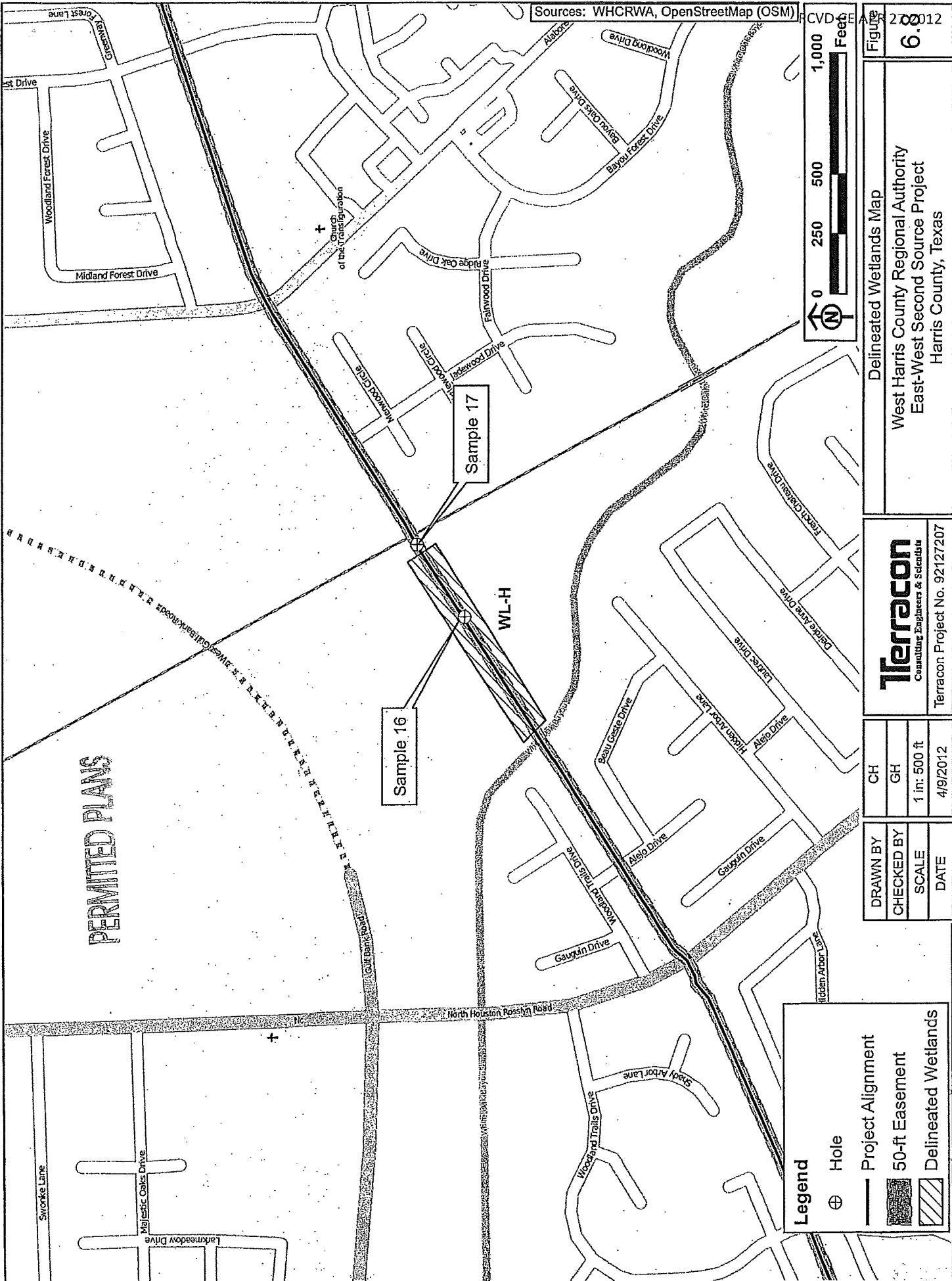
Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127207

CH	
GH	
SCALE	1 in: 500 ft
DATE	4/9/2012

DRAWN BY	Relv
CHECKED BY	

	Hole
	Project Alignment
	50-ft Easement
	Delineated Wetlands

SWG-2012-00388; WHCRWA; Page 8 of 10



PERMITTED PLANS

Sources: WHCRWA, OpenStreetMap (OSM)



Figure 2012
6.02

Delineated Wetlands Map
West Harris County Regional Authority
East-West Second Source Project
Harris County, Texas

Terracon
Consulting Engineers & Scientists
Terracon Project No. 92127207

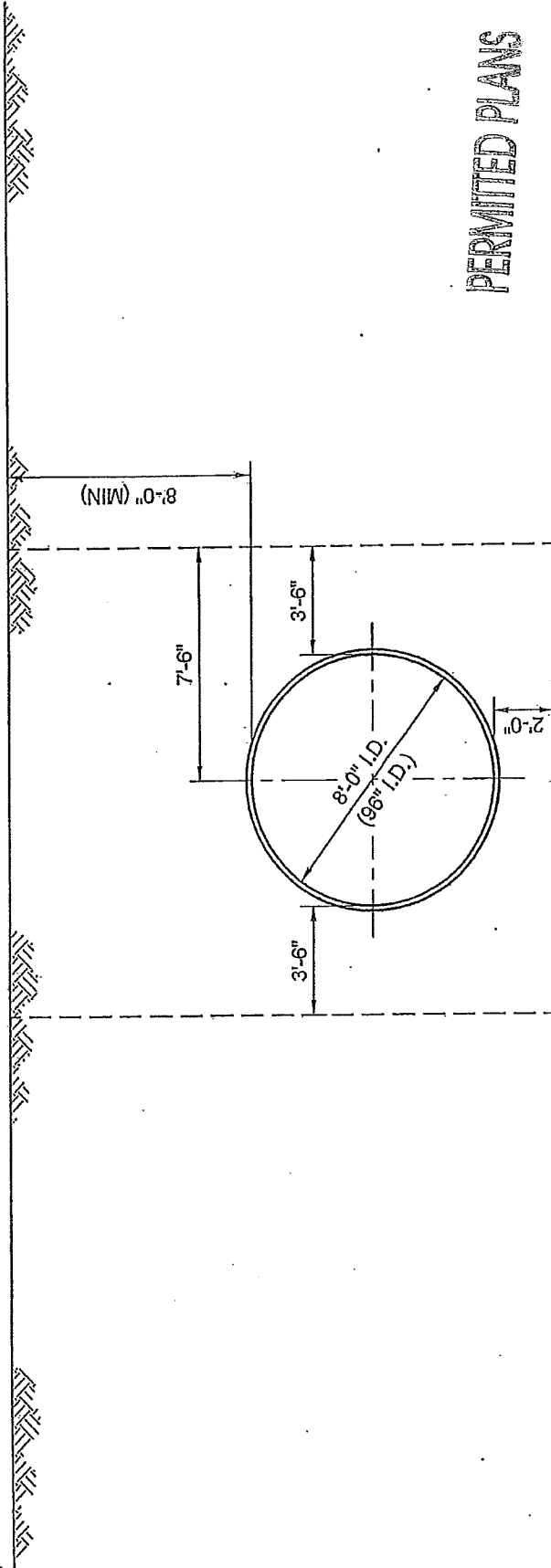
DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 500 ft
DATE	4/9/2012

Legend

- ⊕ Hole
- Project Alignment
- ▨ 50-ft Easement
- ▩ Delineated Wetlands

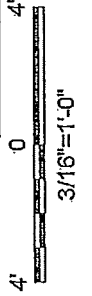
SWG-2012-00388; WHCRWA; Page 9 of 10

50'-0" EASEMENT



PERMITTED PLANS

FIGURE 7.1



DANNENBAUM
ENGINEERING CORPORATION
 T.B.P.E. FIRM REGISTRATION #392



TYPICAL CROSS SECTION

DRAWN BY: B.A.M.	SCALE: 3/16"=1'-0"
CHECKED BY: G.C.P.	DATE: 03/23/2012

S1165-7012-00388: WHC RWA: Page 10 of 10

Nationwide Permit General Conditions

The following general conditions must be followed in order for any authorization by an NWP to be valid:

1. **Navigation.**

- (a) No activity may cause more than a minimal adverse effect on navigation.
- (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
- (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. **Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. **Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. **Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. **Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. **Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

20. Historic Properties.

(a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the preconstruction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete preconstruction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP's 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWP 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

- (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).
- (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.
- (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require preconstruction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.
 - (1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.
 - (2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.
 - (3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2)–(14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).
 - (4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

- (5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.
- (d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.
 - (e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.
 - (f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.
 - (g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.
 - (h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature: "When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

- (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
- (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
- (c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification.

(a) *Timing.* Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

- (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
- (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot

begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed project;
- (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);
- (4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;
- (5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
- (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) *Form of Pre-Construction Notification:* The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) *Agency Coordination:*

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWP's and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the preconstruction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWP's, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

- (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.
- (4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of preconstruction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.
2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer

determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either:
 - (a) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit;
 - (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or
 - (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

**NATIONWIDE PERMIT (NWP) REGIONAL CONDITIONS
FOR THE STATE OF TEXAS**

The following regional conditions apply within the entire State of Texas:

1. Compensatory mitigation is required at a minimum one-for-one ratio for all special aquatic site losses that exceed 1/10 acre and require pre-construction notification (PCN), and for all losses to streams that exceed 300 linear feet and require PCN, unless the appropriate District Engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement.

2. For all discharges proposed for authorization under nationwide permits (NWP) 3, 6, 7, 12, 14, 18, 19, 25, 27, 29, 39, 40, 41, 42, 43, 44, 51, and 52, into the following habitat types or specific areas, the applicant shall notify the appropriate District Engineer in accordance with the NWP General Condition 31, Pre-Construction Notification (PCN). The Corps of Engineers (Corps), except for the Tulsa District, will coordinate with the resource agencies as specified in NWP General Condition 31(d) (PCN). The habitat types or areas are:
 - a. Pitcher Plant Bogs: Wetlands typically characterized by an organic surface soil layer and include vegetation such as pitcher plants (Sarracenia sp.), sundews (Drosera sp.), and sphagnum moss (Sphagnum sp.).

 - b. Bald Cypress-Tupelo Swamps: Wetlands comprised predominantly of bald cypress trees (Taxodium distichum), and water tupelo trees (Nyssa aquatica), that are occasionally or regularly flooded by fresh water. Common associates include red maple (Acer rubrum), swamp privet (Forestiera acuminata), green ash (Fraxinus pennsylvanica) and water elm (Planera aquatica). Associated herbaceous species include lizard's tail (Saururus cernuus), water mermaid weed (Proserpinaca spp.), buttonbush (Cephalanthus occidentalis) and smartweed (Polygonum spp.). (Eyre, F. H. Forest Cover Types of the United States and Canada. 1980. Society of American Foresters, 5400 Grosvenor Lane, Bethesda, Maryland 20814-2198. Library of Congress Catalog Card No. 80-54185)

3. For all activities proposed for authorization under NWP 12 that involve a discharge of fill material associated with mechanized land clearing in a forested wetland, the applicant shall notify the appropriate District Engineer in accordance with the NWP General Condition 31 (Pre-Construction Notification) prior to commencing the activity.

4. For all activities proposed for authorization under NWP 16, the applicant shall notify the appropriate District Engineer in accordance with the NWP General Condition 31 (Pre-Construction Notification), and work cannot begin under NWP 16 until the applicant has received written approval from the Corps.

The following regional conditions apply only within the Fort Worth District in the State of Texas:

5. For all discharges proposed for authorization under all NWPs, into the area of Caddo Lake within Texas that is designated as a “Wetland of International Importance” under the Ramsar Convention, the applicant shall notify the Fort Worth District Engineer in accordance with the NWP General Condition 31. The Corps will coordinate with the resource agencies as specified in NWP General Condition 31(d) (Pre-Construction Notification).
6. For all discharges proposed for authorization under NWP 43 that occur in forested wetlands, the applicant shall notify the Fort Worth District Engineer in accordance with the General Condition 31 (Pre-Construction Notification).
7. For all discharges proposed for authorization under any nationwide permit in Dallas, Denton, and Tarrant Counties that are within the study area of the “Final Regional Environmental Impact Statement (EIS), Trinity River and Tributaries” (May 1986), the applicant shall meet the criteria and follow the guidelines specified in Section III of the Record of Decision for the Regional EIS, including the hydraulic impact requirements. A copy of these guidelines is available upon request from the Fort Worth District and at the District website www.swf.usace.army.mil (select “Permits”).
8. Federal Projects. The applicant shall notify the Fort Worth District Engineer in accordance with the NWP General Condition 31, Pre-Construction Notification (PCN) for any regulated activity where the applicant is proposing work that would result in the modification or alteration of any completed Corps of Engineer projects that are either locally or federally maintained and for work that would occur within the conservation pool or flowage easement of any Corps of Engineers lake project. PCN's cannot be deemed complete until such time as the Corps has made a determination relative to 33 USC Section 408, 33 CFR Part 208, Section 208.10, 33 CFR Part 320, Section 320.4.
9. Invasive and Exotic Species. Best management practices are required where practicable to reduce the risk of transferring invasive plant and animal species to or from project sites. Information concerning state specific lists and threats can be found at: <http://www.invasivespeciesinfo.gov/unitedstates/tx.shtml>. Best management practices can be found at: <http://www.invasivespeciesinfo.gov/toolkit/prevention.shtml>. Known zebra mussel waters within can be found at: <http://nas.er.usgs.gov/queries/zmbyst.asp>.
10. For all discharges proposed for authorization under NWPs 51 and 52, the Corps will provide the PCN to the US Fish and Wildlife Service as specified in NWP General Condition 31(d)(2) for its review and comments.

The following regional conditions apply only within the Galveston District in the State of Texas:

11. Nationwide permit (NWP) 12 shall not be used to authorize discharges within 500 feet of vegetated shallows and coral reefs; as defined by 40 CFR 230.43 and 230.44 respectfully. Examples include, but not limited to: seagrass beds, oyster reefs, and coral reefs.

12. For all 3-D seismic testing activities proposed for authorization under NWP 6, the applicant shall notify the Galveston District Engineer in accordance with the NWP General Condition 31 (Pre-Construction Notification). The pre-construction notification must state the time period for which the temporary fill is proposed, and must include a restoration plan for the special aquatic sites. 3-D seismic testing will not be authorized under NWP 6 within the Cowardin Marine System, Subtidal Subsystem; as defined by the U.S. Fish and Wildlife, Classification of Wetlands and Deepwater Habitats of the United States, December 1979/Reprinted 1992.

13. All NWPs, except NWP 3, shall not be used to authorize discharges into mangrove marshes. Mangrove marshes are dominated by mangroves (Avicennia sp. and Rhizophora sp.). (Preliminary Guide to Wetlands of the Gulf Coastal Plain. 1978. Technical Report - U.S. Army Engineer Waterways Experiment Station: Y-78-5. P.O. Box 631, Vicksburg, Miss. 39180.)

14. All NWPs, except NWP 3, shall not be used to authorize discharges into the following waters of the United States within the coastal zone of Texas: Coastal Dune Swales, "wetlands and other waters of the United States that are formed as depressions within and among multiple beach ridge barriers, dune complexes, or dune areas adjacent to beaches fronting the tidal waters of the Gulf of Mexico and adjacent to the tidal waters of bays and estuaries. Coastal dune swales are generally comprised either of impermeable muds that act as reservoirs which collect precipitation or of groundwater nourished wetlands in sandy soils. As such, they generally have a high fresh to brackish water table. Vegetation species characteristically found in coastal dune swales include but are not limited to marshhay cordgrass (Spartina patens), gulfdune paspalum (Paspalum monostachyum), bulrush (Scirpus spp.), seashore paspalum (Paspalum vaginatum), common reed (Phragmites australis), groundsel bush (Baccharis halimifolia), rattlebush (Sesbania drummondii), camphor weed (Pluchea camphorata), smartweed (Polygonum spp.), water hyssop (Bacopa monnieri), cattail (Typha spp.), umbrella sedge (Cyperus spp.), sofrush (Juncus spp.), sedge (Carex spp.), beakrush (Rhynchospora spp.), frog-fruit (Phyla spp.), duckweed (Lemna spp.), buttonweed (Diodia virginiana), mist flower (Eupatorium coelestinum), creeping spotflower (Acemella oppositifolia var. repens), pennywort (Hydrocotyle spp.), and bushy bluestem (Andropogon glomeratus)."
(U.S. Fish and Wildlife Service, Houston, Texas, and the Texas General Land Office, Austin, Texas).

15. For all discharges and work proposed in tidal waters under NWPs 14 and 18 the applicant shall notify the Galveston District Engineer in accordance with the NWP General Condition 31 (Pre-Construction Notification). The Corps will coordinate with the National Marine Fisheries Service in accordance with NWP General Condition 31(d) (Pre-Construction Notification).

16. For all work in the San Jacinto River Waste Pits (SJWP) Area of Concern (AOC), authorized under a NWP, requires a waiver from the Galveston District Engineer. The applicant shall notify the Galveston District Engineer (DE) in accordance with the NWP General Condition 31, Pre-Construction Notification (PCN). This PCN shall be used to review the project to determine if it will result in more than minimal effects to the region, and does not lessen the restriction provided by any General Condition of the NWPs. The applicant must receive written approval, including a waiver from the Galveston DE prior to starting work in jurisdictional areas of waters of the United States.

17. The use of NWP 51 and 52 are administratively denied, within the Galveston District boundaries.

The following regional conditions apply only within the Albuquerque District in the State of Texas:

18. Nationwide Permit No. 23 – Approved Categorical Exclusions. Notification to the District Engineer in accordance with General Condition 31 (Pre-Construction Notification) is required for all proposed activities under nationwide permit 23.

19. Nationwide Permit No. 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities. For all proposed activities under Nationwide Permit 27 that require Pre-Construction Notification, a monitoring plan commensurate with the scale of the proposed restoration project and the potential for risk to the aquatic environment must be submitted to the Corps. (See “Guidelines for Nationwide Permit 27 Submittals” at <http://www.spa.usace.army.mil/reg/>).

20. Nationwide Permits No. 29 - Residential Developments, and No. 39 – Commercial and Institutional Developments. These permits do not authorize channelization or relocation of any intermittent or perennial water course regardless of size or rate of flow, except when, as determined by the Albuquerque District, the proposed channelization would impact a previously channelized stream reach, or the relocation would result in a net increase in functions of the aquatic ecosystem within the watershed.

21. Activities in Special Aquatic Sites, Including Wetlands. Notification to the District Engineer in accordance with General Condition 31 (Pre-Construction Notification) is required for all proposed impacts that exceed 1/10 acre in special aquatic sites, including wetlands.

22. Activities in Intermittent and Perennial Streams. Notification to the District Engineer in accordance with General Condition 31 (Pre-Construction Notification) is required for all proposed activities that involve fills greater than 1/10 acre in perennial or intermittent streams and is not covered by other notification requirements.

23. Springs. All nationwide permits require preconstruction notification pursuant to General Condition 31 for discharges of dredged or fill material within 100 feet of the point of groundwater discharge of natural springs. A spring source is defined as any location where ground water emanates from a point in the ground and a jurisdictional nexus to another water of the United States. For purposes of this regional condition, springs do not include seeps or other discharges which lack a jurisdictional nexus to another water of the United States.

24. Suitable Fill. Use of broken concrete or used tires formed into bales as fill or bank stabilization material requires notification to the District Engineer in accordance with General Condition 31 (Pre-Construction Notification). Applicants must demonstrate that soft engineering methods utilizing native or non-manmade materials are not practicable (with respect to environment, cost, existing technology, and logistics), before broken concrete or used tires as bales are allowed as suitable fill.



Attachment 1

Conditions of Section 401 Certification for Nationwide Permits and General Conditions

General Condition 12 (Soil Erosion and Sediment Controls)

Erosion control and sediment control BMPs described in Attachment 2 are required with the use of this general condition. If the applicant does not choose one of the BMPs listed in Attachment 2, an individual 401 certification is required.

General Condition 25 (Water Quality)

Post-construction total suspended solids (TSS) BMPs described in Attachment 2 are required with the use of this general condition. If the applicant does not choose one of the BMP's listed in Attachment 2, an individual 401 certification is required. Bridge deck runoff is exempt from this requirement.

General Condition 23 (Mitigation)

The U.S. Army Corps of Engineers will copy the TCEQ on all mitigation waivers sent to applicants.

NWPs 13, 29, 39, 40, 41, 42, 43, 44, 50, 51, 52

The U.S. Army Corps of Engineers will copy the TCEQ on all written approvals of waivers for impacts to ephemeral, intermittent or perennial streams.

All NWPs except for NWP 3

These NWPs are not authorized for use in coastal dune swales in Texas.

NWP 3 (Maintenance)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 6 (Survey Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 7 (Outfall Structures and Associated Intake Structures)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 12 (Utility Line Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 13 (Bank Stabilization)

Soil Erosion and Sediment Controls under General Condition 12 are required.



Attachment 1

Conditions of Section 401 Certification for Nationwide Permits and General Conditions

NWP 14 (Linear Transportation Projects)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 15 (U.S. Coast Guard Approved Bridges)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 16 (Return Water From Upland Contained Disposal Areas)

Activities that would be regulated under Standard Industrial Classification (SIC) codes 1442 and 1446 (industrial and construction sand and gravel mining) are not eligible for this NWP. Effluent from an upland contained disposal area shall not exceed a TSS concentration of 300 mg/L unless a site-specific TSS limit, or a site specific correlation curve for turbidity (nephelometric turbidity units (NTU)) versus (TSS) has been approved by TCEQ.

NWP 17 (Hydropower Projects)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 18 (Minor Discharges)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 19 (Minor Dredging)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 21 (Surface Coal Mining Operations)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 22 (Removal of Vessels)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 25 (Structural Discharges)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 27 (Aquatic Habitat Restoration, Establishment, and Enhancement Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required.



Attachment 1

Conditions of Section 401 Certification for Nationwide Permits and General Conditions

NWP 29 (Residential Developments)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 30 (Moist Soil Management for Wildlife)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 31 (Maintenance of Existing Flood Control Facilities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 32 (Completed Enforcement Actions)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 33 (Temporary Construction, Access and Dewatering)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 36 (Boat Ramps)

The U.S. Army Corps of Engineers will copy the TCEQ on all written waivers for discharges greater than the 50 cubic yard limit or boat ramps greater than 20 feet in width. Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 37 (Emergency Watershed Protection and Rehabilitation)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 38 (Cleanup of Hazardous and Toxic Waste)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 39 (Commercial and Institutional Developments)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 40 (Agricultural Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.



Attachment 1

Conditions of Section 401 Certification for Nationwide Permits and General Conditions

NWP 41 (Reshaping Existing Drainage Ditches)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 42 (Recreational Facilities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 43 (Stormwater Management Facilities)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 44 (Mining Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 45 (Repair of Uplands Damaged by Discrete Events)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 46 (Discharges in Ditches)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 49 (Coal Remining Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 50 (Underground Coal Mining Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 51 (Land-Based Renewal Energy Generation Facilities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 52 (Water-Based Renewal Energy Generation Pilot Projects)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.



Attachment 2 401 Water Quality Certification Best Management Practices (BMPs) for Nationwide Permits

Below are the 401 water quality certification conditions the Texas Commission on Environmental Quality (TCEQ) added to the February 21, 2012 issuance of Nationwide Permits (NWP), as described in the Federal Register (Vol. 77, No. 34, pages 10184-10290).

Additional information regarding these conditions, including descriptions of the best management practices (BMPs), can be obtained from the TCEQ by contacting the 401 Coordinator, MC-150, P.O. Box 13087, Austin, Texas 78711-3087 or from the appropriate U.S. Army Corps of Engineers district office.

I. Erosion Control

Disturbed areas must be stabilized to prevent the introduction of sediment to adjacent wetlands or water bodies during wet weather conditions (erosion). *At least one* of the following BMPs must be maintained and remain in place until the area has been stabilized for NWPs 3, 6, 7, 12, 13, 14, 15, 17, 18, 19, 21, 22, 25, 27, 29, 30, 31, 32, 33, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, and 52. If the applicant does not choose one of the BMPs listed, an individual 401 certification is required. BMPs for NWP 52 apply only to land-based impacts from attendant features.

- o Temporary Vegetation
- o Blankets/Matting
- o Mulch
- o Sod
- o Interceptor Swale
- o Diversion Dike
- o Erosion Control Compost
- o Mulch Filter Socks
- o Compost Filter Socks

II. Sedimentation Control

Prior to project initiation, the project area must be isolated from adjacent wetlands and water bodies by the use of BMPs to confine sediment. Dredged material shall be placed in such a manner that prevents sediment runoff into water in the state, including wetlands. Water bodies can be isolated by the use of one or more of the required BMPs identified for sedimentation control. These BMP's must be maintained and remain in place until the dredged material is stabilized. *At least one* of the following BMPs must be maintained and remain in place until the area has been stabilized for NWPs 3, 6, 7, 12, 13, 14, 15, 17, 18, 19, 21, 22, 25, 27, 29, 30, 31, 32, 33, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, and 52. If the applicant does not choose one of the BMPs listed, an individual 401 certification is required. BMPs for NWP 52 apply only to land-based impacts from attendant features.

- o Sand Bag Berm
- o Rock Berm
- o Silt Fence
- o Hay Bale Dike



Attachment 3
Reference to Nationwide Permits Best Management Practices Requirements

NWP	Permit Description	Erosion Control	Sediment Control	Post Construction TSS
1	Aid to Navigation			
2	Structures in Artificial Canals			
3	Maintenance	X	X	
4	Fish and Wildlife Harvesting, Enhancement and Attraction Devices and Activities			
5	Scientific Measurement Devices			
6	Survey Activities *Trenching	X	X	
7	Outfall Structures and Associated Intake Structures	X	X	
8	Oil and Gas Structures on the Outer Continental Shelf			
9	Structures in Fleeting and Anchorage Areas			
10	Mooring Buoys			
11	Temporary Recreational Structures			
12	Utility Line Activities	X	X	X
13	Bank Stabilization	X	X	
14	Linear Transportation Projects	X	X	X
15	U.S. Coast Guard Approved Bridges	X	X	
16	Return Water From Upland Contained Disposal Areas			
17	Hydropower Projects	X	X	X
18	Minor Discharges	X	X	X
19	Minor Dredging	X	X	
20	Response Operations for Oil and Hazardous Substances			
21	Surface Coal Mining Operations	X	X	X
22	Removal of Vessels	X	X	



Attachment 3
Reference to Nationwide Permits Best Management Practices Requirements

NWP	Permit Description	Erosion Control	Sediment Control	Post Construction TSS
23	Approved Categorical Exclusions			
24	Indian Tribe or State Administered Section 404 Programs			
25	Structural Discharges	X	X	
26	[Reserved]			
27	Aquatic Habitat Restoration, Establishment, and Enhancement Activities	X	X	
28	Modifications of Existing Marinas			
29	Residential Developments	X	X	X
30	Moist Soil Management for Wildlife	X	X	
31	Maintenance of Existing Flood Control Facilities	X	X	X
32	Completed Enforcement Actions	X	X	
33	Temporary Construction, Access and Dewatering	X	X	
34	Cranberry Production Activities			
35	Maintenance Dredging of Existing Basins			
36	Boat Ramps	X	X	X
37	Emergency Watershed Protection and Rehabilitation	X	X	
38	Cleanup of Hazardous and Toxic Waste	X	X	
39	Commercial and Institutional Developments	X	X	X
40	Agricultural Activities	X	X	X
41	Reshaping Existing Drainage Ditches	X	X	X
42	Recreational Facilities	X	X	X
43	Stormwater Management Facilities	X	X	
44	Mining Activities	X	X	X



Attachment 3
Reference to Nationwide Permits Best Management Practices Requirements

NWP	Permit Description	Erosion Control	Sediment Control	Post Construction TSS
45.	Repair of Uplands Damaged by Discrete Events	X	X	X
46.	Discharges in Ditches	X	X	
47.	[Reserved]			
48.	Existing Commercial Shellfish Aquaculture Activities			
49.	Coal Remining Activities	X	X	X
50.	Underground Coal Mining Activities	X	X	X
51.	Land-Based Renewable Energy Generation Facilities	X	X	X
52.	Water-Based Renewable Energy Generation Pilot Projects	X	X	X



Attachment 4 **Description of BMPs**

EROSION CONTROL BMPs

Temporary Vegetation

Description: Vegetation can be used as a temporary or permanent stabilization technique for areas disturbed by construction. Vegetation effectively reduces erosion in swales, stockpiles, berms, mild to medium slopes, and along roadways. Other techniques such as matting, mulches, and grading may be required to assist in the establishment of vegetation.

Materials:

- The type of temporary vegetation used on a site is a function of the season and the availability of water for irrigation.
- Temporary vegetation should be selected appropriately for the area.
- County agricultural extension agents are a good source for suggestions for temporary vegetation.
- All seed should be high quality, U.S. Dept. of Agriculture certified seed.

Installation:

- Grading must be completed prior to seeding.
- Slopes should be minimized.
- Erosion control structures should be installed.
- Seedbeds should be well pulverized, loose, and uniform.
- Fertilizers should be applied at appropriate rates.
- Seeding rates should be applied as recommended by the county agricultural extension agent.
- The seed should be applied uniformly.
- Steep slopes should be covered with appropriate soil stabilization matting.

Blankets and Matting

Description: Blankets and matting material can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are in channels, interceptor swales, diversion dikes, short, steep slopes, and on tidal or stream banks.



Attachment 4 **Description of BMPs**

Materials:

New types of blankets and matting materials are continuously being developed. The Texas Department of Transportation (TxDOT) has defined the critical performance factors for these types of products and has established minimum performance standards which must be met for any product seeking to be approved for use within any of TxDOT's construction or maintenance activities. The products that have been approved by TxDOT are also appropriate for general construction site stabilization. TxDOT maintains a web site at http://www.txdot.gov/business/doing_business/product_evaluation/erosion_control.htm which is updated as new products are evaluated.

Installation:

- Install in accordance with the manufacturer's recommendations.
- Proper anchoring of the material.
- Prepare a friable seed bed relatively free from clods and rocks and any foreign material.
- Fertilize and seed in accordance with seeding or other type of planting plan.
- Erosion stops should extend beyond the channel liner to full design cross-section of the channel.
- A uniform trench perpendicular to line of flow may be dug with a spade or a mechanical trencher.
- Erosion stops should be deep enough to penetrate solid material or below level of ruling in sandy soils.
- Erosion stop mats should be wide enough to allow turnover at bottom of trench for stapling, while maintaining the top edge flush with channel surface.

Mulch

Description: Mulching is the process of applying a material to the exposed soil surface to protect it from erosive forces and to conserve soil moisture until plants can become established. When seeding critical sites, sites with adverse soil conditions or seeding on other than optimum seeding dates, mulch material should be applied immediately after seeding. Seeding during optimum seeding dates and with favorable soils and site conditions will not need to be mulched.

Materials:

- Mulch may be small grain straw which should be applied uniformly.
- On slopes 15 percent or greater, a binding chemical must be applied to the surface.



Attachment 4 **Description of BMPs**

- Wood-fiber or paper-fiber mulch may be applied by hydroseeding.
- Mulch nettings may be used.
- Wood chips may be used where appropriate.

Installation:

Mulch anchoring should be accomplished immediately after mulch placement. This may be done by one of the following methods: peg and twine, mulch netting, mulch anchoring tool, or liquid mulch binders.

Sod

Description: Sod is appropriate for disturbed areas which require immediate vegetative covers, or where sodding is preferred to other means of grass establishment. Locations particularly suited to stabilization with sod are waterways carrying intermittent flow, areas around drop inlets or in grassed swales, and residential or commercial lawns where quick use or aesthetics are factors. Sod is composed of living plants and those plants must receive adequate care in order to provide vegetative stabilization on a disturbed area.

Materials:

- Sod should be machine cut at a uniform soil thickness.
- Pieces of sod should be cut to the supplier's standard width and length.
- Torn or uneven pads are not acceptable.
- Sections of sod should be strong enough to support their own weight and retain their size and shape when suspended from a firm grasp.
- Sod should be harvested, delivered, and installed within a period of 36 hours.

Installation:

- Areas to be sodded should be brought to final grade.
- The surface should be cleared of all trash and debris.
- Fertilize according to soil tests.
- Fertilizer should be worked into the soil.
- Sod should not be cut or laid in excessively wet or dry weather.



Attachment 4 **Description of BMPs**

- Sod should not be laid on soil surfaces that are frozen.
- During periods of high temperature, the soil should be lightly irrigated.
- The first row of sod should be laid in a straight line with subsequent rows placed parallel to and butting tightly against each other.
- Lateral joints should be staggered to promote more uniform growth and strength.
- Wherever erosion may be a problem, sod should be laid with staggered joints and secured.
- Sod should be installed with the length perpendicular to the slope (on the contour).
- Sod should be rolled or tamped.
- Sod should be irrigated to a sufficient depth.
- Watering should be performed as often as necessary to maintain soil moisture.
- The first mowing should not be attempted until the sod is firmly rooted.
- Not more than one third of the grass leaf should be removed at any one cutting.

Interceptor Swale

Interceptor swales are used to shorten the length of exposed slope by intercepting runoff, prevent off-site runoff from entering the disturbed area, and prevent sediment-laden runoff from leaving a disturbed site. They may have a v-shape or be trapezoidal with a flat bottom and side slopes of 3:1 or flatter. The outflow from a swale should be directed to a stabilized outlet or sediment trapping device. The swales should remain in place until the disturbed area is permanently stabilized.

Materials:

- Stabilization should consist of a layer of crushed stone three inches thick, riprap or high velocity erosion control mats.
- Stone stabilization should be used when grades exceed 2% or velocities exceed 6 feet per second.
- Stabilization should extend across the bottom of the swale and up both sides of the channel to a minimum height of three inches above the design water surface elevation based on a 2-year, 24-hour storm.



Attachment 4 **Description of BMPs**

Installation:

- An interceptor swale should be installed across exposed slopes during construction and should intercept no more than 5 acres of runoff.
- All earth removed and not needed in construction should be disposed of in an approved spoils site so that it will not interfere with the functioning of the swale or contribute to siltation in other areas of the site.
- All trees, brush, stumps, obstructions and other material should be removed and disposed of so as not to interfere with the proper functioning of the swale.
- Swales should have a maximum depth of 1.5 feet with side slopes of 3:1 or flatter. Swales should have positive drainage for the entire length to an outlet.
- When the slope exceeds 2 percent, or velocities exceed 6 feet per second (regardless of slope), stabilization is required. Stabilization should be crushed stone placed in a layer of at least 3 inches thick or may be high velocity erosion control matting. Check dams are also recommended to reduce velocities in the swales possibly reducing the amount of stabilization necessary.
- Minimum compaction for the swale should be 90% standard proctor density.

Diversion Dikes

A temporary diversion dike is a barrier created by the placement of an earthen embankment to reroute the flow of runoff to an erosion control device or away from an open, easily erodible area. A diversion dike intercepts runoff from small upland areas and diverts it away from exposed slopes to a stabilized outlet, such as a rock berm, sandbag berm, or stone outlet structure. These controls can be used on the perimeter of the site to prevent runoff from entering the construction area. Dikes are generally used for the duration of construction to intercept and reroute runoff from disturbed areas to prevent excessive erosion until permanent drainage features are installed and/or slopes are stabilized.

Materials:

- Stone stabilization (required for velocities in excess of 6 fps) should consist of riprap placed in a layer at least 3 inches thick and should extend a minimum height of 3 inches above the design water surface up the existing slope and the upstream face of the dike.
- Geotextile fabric should be a non-woven polypropylene fabric designed specifically for use as a soil filtration media with an approximate weight of 6 oz./yd², a Mullen burst rating of 140 psi, and having an equivalent opening size (EOS) greater than a #50 sieve.

Installation:

- Diversion dikes should be installed prior to and maintained for the duration of construction and should intercept no more than 10 acres of runoff.



Attachment 4 **Description of BMPs**

- Dikes should have a minimum top width of 2 feet and a minimum height of compacted fill of 18 inches measured from the top of the existing ground at the upslope toe to top of the dike and have side slopes of 3:1 or flatter.
- The soil for the dike should be placed in lifts of 8 inches or less and be compacted to 95 % standard proctor density.
- The channel, which is formed by the dike, must have positive drainage for its entire length to an outlet.
- When the slope exceeds 2 percent, or velocities exceed 6 feet per second (regardless of slope), stabilization is required. In situations where velocities do not exceed 6 feet per second, vegetation may be used to control erosion.

Erosion Control Compost

Description: Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.

Materials:

New types of erosion control compost are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Material used within any TxDOT construction or maintenance activities must meet material specifications in accordance with current TxDOT specifications. TxDOT maintains a website at http://www.txdot.gov/business/contractors_consultants/recycling/compost.htm that provides information on compost specification data.

ECC used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used as an ECC, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission (now named TCEQ) Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on



Attachment 4 **Description of BMPs**

compost products used for ECC to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC. TMECC information can be found at <http://www.tmecc.org/tmecc/index.html>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at http://tmecc.org/sta/STA_program_description.html.

Installation:

- Install in accordance with current TxDOT specification.
- Use on slopes 3:1 or flatter.
- Apply a 2 inch uniform layer unless otherwise shown on the plans or as directed.
- When rolling is specified, use a light corrugated drum roller.

Mulch and Compost Filter Socks

Description: Mulch and compost filter socks (erosion control logs) are used to intercept and detain sediment laden run-off from unprotected areas. When properly used, mulch and compost filter socks can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. Mulch and compost filter socks are used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. The sock should remain in place until the area is permanently stabilized. Mulch and compost filter socks may be installed in construction areas and temporarily moved during the day to allow construction activity provided it is replaced and properly anchored at the end of the day. Mulch and compost filter socks may be seeded to allow for quick vegetative growth and reduction in run-off velocity.

Materials:

New types of mulch and compost filter socks are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Mulch and compost filter socks used within any TxDOT construction or maintenance activities must meet material specifications in accordance with TxDOT specification 5049. TxDOT maintains a website at http://www.txdot.gov/business/contractors_consultants/recycling/compost.htm that provides information on compost specification data.



Attachment 4 **Description of BMPs**

Mulch and compost filter socks used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used for mulch and compost filter socks, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for mulch and compost filter socks to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC. TMECC information can be found at <http://www.tmecc.org/tmecc/index.html>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at http://tmecc.org/sta/STA_program_description.html.

Installation:

- Install in accordance with TxDOT Special Specification 5049.
- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.
- Inspect and maintain the socks in good condition (including staking, anchoring, etc.). Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.



Attachment 4 Description of BMPs

SEDIMENT CONTROL BMPs

Sand Bag Berm

Description: The purpose of a sandbag berm is to detain sediment carried in runoff from disturbed areas. This objective is accomplished by intercepting runoff and causing it to pool behind the sand bag berm. Sediment carried in the runoff is deposited on the upstream side of the sand bag berm due to the reduced flow velocity. Excess runoff volumes are allowed to flow over the top of the sand bag berm. Sand bag berms are used only during construction activities in streambeds when the contributing drainage area is between 5 and 10 acres and the slope is less than 15%, i.e., utility construction in channels, temporary channel crossing for construction equipment, etc. Plastic facing should be installed on the upstream side and the berm should be anchored to the streambed by drilling into the rock and driving in "T" posts or rebar (#5 or #6) spaced appropriately.

Materials:

- The sand bag material should be polypropylene, polyethylene, polyamide or cotton burlap woven fabric, minimum unit weight 4 oz/yd², mullen burst strength exceeding 300 psi and ultraviolet stability exceeding 70 percent.
- The bag length should be 24 to 30 inches, width should be 16 to 18 inches and thickness should be 6 to 8 inches.
- Sandbags should be filled with coarse grade sand and free from deleterious material. All sand should pass through a No. 10 sieve. The filled bag should have an approximate weight of 40 pounds.
- Outlet pipe should be schedule 40 or stronger polyvinyl chloride (PVC) having a nominal internal diameter of 4 inches.

Installation:

- The berm should be a minimum height of 18 inches, measured from the top of the existing ground at the upslope toe to the top of the berm.
- The berm should be sized as shown in the plans but should have a minimum width of 48 inches measured at the bottom of the berm and 16 inches measured at the top of the berm.
- Runoff water should flow over the tops of the sandbags or through 4-inch diameter PVC pipes embedded below the top layer of bags.
- When a sandbag is filled with material, the open end of the sandbag should be stapled or tied with nylon or poly cord.
- Sandbags should be stacked in at least three rows abutting each other, and in staggered arrangement.



Attachment 4 **Description of BMPs**

- The base of the berm should have at least 3 sandbags. These can be reduced to 2 and 1 bag in the second and third rows respectively.
- For each additional 6 inches of height, an additional sandbag must be added to each row width.
- A bypass pump-around system, or similar alternative, should be used on conjunction with the berm for effective dewatering of the work area.

Silt Fence

Description: A silt fence is a barrier consisting of geotextile fabric supported by metal posts to prevent soil and sediment loss from a site. When properly used, silt fences can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. If not properly installed, silt fences are not likely to be effective. The purpose of a silt fence is to intercept and detain water-borne sediment from unprotected areas of a limited extent. Silt fence is used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. This fence should remain in place until the disturbed area is permanently stabilized. Silt fence should not be used where there is a concentration of water in a channel or drainage way. If concentrated flow occurs after installation, corrective action must be taken such as placing a rock berm in the areas of concentrated flow. Silt fencing within the site may be temporarily moved during the day to allow construction activity provided it is replaced and properly anchored to the ground at the end of the day. Silt fences on the perimeter of the site or around drainage ways should not be moved at any time.

Materials:

- Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in², ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Y-bar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft², and Brindell hardness exceeding 140.
- Woven wire backing to support the fabric should be galvanized 2" x 4" welded wire, 12 gauge minimum.

Installation:

- Steel posts, which support the silt fence, should be installed on a slight angle toward the anticipated runoff source. Post must be embedded a minimum of 1 foot deep and spaced not more than 8 feet on center. Where water concentrates, the maximum spacing should be 6 feet.
- Lay out fencing down-slope of disturbed area, following the contour as closely as possible. The



Attachment 4 **Description of BMPs**

fence should be sited so that the maximum drainage area is $\frac{1}{4}$ acre/100 feet of fence.

- The toe of the silt fence should be trenched in with a spade or mechanical trencher, so that the down-slope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g., pavement or rock outcrop), weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence.
- The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.
- Silt fence should be securely fastened to each steel support post or to woven wire, which is in turn attached to the steel fence post. There should be a 3-foot overlap, securely fastened where ends of fabric meet.

Triangular Filter Dike

Description: The purpose of a triangular sediment filter dike is to intercept and detain water-borne sediment from unprotected areas of limited extent. The triangular sediment filter dike is used where there is no concentration of water in a channel or other drainage way above the barrier and the contributing drainage area is less than one acre. If the uphill slope above the dike exceeds 10%, the length of the slope above the dike should be less than 50 feet. If concentrated flow occurs after installation, corrective action should be taken such as placing rock berm in the areas of concentrated flow. This measure is effective on paved areas where installation of silt fence is not possible or where vehicle access must be maintained. The advantage of these controls is the ease with which they can be moved to allow vehicle traffic and then reinstalled to maintain sediment

Materials:

- Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in², ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- The dike structure should be 6 gauge 6" x 6" wire mesh folded into triangular form being eighteen (18) inches on each side.

Installation:

- The frame of the triangular sediment filter dike should be constructed of 6" x 6", 6 gauge welded wire mesh, 18 inches per side, and wrapped with geotextile fabric the same composition as that used for silt fences.
- Filter material should lap over ends six (6) inches to cover dike to dike junction; each junction should be secured by shoat rings.
- Position dike parallel to the contours, with the end of each section closely abutting the adjacent



Attachment 4 **Description of BMPs**

sections.

- There are several options for fastening the filter dike to the ground. The fabric skirt may be toed-in with 6 inches of compacted material, or 12 inches of the fabric skirt should extend uphill and be secured with a minimum of 3 inches of open graded rock, or with staples or nails. If these two options are not feasible the dike structure may be trenched in 4 inches.
- Triangular sediment filter dikes should be installed across exposed slopes during construction with ends of the dike tied into existing grades to prevent failure and should intercept no more than one acre of runoff.
- When moved to allow vehicular access, the dikes should be reinstalled as soon as possible, but always at the end of the workday.

Rock Berm

Description: The purpose of a rock berm is to serve as a check dam in areas of concentrated flow, to intercept sediment-laden runoff, detain the sediment and release the water in sheet flow. The rock berm should be used when the contributing drainage area is less than 5 acres. Rock berms are used in areas where the volume of runoff is too great for a silt fence to contain. They are less effective for sediment removal than silt fences, particularly for fine particles, but are able to withstand higher flows than a silt fence. As such, rock berms are often used in areas of channel flows (ditches, gullies, etc.). Rock berms are most effective at reducing bed load in channels and should not be substituted for other erosion and sediment control measures further up the watershed.

Materials:

- The berm structure should be secured with a woven wire sheathing having maximum opening of 1 inch and a minimum wire diameter of 20 gauge galvanized and should be secured with shoat rings.
- Clean, open graded 3- to 5-inch diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5- to 8-inch diameter rocks may be used.

Installation:

- Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1 inch openings.
- Berm should have a top width of 2 feet minimum with side slopes being 2:1 (H:V) or flatter:
- Place the rock along the sheathing to a height not less than 18".
- Wrap the wire sheathing around the rock and secure with tie wire so that the ends of the sheathing overlap at least 2 inches, and the berm retains its shape when walked upon.



Attachment 4 **Description of BMPs**

- Berm should be built along the contour at zero percent grade or as near as possible.
- The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approximately 3 to 4 inches deep to prevent failure of the control.

Hay Bale Dike

Description: The purpose of a hay or straw bale dike is to intercept and detain small amounts of sediment-laden runoff from relatively small unprotected areas. Straw bales are to be used when it is not feasible to install other, more effective measures or when the construction phase is expected to last less than 3 months. Straw bales should not be used on areas where rock or other hard surfaces prevent the full and uniform anchoring of the barrier.

Materials:

Straw: The best quality straw mulch comes from wheat, oats or barley and should be free of weed and grass seed which may not be desired vegetation for the area to be protected. Straw mulch is light and therefore must be properly anchored to the ground.

Hay: This is very similar to straw with the exception that it is made of grasses and weeds and not grain stems. This form of mulch is very inexpensive and is widely available but does introduce weed and grass seed to the area. Like straw, hay is light and must be anchored.

- Straw bales should weigh a minimum of 50 pounds and should be at least 30 inches long.
- Bales should be composed entirely of vegetable matter and be free of seeds.
- Binding should be either wire or nylon string, jute or cotton binding is unacceptable. Bales should be used for not more than two months before being replaced.

Installation:

- Bales should be embedded a minimum of 4 inches and securely anchored using 2" x 2" wood stakes or 3/8" diameter rebar driven through the bales into the ground a minimum of 6 inches.
- Bales are to be placed directly adjacent to one another leaving no gap between them.
- All bales should be placed on the contour.
- The first stake in each bale should be angled toward the previously laid bale to force the bales together.

Brush Berms

Organic litter and spoil material from site clearing operations is usually burned or hauled away to



Attachment 4

Description of BMPs

be dumped elsewhere. Much of this material can be used effectively on the construction site itself. The key to constructing an efficient brush berm is in the method used to obtain and place the brush. It will not be acceptable to simply take a bulldozer and push whole trees into a pile. This method does not assure continuous ground contact with the berm and will allow uncontrolled flows under the berm.

Brush berms may be used where there is little or no concentration of water in a channel or other drainage way above the berm. The size of the drainage area should be no greater than one-fourth of an acre per 100 feet of barrier length; the maximum slope length behind the barrier should not exceed 100 feet; and the maximum slope gradient behind the barrier should be less than 50 percent (2:1).

Materials:

- The brush should consist of woody brush and branches, preferably less than 2 inches in diameter.
- The filter fabric should conform to the specifications for filter fence fabric.
- The rope should be ¼ inch polypropylene or nylon rope.
- The anchors should be 3/8-inch diameter rebar stakes that are 18-inches long.

Installation:

- Lay out the brush berm following the contour as closely as possible.
- The juniper limbs should be cut and hand placed with the vegetated part of the limb in close contact with the ground. Each subsequent branch should overlap the previous branch providing a shingle effect.
- The brush berm should be constructed in lifts with each layer extending the entire length of the berm before the next layer is started.
- A trench should be excavated 6-inches wide and 4-inches deep along the length of the barrier and immediately uphill from the barrier.
- The filter fabric should be cut into lengths sufficient to lay across the barrier from its up-slope base to just beyond its peak. The lengths of filter fabric should be draped across the width of the barrier with the uphill edge placed in the trench and the edges of adjacent pieces overlapping each other. Where joints are necessary, the fabric should be spliced together with a minimum 6-inch overlap and securely sealed.
- The trench should be backfilled and the soil compacted over the filter fabric.
- Set stakes into the ground along the downhill edge of the brush barrier, and anchor the fabric



Attachment 4 **Description of BMPs**

by tying rope from the fabric to the stakes. Drive the rope anchors into the ground at approximately a 45-degree angle to the ground on 6-foot centers.

- Fasten the rope to the anchors and tighten berm securely to the ground with a minimum tension of 50 pounds.
- The height of the brush berm should be a minimum of 24 inches after the securing ropes have been tightened.

Stone Outlet Sediment Traps

A stone outlet sediment trap is an impoundment created by the placement of an earthen and stone embankment to prevent soil and sediment loss from a site. The purpose of a sediment trap is to intercept sediment-laden runoff and trap the sediment in order to protect drainage ways, properties and rights of way below the sediment trap from sedimentation. A sediment trap is usually installed at points of discharge from disturbed areas. The drainage area for a sediment trap is recommended to be less than 5 acres.

Larger areas should be treated using a sediment basin. A sediment trap differs from a sediment basin mainly in the type of discharge structure. The trap should be located to obtain the maximum storage benefit from the terrain, for ease of clean out and disposal of the trapped sediment and to minimize interference with construction activities. The volume of the trap should be at least 3600 cubic feet per acre of drainage area.

Materials:

- All aggregate should be at least 3 inches in diameter and should not exceed a volume of 0.5 cubic foot.
- The geotextile fabric specification should be woven polypropylene, polyethylene or polyamide geotextile, minimum unit weight of 4.5 oz/yd², mullen burst strength at least 250 lb/in², ultraviolet stability exceeding 70%, and equivalent opening size exceeding 40.

Installation:

- **Earth Embankment:** Place fill material in layers not more than 8 inches in loose depth. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content of the material. Compact each layer to 95 percent standard proctor density. Do not place material on surfaces that are muddy or frozen. Side slopes for the embankment are to be 3:1. The minimum width of the embankment should be 3 feet.
- A gap is to be left in the embankment in the location where the natural confluence of runoff crosses the embankment line. The gap is to have a width in feet equal to 6 times the drainage area in acres.



Attachment 4 **Description of BMPs**

- **Geotextile Covered Rock Core:** A core of filter stone having a minimum height of 1.5 feet and a minimum width at the base of 3 feet should be placed across the opening of the earth embankment and should be covered by geotextile fabric which should extend a minimum distance of 2 feet in either direction from the base of the filter stone core.
- **Filter Stone Embankment:** Filter stone should be placed over the geotextile and is to have a side slope which matches that of the earth embankment of 3:1 and should cover the geotextile/rock core a minimum of 6 inches when installation is complete. The crest of the outlet should be at least 1 foot below the top of the embankment.

Sediment Basins:

The purpose of a sediment basin is to intercept sediment-laden runoff and trap the sediment in order to protect drainage ways, properties and rights of way below the sediment basin from sedimentation. A sediment basin is usually installed at points of discharge from disturbed areas. The drainage area for a sediment basin is recommended to be less than 100 acres.

Sediment basins are effective for capturing and slowly releasing the runoff from larger disturbed areas thereby allowing sedimentation to take place. A sediment basin can be created where a permanent pond BMP is being constructed. Guidelines for construction of the permanent BMP should be followed, but revegetation, placement of underdrain piping, and installation of sand or other filter media should not be carried out until the site construction phase is complete.

Materials:

- Riser should be corrugated metal or reinforced concrete pipe or box and should have watertight fittings or end to end connections of sections.
- An outlet pipe of corrugated metal or reinforced concrete should be attached to the riser and should have positive flow to a stabilized outlet on the downstream side of the embankment.
- An anti-vortex device and rubbish screen should be attached to the top of the riser and should be made of polyvinyl chloride or corrugated metal.

Basin Design and Construction:

- For common drainage locations that serve an area with ten or more acres disturbed at one time, a sediment basin should provide storage for a volume of runoff from a two-year, 24-hour storm from each disturbed acre drained.
- The basin length to width ratio should be at least 2:1 to improve trapping efficiency. The shape may be attained by excavation or the use of baffles. The lengths should be measured at the elevation of the riser de-watering hole.
- Place fill material in layers not more than 8 inches in loose depth. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content of the material. Compact each layer to 95 percent standard proctor density. Do not place material



Attachment 4 **Description of BMPs**

on surfaces that are muddy or frozen. Side slopes for the embankment should be 3:1 (H:V).

- An emergency spillway should be installed adjacent to the embankment on undisturbed soil and should be sized to carry the full amount of flow generated by a 10-year, 3-hour storm with 1 foot of freeboard less the amount which can be carried by the principal outlet control device.
- The emergency spillway should be lined with riprap as should the swale leading from the spillway to the normal watercourse at the base of the embankment.
- The principal outlet control device should consist of a rigid vertically oriented pipe or box of corrugated metal or reinforced concrete. Attached to this structure should be a horizontal pipe, which should extend through the embankment to the toe of fill to provide a de-watering outlet for the basin.
- An anti-vortex device should be attached to the inlet portion of the principal outlet control device to serve as a rubbish screen.
- A concrete base should be used to anchor the principal outlet control device and should be sized to provide a safety factor of 1.5 (downward forces = 1.5 buoyant forces).
- The basin should include a permanent stake to indicate the sediment level in the pool and marked to indicate when the sediment occupies 50% of the basin volume (not the top of the stake).
- The top of the riser pipe should remain open and be guarded with a trash rack and anti-vortex device. The top of the riser should be 12 inches below the elevation of the emergency spillway. The riser should be sized to convey the runoff from the 2-year, 3-hour storm when the water surface is at the emergency spillway elevation. For basins with no spillway the riser must be sized to convey the runoff from the 10-yr, 3-hour storm.
- Anti-seep collars should be included when soil conditions or length of service make piping through the backfill a possibility.
- The 48-hour drawdown time will be achieved by using a riser pipe perforated at the point measured from the bottom of the riser pipe equal to $\frac{1}{2}$ the volume of the basin. This is the maximum sediment storage elevation. The size of the perforation may be calculated as follows:

$$A_o = \frac{A_s \times \sqrt{2h}}{C_d \times 980,000}$$

Where:



Attachment 4 **Description of BMPs**

A_o = Area of the de-watering hole, ft²

A_s = Surface area of the basin, ft²

C_d = Coefficient of contraction, approximately 0.6

h = head of water above the hole, ft

Perforating the riser with multiple holes with a combined surface area equal to A_o is acceptable.

Erosion Control Compost

Description: Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.

Materials:

New types of erosion control compost are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Material used within any TxDOT construction or maintenance activities must meet material specifications in accordance with current TxDOT specifications. TxDOT maintains a website at http://www.txdot.gov/business/contractors_consultants/recycling/compost.htm that provides information on compost specification data.

ECC used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used as an ECC, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission (now named TCEQ) Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for ECC to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous



Attachment 4 **Description of BMPs**

parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC. TMECC information can be found at <http://www.tmecc.org/tmecc/index.html>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at http://tmecc.org/sta/STA_program_description.html.

Installation:

- Install in accordance with current TxDOT specification.
- Use on slopes 3:1 or flatter.
- Apply a 2 inch uniform layer unless otherwise shown on the plans or as directed.
- When rolling is specified, use a light corrugated drum roller.

Mulch and Compost Filter Socks

Description: Mulch and compost filter socks (erosion control logs) are used to intercept and detain sediment laden run-off from unprotected areas. When properly used, mulch and compost filter socks can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. Mulch and compost filter socks are used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. The sock should remain in place until the area is permanently stabilized. Mulch and compost filter socks may be installed in construction areas and temporarily moved during the day to allow construction activity provided it is replaced and properly anchored at the end of the day. Mulch and compost filter socks may be seeded to allow for quick vegetative growth and reduction in run-off velocity.

Materials:

New types of mulch and compost filter socks are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Mulch and compost filter socks used within any TxDOT construction or maintenance activities must meet material specifications in accordance with TxDOT specification 5049. TxDOT maintains a website at http://www.txdot.gov/business/contractors_consultants/recycling/compost.htm that provides information on compost specification data.

Mulch and compost filter socks used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used for mulch and compost filter socks, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other



Attachment 4 **Description of BMPs**

relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for mulch and compost filter socks to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC. TMECC information can be found at <http://www.tmecc.org/tmecc/index.html>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at http://tmecc.org/sta/STA_program_description.html.

Installation:

- Install in accordance with TxDOT Special Specification 5049.
- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.
- Inspect and maintain the socks in good condition (including staking, anchoring, etc.). Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.

POST-CONSTRUCTION TSS CONTROLS

Retention/Irrigation Systems

Description: Retention/irrigation systems refer to the capture of runoff in a holding pond, then use of the captured water for irrigation of appropriate landscape areas. Retention/irrigation systems are characterized by the capture and disposal of runoff without direct release of captured flow to receiving streams. Retention systems exhibit excellent pollutant removal but can require regular, proper maintenance. Collection of roof runoff for subsequent use (rainwater harvesting) also qualifies as a retention/irrigation practice, but should be operated and sized to provide adequate volume. This technology, which emphasizes beneficial use of stormwater runoff, is



Attachment 4 **Description of BMPs**

particularly appropriate for arid regions because of increasing demands on water supplies for agricultural irrigation and urban water supply.

Design Considerations: Retention/irrigation practices achieve 100% removal efficiency of total suspended solids contained within the volume of water captured. Design elements of retention/irrigation systems include runoff storage facility configuration and sizing, pump and wet well system components, basin lining, basin detention time, and physical and operational components of the irrigation system. Retention/irrigation systems are appropriate for large drainage areas with low to moderate slopes. The retention capacity should be sufficient considering the average rainfall event for the area.

Maintenance Requirements: Maintenance requirements for retention/irrigation systems include routine inspections, sediment removal, mowing, debris and litter removal, erosion control, and nuisance control.

Extended Detention Basin

Description: Extended detention facilities are basins that temporarily store a portion of stormwater runoff following a storm event. Extended detention basins are normally used to remove particulate pollutants and to reduce maximum runoff rates associated with development to their pre-development levels. The water quality benefits are the removal of sediment and buoyant materials. Furthermore, nutrients, heavy metals, toxic materials, and oxygen-demanding materials associated with the particles also are removed. The control of the maximum runoff rates serves to protect drainage channels below the device from erosion and to reduce downstream flooding. Although detention facilities designed for flood control have different design requirements than those used for water quality enhancement, it is possible to achieve these two objectives in a single facility.

Design Considerations: Extended detention basins can remove approximately 75% of the total suspended solids contained within the volume of runoff captured in the basin. Design elements of extended detention basins include basin sizing, basin configuration, basin side slopes, basin lining, inlet/outlet structures, and erosion controls. Extended detention basins are appropriate for large drainage areas with low to moderate slopes. The retention capacity should be sufficient considering the average rainfall event for the area.

Maintenance Requirements: Maintenance requirements for extended detention basins include routine inspections, mowing, debris and litter removal, erosion control, structural repairs, nuisance control, and sediment removal.

Vegetative Filter Strips

Description: Filter strips, also known as vegetated buffer strips, are vegetated sections of land similar to grassy swales except they are essentially flat with low slopes, and are designed only to accept runoff as overland sheet flow. They may appear in any vegetated form from grassland to forest, and are designed to intercept upstream flow, lower flow velocity, and spread water out as sheet flow. The dense vegetative cover facilitates conventional pollutant removal through detention, filtration by vegetation, and infiltration.



Attachment 4 **Description of BMPs**

Filter strips cannot treat high velocity flows, and do not provide enough storage or infiltration to effectively reduce peak discharges to predevelopment levels for design storms. This lack of quantity control favors use in rural or low-density development; however, they can provide water quality benefits even where the impervious cover is as high as 50%. The primary highway application for vegetative filter strips is along rural roadways where runoff that would otherwise discharge directly to a receiving water passes through the filter strip before entering a conveyance system. Properly designed roadway medians and shoulders make effective buffer strips. These devices also can be used on other types of development where land is available and hydraulic conditions are appropriate.

Flat slopes and low to fair permeability of natural subsoil are required for effective performance of filter strips. Although an inexpensive control measure, they are most useful in contributing watershed areas where peak runoff velocities are low as they are unable to treat the high flow velocities typically associated with high impervious cover.

Successful performance of filter strips relies heavily on maintaining shallow unconcentrated flow. To avoid flow channelization and maintain performance, a filter strip should:

- Be equipped with a level spreading device for even distribution of runoff
- Contain dense vegetation with a mix of erosion resistant, soil binding species
- Be graded to a uniform, even and relatively low slope
- Laterally traverse the contributing runoff area

Filter strips can be used upgradient from watercourses, wetlands, or other water bodies along toes and tops of slopes and at outlets of other stormwater management structures. They should be incorporated into street drainage and master drainage planning. The most important criteria for selection and use of this BMP are soils, space, and slope.

Design Considerations: Vegetative filter strips can remove approximately 85% of the total suspended solids contained within the volume of runoff captured. Design elements of vegetative filter strips include uniform, shallow overland flow across the entire filter strip area, hydraulic loading rate, inlet structures, slope, and vegetative cover. The area should be free of gullies or rills which can concentrate flow. Vegetative filter strips are appropriate for small drainage areas with moderate slopes. Other design elements include the following:

- Soils and moisture are adequate to grow relatively dense vegetative stands
- Sufficient space is available
- Slope is less than 12%
- Comparable performance to more expensive structural controls



Attachment 4 **Description of BMPs**

Maintenance Requirements: Maintenance requirements for vegetative filter strips include pest management, seasonal mowing and lawn care, routine inspections, debris and litter removal, sediment removal, and grass reseeding and mulching.

Constructed Wetlands

Description: Constructed wetlands provide physical, chemical, and biological water quality treatment of stormwater runoff. Physical treatment occurs as a result of decreasing flow velocities in the wetland, and is present in the form of evaporation, sedimentation, adsorption, and/or filtration. Chemical processes include chelation, precipitation, and chemical adsorption. Biological processes include decomposition, plant uptake and removal of nutrients, plus biological transformation and degradation. Hydrology is one of the most influential factors in pollutant removal due to its effects on sedimentation, aeration, biological transformation, and adsorption onto bottom sediments.

The wetland should be designed such that a minimum amount of maintenance is required. The natural surroundings, including such things as the potential energy of a stream or flooding river, should be utilized as much as possible. The wetland should approximate a natural situation and unnatural attributes, such as rectangular shape or rigid channel, should be avoided.

Site considerations should include the water table depth, soil/substrate, and space requirements. Because the wetland must have a source of flow, it is desirable that the water table is at or near the surface. If runoff is the only source of inflow for the wetland, the water level often fluctuates and establishment of vegetation may be difficult. The soil or substrate of an artificial wetland should be loose loam to clay. A perennial baseflow must be present to sustain the artificial wetland. The presence of organic material is often helpful in increasing pollutant removal and retention. A greater amount of space is required for a wetland system than is required for a detention facility treating the same amount of area.

Design Considerations: Constructed wetlands can remove over 90% of the total suspended solids contained within the volume of runoff captured in the wetland. Design elements of constructed wetlands include wetland sizing, wetland configuration, sediment forebay, vegetation, outflow structure, depth of inundation during storm events, depth of micropools, and aeration. Constructed wetlands are appropriate for large drainage areas with low to moderate slopes.

Maintenance Requirements: Maintenance requirements for constructed wetlands include mowing, routine inspections, debris and litter removal, erosion control, nuisance control, structural repairs, sediment removal, harvesting, and maintenance of water levels.

Wet Basins

Description: Wet basins are runoff control facilities that maintain a permanent wet pool and a standing crop of emergent littoral vegetation. These facilities may vary in appearance from natural ponds to enlarged, bermed (manmade) sections of drainage systems and may function as online or offline facilities, although offline configuration is preferable. Offline designs can prevent scour and other damage to the wet pond and minimize costly outflow structure elements



Attachment 4 **Description of BMPs**

needed to accommodate extreme runoff events.

During storm events, runoff inflows displace part or all of the existing basin volume and are retained and treated in the facility until the next storm event. The pollutant removal mechanisms are settling of solids, wetland plant uptake, and microbial degradation. When the wet basin is adequately sized, pollutant removal performance can be excellent, especially for the dissolved fraction. Wet basins also help provide erosion protection for the receiving channel by limiting peak flows during larger storm events. Wet basins are often perceived as a positive aesthetic element in a community and offer significant opportunity for creative pond configuration and landscape design. Participation of an experienced wetland designer is suggested. A significant potential drawback for wet ponds in arid climates is that the contributing watershed for these facilities is often incapable of providing an adequate water supply to maintain the permanent pool, especially during the summer months. Makeup water (i.e., well water or municipal drinking water) is sometimes used to supplement the rainfall/runoff process, especially for wet basin facilities treating watersheds that generate insufficient runoff.

Design Considerations: Wet basins can remove over 90% of the total suspended solids contained within the volume of runoff captured in the basin. Design elements of wet basins include basin sizing, basin configuration, basin side slopes, sediment forebay, inflow and outflow structures, vegetation, depth of permanent pool, aeration, and erosion control. Wet basins are appropriate for large drainage areas with low to moderate slopes.

Maintenance Requirements: Maintenance requirements for wet basins include mowing, routine inspections, debris and litter removal, erosion control, nuisance control, structural repairs, sediment removal, and harvesting.

Grassy Swales

Grassy swales are vegetated channels that convey stormwater and remove pollutants by filtration through grass and infiltration through soil. They require shallow slopes and soils that drain well. Pollutant removal capability is related to channel dimensions, longitudinal slope, and type of vegetation. Optimum design of these components will increase contact time of runoff through the swale and improve pollutant removal rates.

Grassy swales are primarily stormwater conveyance systems. They can provide sufficient control under light to moderate runoff conditions, but their ability to control large storms is limited. Therefore, they are most applicable in low to moderate sloped areas or along highway medians as an alternative to ditches and curb and gutter drainage. Their performance diminishes sharply in highly urbanized settings, and they are generally not effective enough to receive construction stage runoff where high sediment loads can overwhelm the system. Grassy swales can be used as a pretreatment measure for other downstream BMPs, such as extended detention basins. Enhanced grassy swales utilize check dams and wide depressions to increase runoff storage and promote greater settling of pollutants.

Grassy swales can be more aesthetically pleasing than concrete or rock-lined drainage systems and are generally less expensive to construct and maintain. Swales can slightly reduce



Attachment 4 **Description of BMPs**

impervious area and reduce the pollutant accumulation and delivery associated with curbs and gutters. The disadvantages of this technique include the possibility of erosion and channelization over time, and the need for more right-of-way as compared to a storm drain system. When properly constructed, inspected, and maintained, the life expectancy of a swale is estimated to be 20 years.

Design Considerations:

- Comparable performance to wet basins
- Limited to treating a few acres
- Availability of water during dry periods to maintain vegetation
- Sufficient available land area

The suitability of a swale at a site will depend on land use, size of the area serviced, soil type, slope, imperviousness of the contributing watershed, and dimensions and slope of the swale system. In general, swales can be used to serve areas of less than 10 acres, with slopes no greater than 5 %. The seasonal high water table should be at least 4 feet below the surface. Use of natural topographic lows is encouraged, and natural drainage courses should be regarded as significant local resources to be kept in use.

Maintenance Requirements:

Research in the Austin area indicates that vegetated controls are effective at removing pollutants even when dormant. Therefore, irrigation is not required to maintain growth during dry periods, but may be necessary only to prevent the vegetation from dying.

Vegetation Lined Drainage Ditches

Vegetation lined drainage ditches are similar to grassy swales. These drainage ditches are vegetated channels that convey storm water and remove pollutants by filtration through grass and infiltration through soil. They require soils that drain well. Pollutant removal capability is related to channel dimensions, longitudinal slope, and type of vegetation. Optimum design of these components will increase contact time of runoff through the ditch and improve pollutant removal rates. Vegetation lined drainage ditches are primarily storm water conveyance systems. They have vegetation lined in the low flow channel and may include vegetated shelves.

Vegetation in drainage ditches reduces erosion and removes pollutants by lowering water velocity over the soil surface, binding soil particles with roots, and by filtration through grass and infiltration through soil. Vegetation lined drainage ditches can be used where:

- A vegetative lining can provide sufficient stability for the channel grade by increasing maximum permissible velocity
- Slopes are generally less than 5%, with protection from shear stress as needed through the use



Attachment 4 **Description of BMPs**

of BMPs, such as erosion control blankets

- Site conditions required to establish vegetation, i.e. climate, soils; topography, are present

Design Criteria: The suitability of a vegetation lined drainage ditch at a site will depend on land use, size of the area serviced, soil type, slope, imperviousness of the contributing watershed, and dimensions and slope of the ditch system. The hydraulic capacity of the drainage ditch and other elements such as erosion, siltation, and pollutant removal capability, must be taken into consideration. Use of natural topographic lows is encouraged, and natural drainage courses should be regarded as significant local resources to be kept in use. Other items to consider include the following:

- Capacity, cross-section shape, side slopes, and grade
- Select appropriate native vegetation
- Construct in stable, low areas to conform with the natural drainage system. To reduce erosion potential, design the channel to avoid sharp bends and steep grades.
- Design and build drainage ditches with appropriate scour and erosion protection. Surface water should be able to enter over the vegetated banks without erosion occurring.
- BMPs, such as erosion control blankets, may need to be installed at the time of seeding to provide stability until the vegetation is fully established. It may also be necessary to divert water from the channel until vegetation is established or to line the channel with sod.
- Vegetated ditches must not be subject to sedimentation from disturbed areas.
- Sediment traps may be needed at channel inlets to prevent entry of muddy runoff and channel sedimentation.
- Availability of water during dry periods to maintain vegetation
- Sufficient available land area

Maintenance:

During establishment, vegetation lined drainage ditches should be inspected, repaired, and vegetation reestablished if necessary. After the vegetation has become established, the ditch should be checked periodically to determine if the channel is withstanding flow velocities without damage. Check the ditch for debris, scour, or erosion and immediately make repairs if needed. Check the channel outlet and all road crossings for bank stability and evidence of piping or scour holes and make repairs immediately. Remove all significant sediment accumulations to maintain the designed carrying capacity. Keep the vegetation in a healthy condition at all times, since it is the primary erosion protection for the channel. Vegetation lined drainage ditches should be seasonally maintained by mowing or irrigating, depending on the vegetation selected. The long-



Attachment 4 **Description of BMPs**

term management of ditches as stable, vegetated, "natural" drainage systems with native vegetation buffers is highly recommended due to the inherent stability offered by grasses, shrubs, trees, and other vegetation.

Research in the Austin area indicates that vegetated controls are effective at removing pollutants even when dormant. Therefore, irrigation is not required to maintain growth during dry periods, but may be necessary only to prevent the vegetation from dying.

Sand Filter Systems

The objective of sand filters is to remove sediment and the pollutants from the first flush of pavement and impervious area runoff. The filtration of nutrients, organics, and coliform bacteria is enhanced by a mat of bacterial slime that develops during normal operations. One of the main advantages of sand filters is their adaptability; they can be used on areas with thin soils, high evaporation rates, low-soil infiltration rates, in limited-space areas, and where groundwater is to be protected.

Since their original inception in Austin, Texas, hundreds of intermittent sand filters have been implemented to treat stormwater runoff. There have been numerous alterations or variations in the original design as engineers in other jurisdictions have improved and adapted the technology to meet their specific requirements. Major types include the Austin Sand Filter, the District of Columbia Underground Sand Filter, the Alexandria Dry Vault Sand Filter, the Delaware Sand Filter, and peat-sand filters which are adapted to provide a sorption layer and vegetative cover to various sand filter designs .

Design Considerations:

- Appropriate for space-limited areas
- Applicable in arid climates where wet basins and constructed wetlands are not appropriate
- High TSS removal efficiency

Cost Considerations:

Filtration Systems may require less land than some other BMPs, reducing the land acquisition cost; however the structure itself is one of the more expensive BMPs. In addition, maintenance cost can be substantial.

Erosion Control Compost

Description: Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.



Attachment 4 **Description of BMPs**

Materials:

New types of erosion control compost are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Material used within any TxDOT construction or maintenance activities must meet material specifications in accordance with current TxDOT specifications. TxDOT maintains a website at http://www.txdot.gov/business/contractors_consultants/recycling/compost.htm that provides information on compost specification data.

ECC used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used as an ECC, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission (now named TCEQ) Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

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Installation:

- Install in accordance with current TxDOT specification.
- Use on slopes 3:1 or flatter.
- Apply a 2 inch uniform layer unless otherwise shown on the plans or as directed.
- When rolling is specified, use a light corrugated drum roller.



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Mulch and Compost Filter Socks

Description: Mulch and compost filter socks (erosion control logs) are used to intercept and detain sediment laden run-off from unprotected areas. When properly used, mulch and compost filter socks can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. Mulch and compost filter socks are used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. The sock should remain in place until the area is permanently stabilized. Mulch and compost filter socks may be installed in construction areas and temporarily moved during the day to allow construction activity provided it is replaced and properly anchored at the end of the day. Mulch and compost filter socks may be seeded to allow for quick vegetative growth and reduction in run-off velocity.

Materials:

New types of mulch and compost filter socks are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Mulch and compost filter socks used within any TxDOT construction or maintenance activities must meet material specifications in accordance with TxDOT specification 5049. TxDOT maintains a website at http://www.txdot.gov/business/contractors_consultants/recycling/compost.htm that provides information on compost specification data.

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Installation:

- Install in accordance with TxDOT Special Specification 5049.
- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.
- Inspect and maintain the socks in good condition (including staking, anchoring, etc.). Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.

Sedimentation Chambers (only to be used when there is no space available for other approved BMP's)

Description: Sedimentation chambers are stormwater treatment structures that can be used when space is limited such as urban settings. These structures are often tied into stormwater drainage systems for treatment of stormwater prior to entering state waters. The water quality benefits are the removal of sediment and buoyant materials. These structures are not designed as a catch basin or detention basin and not typically used for floodwater attenuation.

Design Considerations: Average rainfall and surface area should be considered when following manufacturer's recommendations for chamber sizing and/or number of units needed to achieve effective TSS removal. If properly sized, 50-80% removal of TSS can be expected.

Maintenance Requirements: Maintenance requirements include routine inspections, sediment, debris and litter removal, erosion control and nuisance control.



DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON TEXAS 77553-1229

February 21, 2013

Compliance Section

SUBJECT: **SWG-2012-00769**; Berg Oliver Associates, Inc., Jurisdictional Determination, Approximately 0.33 acres, North of Clay Road and West of Fry Road in Northwest Houston, Harris County, Texas

Mr. Keith Morgan
Berg Oliver Associates, Inc.
14701 St. Mary's Lane, Suite 400
Houston, Texas 77079

Dear Mr. Morgan:

In response to your request, received September 5, 2013, we determined that the 0.33-acre abandoned irrigation ditch is not a water of the United States (attached map). Therefore, it is not subject to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act and the discharge of fill material on the tract does not require a Department of the Army permit. The 0.33-acre abandoned irrigation ditch is north of Clay Road, west of Fry Road, in northwest Houston, Harris County, Texas.

This determination has been conducted to identify the limits of the Corps' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

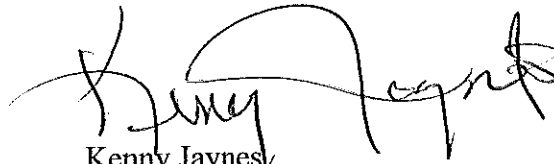
This letter contains an approved jurisdictional determination for your subject site, which is valid for 5 years from the date of this letter unless new information warrants a revision prior to the expiration date. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeals Process (NAP) fact sheet and Request for Appeal (RFA) form.

If you request to appeal this determination, you must submit a completed RFA form to the Southwest Division Office at the following address:

Mr. Elliott Carman
Appeal Review Officer, CESWD-PD-O
U.S. Army Corps of Engineer Division, Southwestern
1100 Commerce Street, Room 831
Dallas, Texas 75242-1731
Telephone: 469-487-7061; FAX: 469-487-7190

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete; that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within **60 days** of the date of the NAP. It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter. If you have any questions concerning this jurisdictional determination, please reference file number **SWG-2012-00769** and contact Ms. Kara Vick at the letterhead address or by telephone at 409-766-3133 or email at kara.vick@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenny Jaynes", written in a cursive style.

Kenny Jaynes
Chief, Compliance Section

Enclosures

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: **BERG OLIVER ASSOCIATES, INC.**

File Number: **SWG 2012-00769**

Date: **02/21/2013**

Attached is:

See Section below

	INITIAL PROFFERED PERMIT (Standard Permit or Letter of Permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of Permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://www.usace.army.mil/inet/functions/cw/cecwo/reg/> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved jurisdictional determination (JD) or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Ms Kara Vick
Regulatory, Compliance Specialist
U.S. Army Corps of Engineers
P.O. Box 1229
Galveston, Texas 77553-1229
409-766-3133; FAX: 409-766-3931

If you only have questions regarding the appeal process you may also contact:

Mr. Elliott Carman
Appeal Review Officer
Southwestern Division USACE CESWD-PD-O
1100 Commerce Street, Room 831
Dallas, Texas 75242-1731
Telephone: 469-487-7061; FAX: 469-487-7199

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or authorized agent.

Date:

Telephone number:

COPY


SEP 05 2012



N
4

Location: Harris County, Texas
 Image Source: NAIP 2010
 Projection: NAD 83 UTM Zone 16 N
 Cell Count: 1024x1024 (1048576 cells)



LEGEND	ACRES
 Remnant Irrigation Ditch (Non-Jurisdictional)	0.39

2010 NAIP AERIAL

SWG-2012-00769

Project #: 8449
 For: Dannenbaum Engineering
 Location: Northwest of Clay Rd and Fry Rd
Harris County, Texas

REVISIONS
Aug. 20, 2012 by MDE

BERG-OLIVER ASSOCIATES, INC.
 ENVIRONMENTAL SCIENCE, ENGINEERING
 & LAND USE CONSULTANTS
 14701 ST. MARY'S LANE, SUITE 400
 HOUSTON, TEXAS 77079 PHONE (281)589-0898 <http://www.bergoliver.com>



enclosure



DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

June 6, 2013

REPLY TO
ATTENTION OF:

Evaluation Section

SUBJECT: Permit No. SWG-2012-00388; Nationwide Permit Re-verification

Bruce Parker
West Harris County Regional Water Authority
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027-7537

Dear Mr. Parker:

Your April 15, 2013, request, submitted on your behalf by Terracon Consultants, Inc., to temporarily discharge fill material into 15.45 acres of freshwater emergent wetlands as part of the project to install a 29.5-mile-long, 96-inch-diameter surface water distribution pipeline is verified by Nationwide Permit (NWP) 12 pursuant to Section 404 of the Clean Water Act (CWA). This NWP verification is valid provided the activity is compliant with the enclosed NWP General/Regional Conditions and the Texas Commission on Environmental Quality's Best Management Practice Guidelines. The project site spans 29.5 miles, and is within an existing pipeline easement that runs from Peek Road to the north of the City of Katy to just east of Halls Bayou at Tidwell Park in Houston, Harris County, Texas.

Nationwide Permit 12 authorizes discharges of fill material for backfill or bedding of pipelines provided the site is restored to pre-construction contours. Material resulting from trench excavation may be temporarily sidecast, up to 3 months, into the adjacent areas provided the material is not placed in such a manner that currents or other forces disperse it. The wetland areas disturbed must be limited to the minimum necessary to construct the pipeline. All heavy equipment working in wetlands must be placed on mats or other measures must be taken to minimize soil disturbance.

The NWP verification is valid until the NWP is modified, reissued or revoked. All of the existing NWPs are scheduled to be modified, reissued or revoked prior to March 19, 2017. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

A copy of your plans in 11 Sheet is enclosed. The following special condition has been added to your authorization:

When structures or work authorized by this permit are determined by the Corps of Engineers (Corps) to have become abandoned, obstructive to navigation, or cease to be used for the purpose for which they were permitted, such structures or other work must be removed, the area cleared of all obstructions, and written notice given to the Chief of Compliance, Galveston District, Regulatory Branch, within 30 calendar days of removal.

The impacts to waters of the United States (U.S.) associated with this NWP verification are based on a preliminary jurisdictional determination (JD) for your subject site. If you wish, you may request an approved JD (which may be appealed) by submitting a written request to us within 30 days from the date of this letter. Please note that if you request an approved JD and then decide to appeal it, the appeal will not be accepted if any work has started in waters of the U.S. or that would alter the hydrology of waters of the U.S.

Corps determinations are conducted to identify the limits of the Corps CWA jurisdiction for particular sites. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

If you have any question regarding this verification please contact Ms. Tosin Sekoni at the letterhead address or by telephone at 409-766-3087. Please notify the Chief of the Compliance, Galveston, District Regulatory Branch, in writing at the letterhead address, upon completion of the authorized project.

FOR THE DISTRICT COMMANDER:



Janet Thomas Botello
Leader, North Evaluation Unit

Enclosures:

Copies Furnished:
(See Page 3)

Copies Furnished:

Texas General Land Office, La Porte, TX

Texas General Land Office, Austin, TX

U.S. Fish and Wildlife Service, Houston, TX

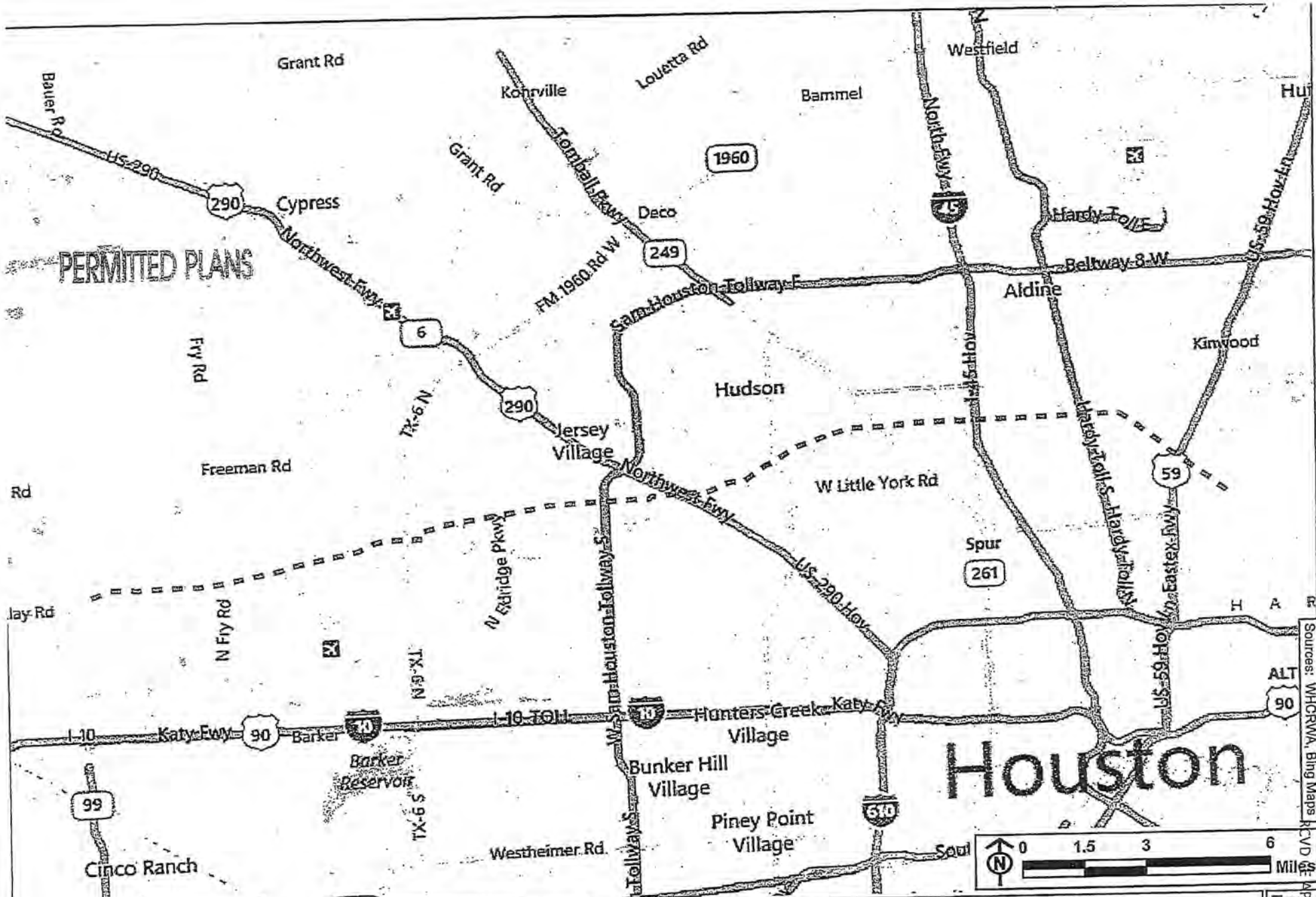
Houston/Galveston Resident Office, Galveston, TX

Marshal William & David Blacklock, Dept. of Defense Clearinghouse, 101 Marietta St. NW,
Ste. 3120, Atlanta, GA 30303-2711

Carland Holstead, Terracon Consultants, Inc., 11555 Clay Rd., Ste. 100, Houston, TX 77043-
1239

This page is a placeholder for information submitted with the application that may contain confidential information.

Please contact Cindy DePrato at 512 463-8420 to request reviewing this information.



PERMITTED PLANS

Sources: WHCRWA, Bing Maps

Legend	
	Project Alignment

Missior

DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 3 miles
DATE	4/9/2012

Terracon
Consulting Engineers & Scientists
Terracon Project No. 92127207

Project Location	
West Harris County Regional Water Authority East-West Second Source Project Harris County, Texas	

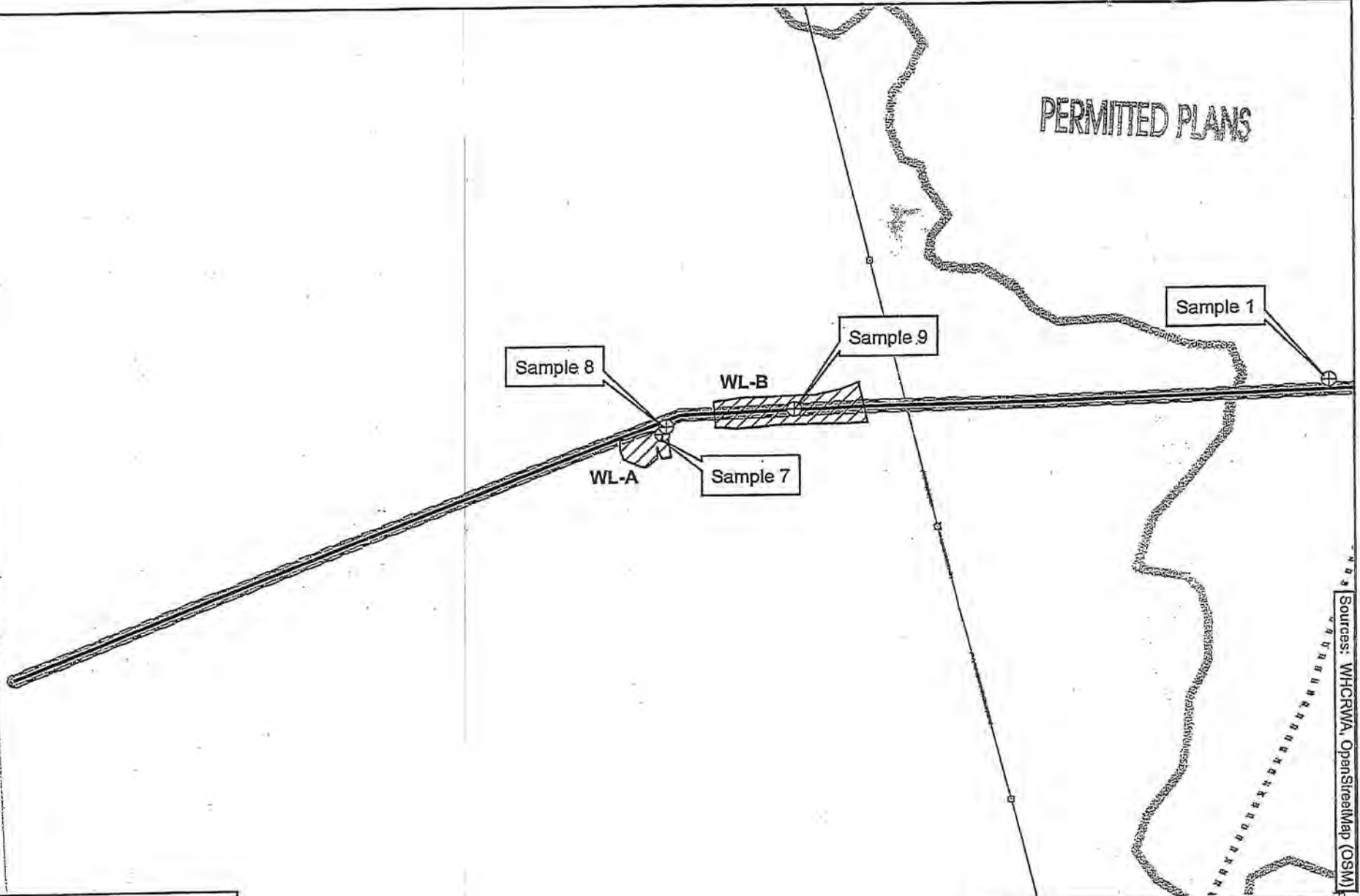
Figure No.	27012
Scale	1" = 3 Miles

APR 15 2013

PERMITTED PLANS

Park Road

Park Road



Sources: WHCRWA, OpenStreetMap (OSM)

Legend	
⊕	Hole
—	Project Alignment
▨	50-ft Easement
▩	Delineated Wetlands

DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 500 ft
DATE	4/9/2012

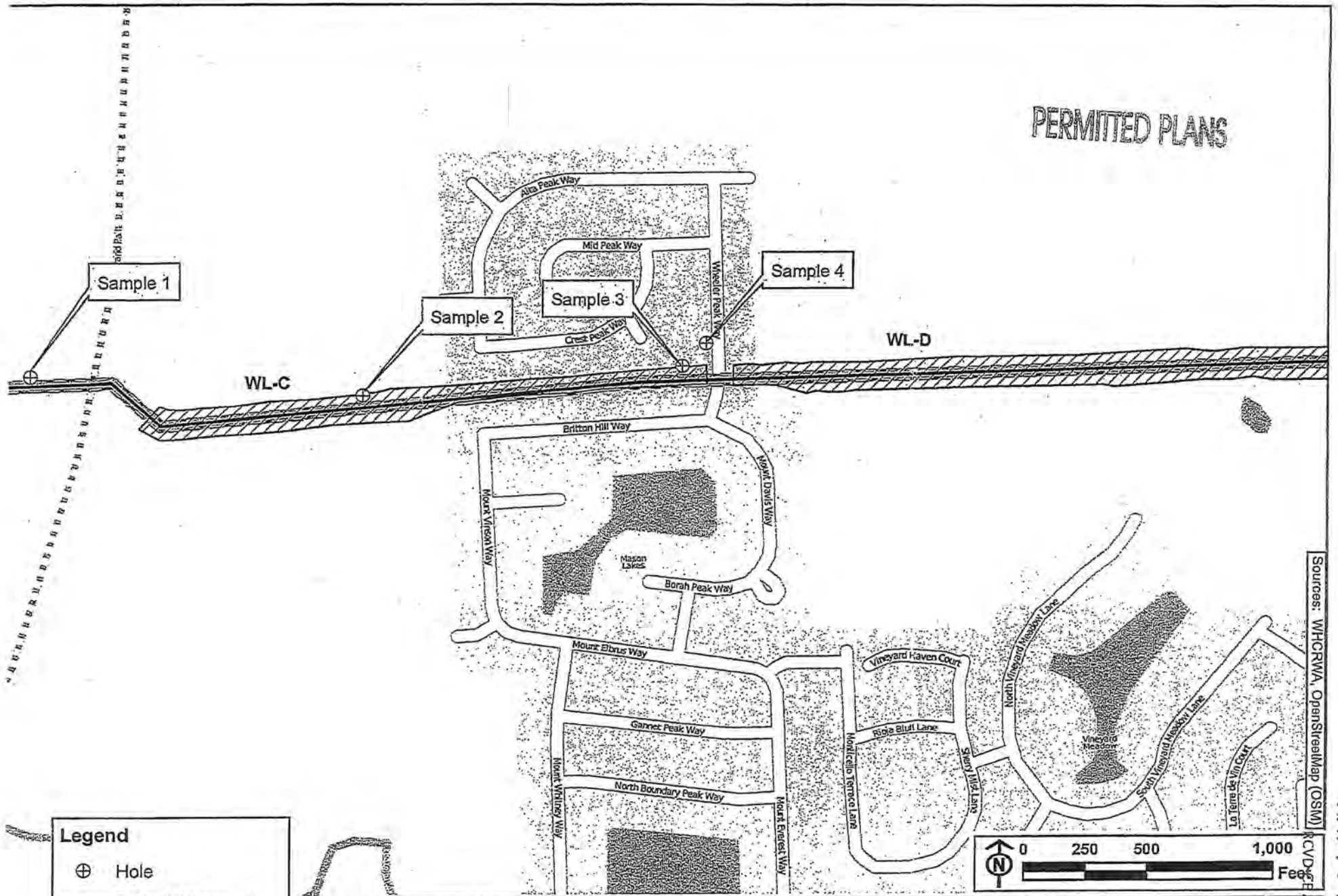
Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127207

Delineated Wetlands Map
 West Harris County Regional Water Authority
 East-West Second Source Project
 Harris County, Texas

Figure
 6
 2/28/12

APR 15 2013

PERMITTED PLANS



Sources: WHCRWA, OpenStreetMap (OSM)
 R/CVD/EF

Legend	
⊕	Hole
—	Project Alignment
▨	50-ft Easement
▧	Delineated Wetlands

DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 500 ft
DATE	4/9/2012

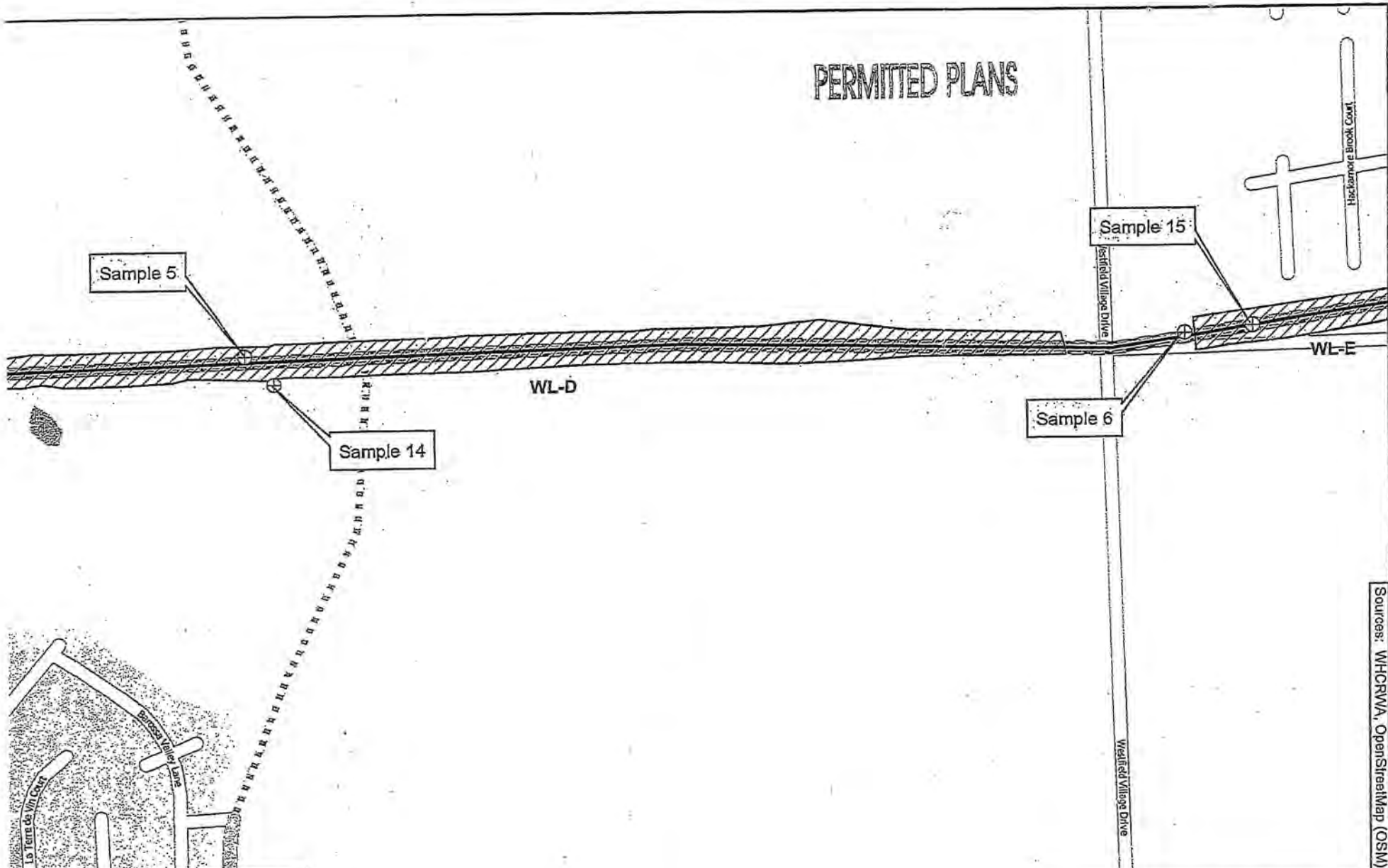
Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127207

Delineated Wetlands Map
 West Harris County Regional Water Authority
 East-West Second Source Project
 Harris County, Texas

Figure	6
APR 2012	

APR 15 2013

PERMITTED PLANS



Legend	
⊕	Hole
—	Project Alignment
▨	50-ft Easement
▧	Delineated Wetlands



DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 500 ft
DATE	4/9/2012

Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127207

Delineated Wetlands Map	
West Harris County Regional Authority East-West Second Source Project Harris County, Texas	
Figure No.	6
Date	4/27/12

Sources: WHCRWA, OpenStreetMap (OSM)

APR 15 2013



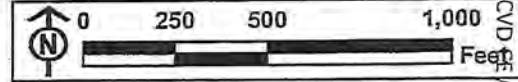
PERMITTED PLANS

Sample 6

Sample 15

WL-E

Legend	
⊕	Hole
—	Project Alignment
▨	50-ft Easement
▨	Delineated Wetlands



DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 500 ft
DATE	4/9/2012

Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127207

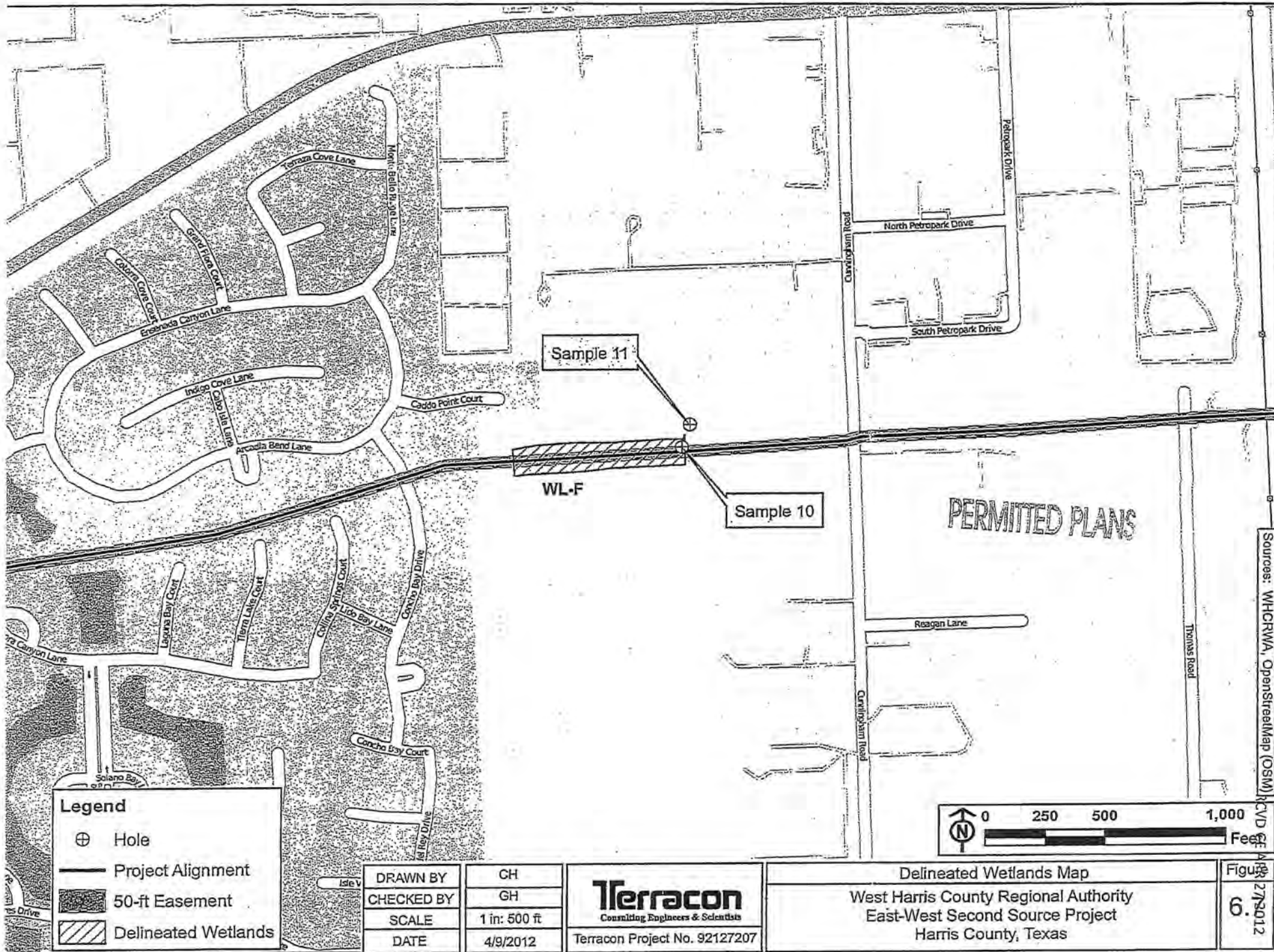
Delineated Wetlands Map
 West Harris County Regional Authority
 East-West Second Source Project
 Harris County, Texas

Figure	6
Scale	2/20/12

Source: WHCRWA, OpenStreetMap (OSM)
 Field Meadow Drive

APR 15 2013

SWG-2012-00388; WHCRWA; Page 7 of 11



Sources: WHCRWA, OpenStreetMap (OSM)

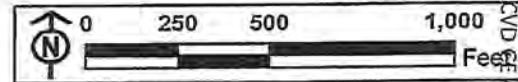
Legend	
⊕	Hole
—	Project Alignment
▨	50-ft Easement
▨	Delineated Wetlands

DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 500 ft
DATE	4/9/2012

Terracon
Consulting Engineers & Scientists
Terracon Project No. 92127207

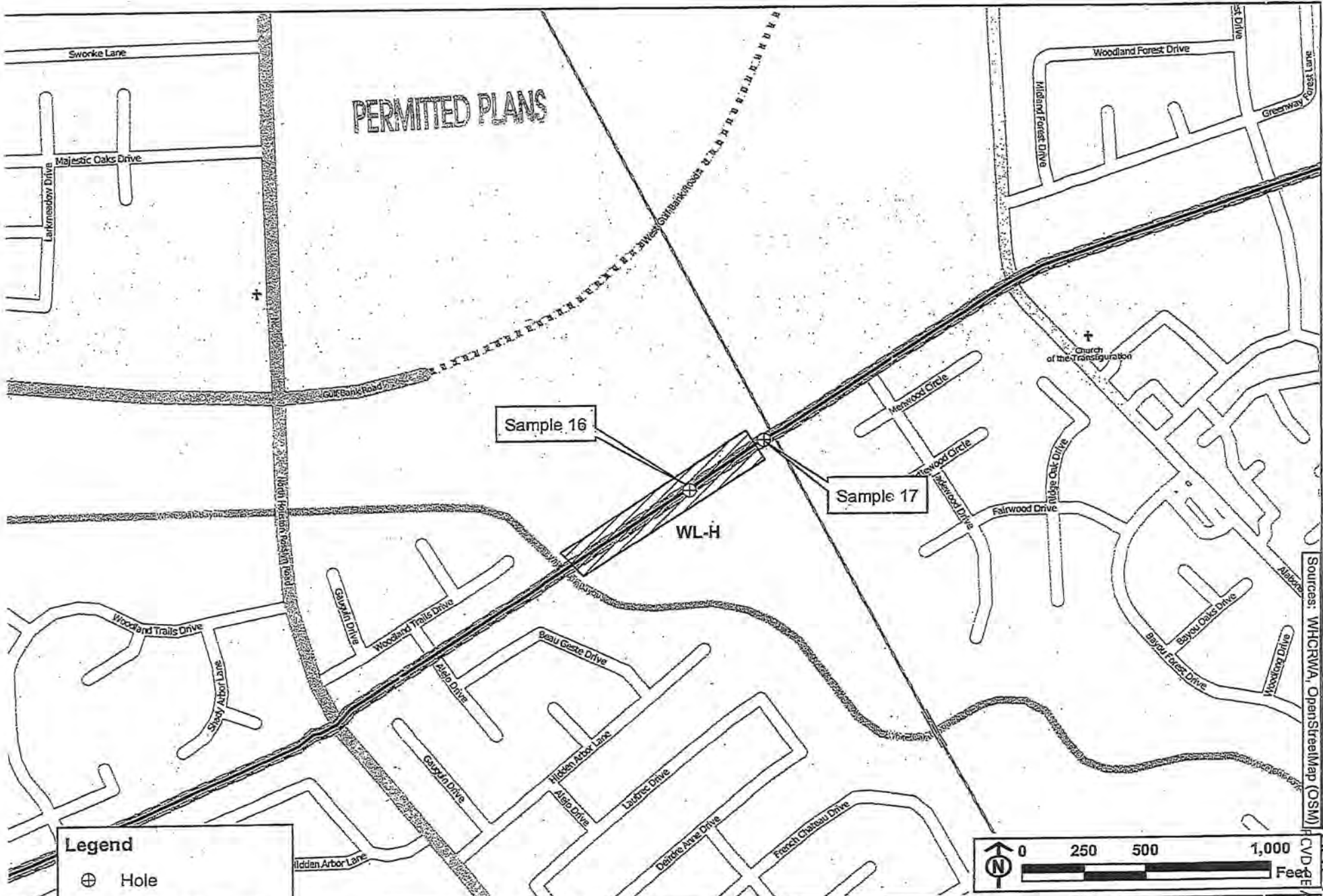
Delineated Wetlands Map
West Harris County Regional Authority
East-West Second Source Project
Harris County, Texas

Figure No.	6
Date	2/7/2012



APR 15 2013

SWG-2012-00388: WHCRWA, P. 9 of 11



Legend	
	Hole
	Project Alignment
	50-ft Easement
	Delineated Wetlands

DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 500 ft
DATE	4/9/2012

Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127207

Delineated Wetlands Map
 West Harris County Regional Authority
 East-West Second Source Project
 Harris County, Texas

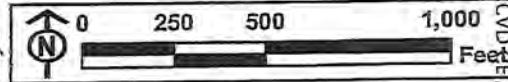


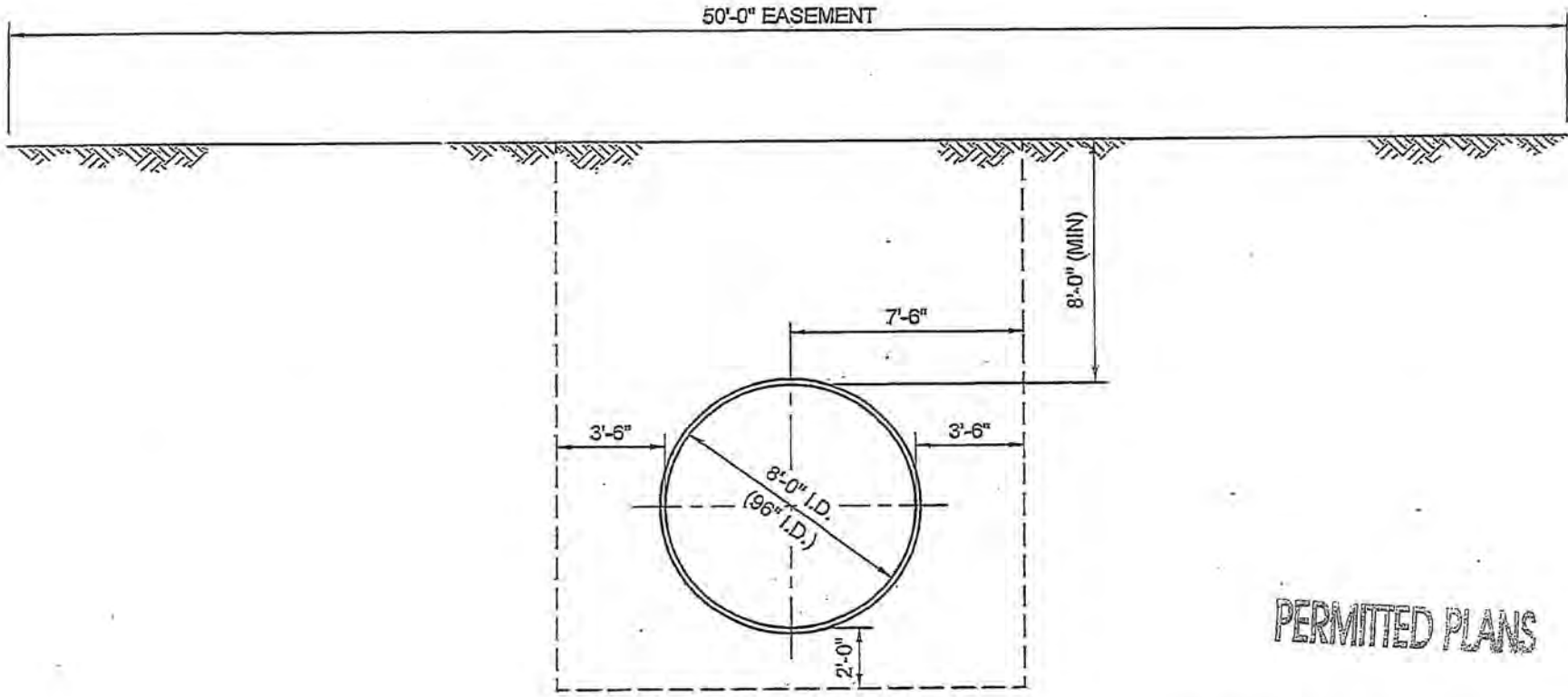
Figure No.	6
Date	2/20/12

Sources: WHCRWA, OpenStreetMap (OSM)

APR 15 2013

110-2012-00788 - WHCRWA - D - E - 11

RCVD CE APR 17 2012



PERMITTED PLANS

DANNENBAUM
ENGINEERING CORPORATION
 T.B.P.E. FIRM REGISTRATION #392

WEST HARRIS COUNTY
 REGIONAL WATER AUTHORITY

FIGURE
7.1

4' 0 4'
 3/16"=1'-0"

DRAWN BY: B.A.M.	SCALE: 3/16"=1'-0"
CHECKED BY: G.C.P.	DATE: 03/23/2012

APR 15 2013

SEE DRAWING FOR DIMENSIONS AND NOTES

REPLY TO
ATTENTION OF:

Evaluation Section

DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1229
GALVESTON, TEXAS 77553-1229

July 24, 2012



SUBJECT: Permit No. SWG-2012-00503; Nationwide Permit Verification

Bruce G. Parker
West Harris County Regional Water Authority
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027-7537

Dear Mr. Parker:

This is in reference to your request, dated June 4, 2012, submitted on your behalf by Terracon Consultants, Inc., to discharge fill material into 0.38 acre of wetlands adjacent to Cole Creek during the construction of a re-pumping station to supply the service area with surface water. Construction of the re-pump station includes three above-ground storage tanks, four buildings, a detention basin, and associated roadways. Your action is verified under Nationwide Permit (NWP) 39, pursuant to Section 404 of the Clean Water Act (CWA). This verification is valid provided the activity is compliant with the enclosed NWP General/Regional Conditions and the Texas Commission on Environmental Quality's Best Management Practice Guidelines. The project site is located in wetlands adjacent to Cole Creek, at a point west of the intersection of West Little York Road and Fairbanks-North Houston Road, near Jersey Village, in Harris County, Texas.

Nationwide Permit 39 authorizes discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of commercial and institutional building foundations and building pads and attendant features that are necessary for the use and maintenance of the structures. The discharge must not cause the loss of greater than ½ acre of non-tidal waters of the United States, including this loss of no more than 300 linear feet of stream bed, unless the district engineer waives the limit. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters.

This verification expires 2 years from the date of this letter. A copy of your plans in 3 sheets is enclosed. The following special conditions have been added to your authorization:

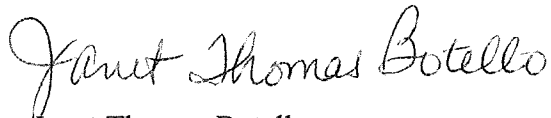
1. The permittee will purchase 0.4 mitigation units from Spellbottom Mitigation Bank prior to the start of work in the jurisdictional area.
2. The permittee will submit documentation to the Corps of Engineers, Chief, Compliance Section, Regulatory Branch, Galveston District, verifying that 0.4 mitigation units were purchased from Spellbottom Mitigation Bank prior to the start of work in the jurisdictional area.

The impacts to waters of the United States (U.S.) associated with this NWP verification are based on a preliminary jurisdictional determination (JD) for your subject site. If you wish, you may request an approved JD (which may be appealed) by submitting a written request to us within 30 days from the date of this letter. Please note that if you request an approved JD and then decide to appeal it, the appeal will not be accepted if any work has started in waters of the U.S. or that would alter the hydrology of waters of the U.S.

Corps determinations are conducted to identify the limits of the Corps' CWA jurisdiction for particular sites. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

If you have any question regarding this action, please contact Elizabeth Shelton at the letterhead address or by telephone at 409-766-3937. Please notify the Chief of the Compliance Section in the Galveston District Regulatory Branch, in writing at the letterhead address, upon completion of the authorized project.

FOR THE DISTRICT COMMANDER:



Janet Thomas Botello
Leader, North Evaluation Unit

Enclosures

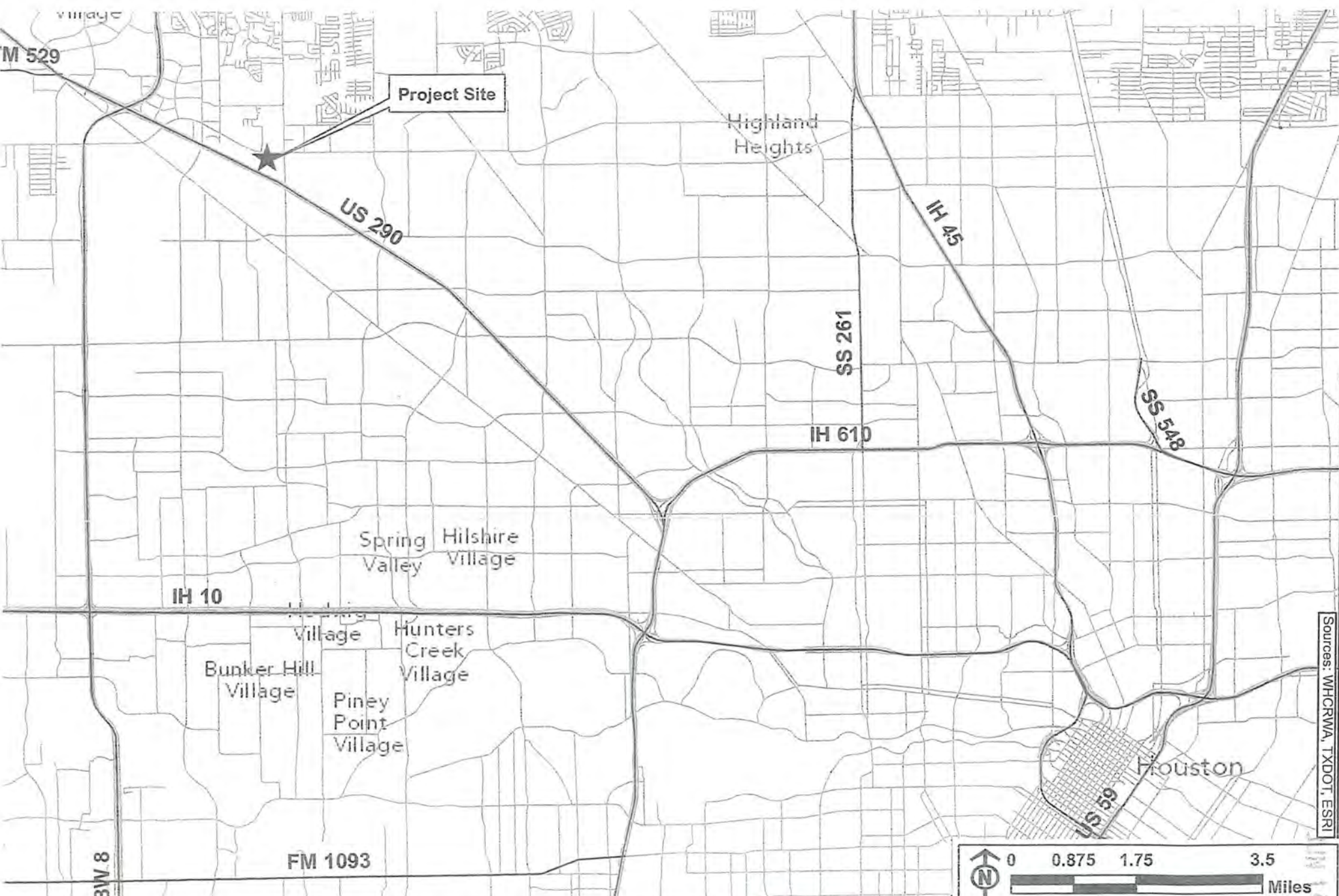
Copies Furnished:

Texas General Land Office, Austin, TX

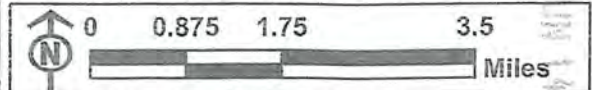
U.S. Fish and Wildlife Service, Houston, TX

Houston/Galveston Resident Office, Galveston, TX

Mr. Carland Holstead/Ms. Ginger Horn, Terracon Consultants, Inc., 11555 Clay Rd., Ste. 100,
Houston, TX 77043-1239



Sources: WHCRWA, TxDOT, ESRI



DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 1.75 miles
DATE	6/12/2012

Terracon
Consulting Engineers & Scientists
Terracon Project No. 92127206

PERMITTED PLANS

Vicinity Map
SWG-2012-00503
WHCRWA Re-Pump Sta
Houston, Harris County, T

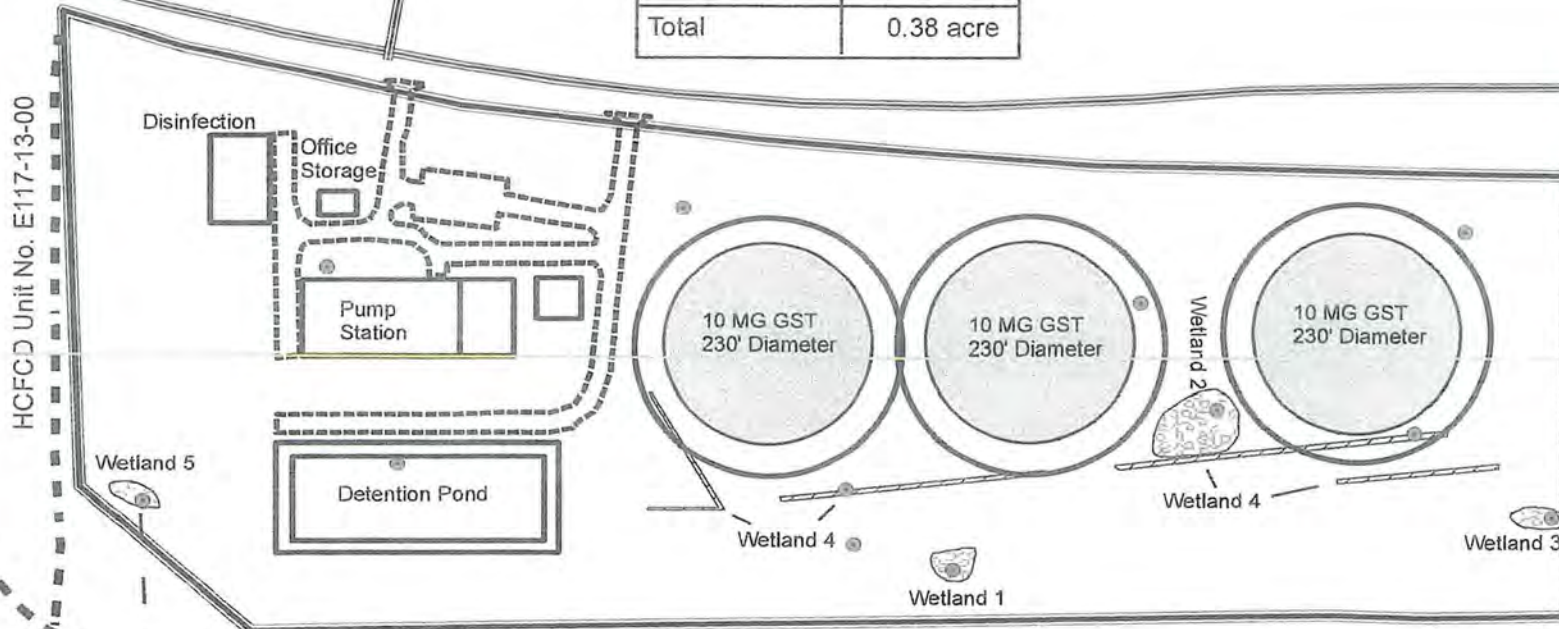
SWG-2012-00503
West Harris County
Regional Water Authority
06/20/2012
Page 1 of 3

JUL 09 2012

Legend

-  Project Site
-  Data Point
-  Wetland Area
-  Drainage Depression Area
-  HCFC Channels

Impacted Wetland Areas	
Wetland Area	Area (acres)
Wetland 1	0.04
Wetland 2	0.08
Wetland 3	0.02
Wetland 4	0.22
Wetland 5	0.02
Total	0.38 acre



HCFC Unit No. E117-13-00

Fairbanks - N Houston

Little York

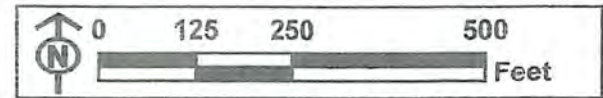
Approx. 235 linear feet from Wetland 5 to Cole Creek

Cole Creek

US 290

S 290

PERMITTED PLANS



DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: 250 ft
DATE	6/12/2012

Terracon
Consulting Engineers & Scientists

Terracon Project No. 92127206

Site Plan

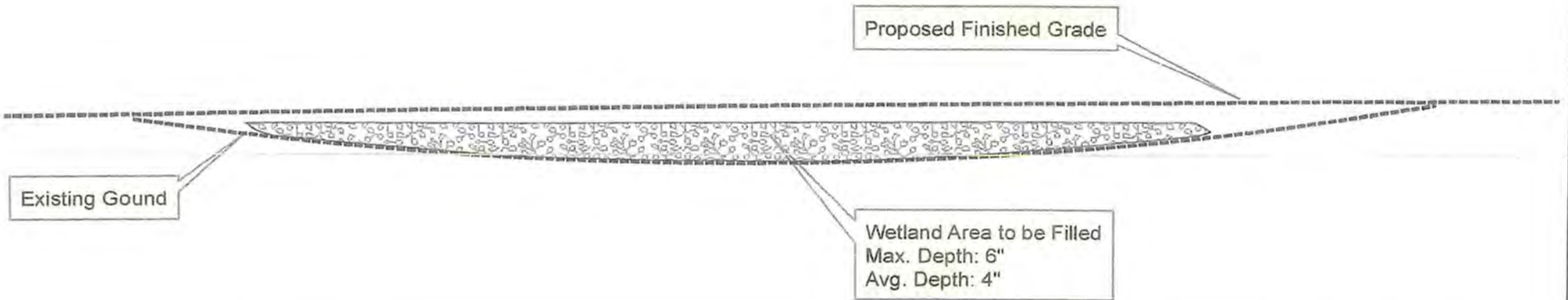
SWG-2012-00503
West Harris County
Regional Water Authority
Houston, Harris County, Te

06/20/2012
Page 2 of 3

Sources: WHCRWA, TXDOT

JUL 09 2012

Impacted Wetland Areas	
Wetland Area	Area (acres)
Wetland 1	0.04
Wetland 2	0.08
Wetland 3	0.02
Wetland 4	0.22
Wetland 5	0.02
Total	0.38 acre



PERMITTED PLANS

Sources: WHCRWA

DRAWN BY	CH
CHECKED BY	GH
SCALE	1 in: ~15 ft
DATE	6/12/2012

Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127206

Typical Cross Section
 SWG-2012-00503
 WHCRWA Re-Pump Station
 Houston, Harris County, Te

SWG-2012-00503
 West Harris County
 Regional Water Authority
 06/20/2012
 Page 3 of 3

Nationwide Permit General Conditions

The following general conditions must be followed in order for any authorization by an NWP to be valid:

1. **Navigation.**

- (a) No activity may cause more than a minimal adverse effect on navigation.
- (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
- (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the reconstruction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species.

- (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.
- (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.
- (c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.
- (d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species specific regional endangered species conditions to the NWPs.
- (e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.
- (f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any “take” permits required under the U.S. Fish and Wildlife Service’s regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such “take” permits are required for a particular activity.

20. Historic Properties.

(a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the preconstruction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete preconstruction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP's 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

- (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).
- (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.
- (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require preconstruction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.
 - (1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.
 - (2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.
 - (3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2)–(14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).
 - (4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

- (5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.
- (d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.
 - (e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.
 - (f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.
 - (g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.
 - (h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature: "When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

(Transferee)

(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

- (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;
- (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and
- (c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification.

(a) *Timing.* Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

- (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
- (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot

begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed project;
- (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);
- (4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;
- (5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
- (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) *Form of Pre-Construction Notification:* The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) *Agency Coordination:*

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWP's and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the preconstruction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWP's, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

- (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.
- (4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of preconstruction notifications to expedite agency coordination.

District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.
2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer

determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either:
 - (a) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit;
 - (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or
 - (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

**NATIONWIDE PERMIT (NWP) REGIONAL CONDITIONS
FOR THE STATE OF TEXAS**

The following regional conditions apply within the entire State of Texas:

1. Compensatory mitigation is required at a minimum one-for-one ratio for all special aquatic site losses that exceed 1/10 acre and require pre-construction notification (PCN), and for all losses to streams that exceed 300 linear feet and require PCN, unless the appropriate District Engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement.

2. For all discharges proposed for authorization under nationwide permits (NWP) 3, 6, 7, 12, 14, 18, 19, 25, 27, 29, 39, 40, 41, 42, 43, 44, 51, and 52, into the following habitat types or specific areas, the applicant shall notify the appropriate District Engineer in accordance with the NWP General Condition 31, Pre-Construction Notification (PCN). The Corps of Engineers (Corps), except for the Tulsa District, will coordinate with the resource agencies as specified in NWP General Condition 31(d) (PCN). The habitat types or areas are:
 - a. Pitcher Plant Bogs: Wetlands typically characterized by an organic surface soil layer and include vegetation such as pitcher plants (Sarracenia sp.), sundews (Drosera sp.), and sphagnum moss (Sphagnum sp.).

 - b. Bald Cypress-Tupelo Swamps: Wetlands comprised predominantly of bald cypress trees (Taxodium distichum), and water tupelo trees (Nyssa aquatica), that are occasionally or regularly flooded by fresh water. Common associates include red maple (Acer rubrum), swamp privet (Forestiera acuminata), green ash (Fraxinus pennsylvanica) and water elm (Planera aquatica). Associated herbaceous species include lizard's tail (Saururus cernuus), water mermaid weed (Proserpinaca spp.), buttonbush (Cephalanthus occidentalis) and smartweed (Polygonum spp.). (Eyre, F. H. Forest Cover Types of the United States and Canada. 1980. Society of American Foresters, 5400 Grosvenor Lane, Bethesda, Maryland 20814-2198. Library of Congress Catalog Card No. 80-54185)

3. For all activities proposed for authorization under NWP 12 that involve a discharge of fill material associated with mechanized land clearing in a forested wetland, the applicant shall notify the appropriate District Engineer in accordance with the NWP General Condition 31 (Pre-Construction Notification) prior to commencing the activity.

4. For all activities proposed for authorization under NWP 16, the applicant shall notify the appropriate District Engineer in accordance with the NWP General Condition 31 (Pre-Construction Notification), and work cannot begin under NWP 16 until the applicant has received written approval from the Corps.

The following regional conditions apply only within the Fort Worth District in the State of Texas:

5. For all discharges proposed for authorization under all NWPs, into the area of Caddo Lake within Texas that is designated as a “Wetland of International Importance” under the Ramsar Convention, the applicant shall notify the Fort Worth District Engineer in accordance with the NWP General Condition 31. The Corps will coordinate with the resource agencies as specified in NWP General Condition 31(d) (Pre-Construction Notification).
6. For all discharges proposed for authorization under NWP 43 that occur in forested wetlands, the applicant shall notify the Fort Worth District Engineer in accordance with the General Condition 31 (Pre-Construction Notification).
7. For all discharges proposed for authorization under any nationwide permit in Dallas, Denton, and Tarrant Counties that are within the study area of the “Final Regional Environmental Impact Statement (EIS), Trinity River and Tributaries” (May 1986), the applicant shall meet the criteria and follow the guidelines specified in Section III of the Record of Decision for the Regional EIS, including the hydraulic impact requirements. A copy of these guidelines is available upon request from the Fort Worth District and at the District website www.swf.usace.army.mil (select “Permits”).
8. Federal Projects. The applicant shall notify the Fort Worth District Engineer in accordance with the NWP General Condition 31, Pre-Construction Notification (PCN) for any regulated activity where the applicant is proposing work that would result in the modification or alteration of any completed Corps of Engineer projects that are either locally or federally maintained and for work that would occur within the conservation pool or flowage easement of any Corps of Engineers lake project. PCN's cannot be deemed complete until such time as the Corps has made a determination relative to 33 USC Section 408, 33 CFR Part 208, Section 208.10, 33 CFR Part 320, Section 320.4.
9. Invasive and Exotic Species. Best management practices are required where practicable to reduce the risk of transferring invasive plant and animal species to or from project sites. Information concerning state specific lists and threats can be found at: <http://www.invasivespeciesinfo.gov/unitedstates/tx.shtml>. Best management practices can be found at: <http://www.invasivespeciesinfo.gov/toolkit/prevention.shtml>. Known zebra mussel waters within can be found at: <http://nas.er.usgs.gov/queries/zmbyst.asp>.
10. For all discharges proposed for authorization under NWPs 51 and 52, the Corps will provide the PCN to the US Fish and Wildlife Service as specified in NWP General Condition 31(d)(2) for its review and comments.

The following regional conditions apply only within the Galveston District in the State of Texas:

11. Nationwide permit (NWP) 12 shall not be used to authorize discharges within 500 feet of vegetated shallows and coral reefs; as defined by 40 CFR 230.43 and 230.44 respectfully. Examples include, but not limited to: seagrass beds, oyster reefs, and coral reefs.

12. For all 3-D seismic testing activities proposed for authorization under NWP 6, the applicant shall notify the Galveston District Engineer in accordance with the NWP General Condition 31 (Pre-Construction Notification). The pre-construction notification must state the time period for which the temporary fill is proposed, and must include a restoration plan for the special aquatic sites. 3-D seismic testing will not be authorized under NWP 6 within the Cowardin Marine System, Subtidal Subsystem; as defined by the U.S. Fish and Wildlife, Classification of Wetlands and Deepwater Habitats of the United States, December 1979/Reprinted 1992.

13. All NWPs, except NWP 3, shall not be used to authorize discharges into mangrove marshes. Mangrove marshes are dominated by mangroves (Avicennia sp. and Rhizophora sp.). (Preliminary Guide to Wetlands of the Gulf Coastal Plain. 1978. Technical Report - U.S. Army Engineer Waterways Experiment Station: Y-78-5. P.O. Box 631, Vicksburg, Miss. 39180.)

14. All NWPs, except NWP 3, shall not be used to authorize discharges into the following waters of the United States within the coastal zone of Texas: Coastal Dune Swales, "wetlands and other waters of the United States that are formed as depressions within and among multiple beach ridge barriers, dune complexes, or dune areas adjacent to beaches fronting the tidal waters of the Gulf of Mexico and adjacent to the tidal waters of bays and estuaries. Coastal dune swales are generally comprised either of impermeable muds that act as reservoirs which collect precipitation or of groundwater nourished wetlands in sandy soils. As such, they generally have a high fresh to brackish water table. Vegetation species characteristically found in coastal dune swales include but are not limited to marshhay cordgrass (Spartina patens), gulfdune paspalum (Paspalum monostachyum), bulrush (Scirpus spp.), seashore paspalum (Paspalum vaginatum), common reed (Phragmites australis), groundsel bush (Baccharis halimifolia), rattlebush (Sesbania drummondii), camphor weed (Pluchea camphorata), smartweed (Polygonum spp.), water hyssop (Bacopa monnieri), cattail (Typha spp.), umbrella sedge (Cyperus spp.), softrush (Juncus spp.), sedge (Carex spp.), beakrush (Rhynchospora spp.), frog-fruit (Phyla spp.), duckweed (Lemna spp.), buttonweed (Diodia virginiana), mist flower (Eupatorium coelestinum), creeping spotflower (Acmella oppositifolia var. repens), pennywort (Hydrocotyle spp.), and bushy bluestem (Andropogon glomeratus).” (U.S. Fish and Wildlife Service, Houston, Texas, and the Texas General Land Office, Austin, Texas).

15. For all discharges and work proposed in tidal waters under NWPs 14 and 18 the applicant shall notify the Galveston District Engineer in accordance with the NWP General Condition 31 (Pre-Construction Notification). The Corps will coordinate with the National Marine Fisheries Service in accordance with NWP General Condition 31(d) (Pre-Construction Notification).

16. For all work in the San Jacinto River Waste Pits (SJWP) Area of Concern (AOC), authorized under a NWP, requires a waiver from the Galveston District Engineer. The applicant shall notify the Galveston District Engineer (DE) in accordance with the NWP General Condition 31, Pre-Construction Notification (PCN). This PCN shall be used to review the project to determine if it will result in more than minimal effects to the region, and does not lessen the restriction provided by any General Condition of the NWPs. The applicant must receive written approval, including a waiver from the Galveston DE prior to starting work in jurisdictional areas of waters of the United States.

17. The use of NWP 51 and 52 are administratively denied, within the Galveston District boundaries.

The following regional conditions apply only within the Albuquerque District in the State of Texas:

18. Nationwide Permit No. 23 – Approved Categorical Exclusions. Notification to the District Engineer in accordance with General Condition 31 (Pre-Construction Notification) is required for all proposed activities under nationwide permit 23.

19. Nationwide Permit No. 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities. For all proposed activities under Nationwide Permit 27 that require Pre-Construction Notification, a monitoring plan commensurate with the scale of the proposed restoration project and the potential for risk to the aquatic environment must be submitted to the Corps. (See “Guidelines for Nationwide Permit 27 Submittals” at <http://www.spa.usace.army.mil/reg/>).

20. Nationwide Permits No. 29 - Residential Developments, and No. 39 – Commercial and Institutional Developments. These permits do not authorize channelization or relocation of any intermittent or perennial water course regardless of size or rate of flow, except when, as determined by the Albuquerque District, the proposed channelization would impact a previously channelized stream reach, or the relocation would result in a net increase in functions of the aquatic ecosystem within the watershed.

21. Activities in Special Aquatic Sites, Including Wetlands. Notification to the District Engineer in accordance with General Condition 31 (Pre-Construction Notification) is required for all proposed impacts that exceed 1/10 acre in special aquatic sites, including wetlands.

22. Activities in Intermittent and Perennial Streams. Notification to the District Engineer in accordance with General Condition 31 (Pre-Construction Notification) is required for all proposed activities that involve fills greater than 1/10 acre in perennial or intermittent streams and is not covered by other notification requirements.

23. Springs. All nationwide permits require preconstruction notification pursuant to General Condition 31 for discharges of dredged or fill material within 100 feet of the point of groundwater discharge of natural springs. A spring source is defined as any location where ground water emanates from a point in the ground and a jurisdictional nexus to another water of the United States. For purposes of this regional condition, springs do not include seeps or other discharges which lack a jurisdictional nexus to another water of the United States.

24. Suitable Fill. Use of broken concrete or used tires formed into bales as fill or bank stabilization material requires notification to the District Engineer in accordance with General Condition 31 (Pre-Construction Notification). Applicants must demonstrate that soft engineering methods utilizing native or non-manmade materials are not practicable (with respect to environment, cost, existing technology, and logistics), before broken concrete or used tires as bales are allowed as suitable fill.



Attachment 1

Conditions of Section 401 Certification for Nationwide Permits and General Conditions

General Condition 12 (Soil Erosion and Sediment Controls)

Erosion control and sediment control BMPs described in Attachment 2 are required with the use of this general condition. If the applicant does not choose one of the BMPs listed in Attachment 2, an individual 401 certification is required.

General Condition 25 (Water Quality)

Post-construction total suspended solids (TSS) BMPs described in Attachment 2 are required with the use of this general condition. If the applicant does not choose one of the BMP's listed in Attachment 2, an individual 401 certification is required. Bridge deck runoff is exempt from this requirement.

General Condition 23 (Mitigation)

The U.S. Army Corps of Engineers will copy the TCEQ on all mitigation waivers sent to applicants.

NWPs 13, 29, 39, 40, 41, 42, 43, 44, 50, 51, 52

The U.S. Army Corps of Engineers will copy the TCEQ on all written approvals of waivers for impacts to ephemeral, intermittent or perennial streams.

All NWPs except for NWP 3

These NWPs are not authorized for use in coastal dune swales in Texas.

NWP 3 (Maintenance)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 6 (Survey Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 7 (Outfall Structures and Associated Intake Structures)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 12 (Utility Line Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 13 (Bank Stabilization)

Soil Erosion and Sediment Controls under General Condition 12 are required.



Attachment 1

Conditions of Section 401 Certification for Nationwide Permits and General Conditions

NWP 14 (Linear Transportation Projects)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 15 (U.S. Coast Guard Approved Bridges)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 16 (Return Water From Upland Contained Disposal Areas)

Activities that would be regulated under Standard Industrial Classification (SIC) codes 1442 and 1446 (industrial and construction sand and gravel mining) are not eligible for this NWP. Effluent from an upland contained disposal area shall not exceed a TSS concentration of 300 mg/L unless a site-specific TSS limit, or a site specific correlation curve for turbidity (nephelometric turbidity units (NTU)) versus (TSS) has been approved by TCEQ.

NWP 17 (Hydropower Projects)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 18 (Minor Discharges)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 19 (Minor Dredging)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 21 (Surface Coal Mining Operations)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 22 (Removal of Vessels)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 25 (Structural Discharges)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 27 (Aquatic Habitat Restoration, Establishment, and Enhancement Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required.



Attachment 1

Conditions of Section 401 Certification for Nationwide Permits and General Conditions

NWP 29 (Residential Developments)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 30 (Moist Soil Management for Wildlife)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 31 (Maintenance of Existing Flood Control Facilities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 32 (Completed Enforcement Actions)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 33 (Temporary Construction, Access and Dewatering)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 36 (Boat Ramps)

The U.S. Army Corps of Engineers will copy the TCEQ on all written waivers for discharges greater than the 50 cubic yard limit or boat ramps greater than 20 feet in width. Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 37 (Emergency Watershed Protection and Rehabilitation)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 38 (Cleanup of Hazardous and Toxic Waste)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 39 (Commercial and Institutional Developments)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 40 (Agricultural Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.



Attachment 1

Conditions of Section 401 Certification for Nationwide Permits and General Conditions

NWP 41 (Reshaping Existing Drainage Ditches)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 42 (Recreational Facilities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 43 (Stormwater Management Facilities)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 44 (Mining Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 45 (Repair of Uplands Damaged by Discrete Events)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 46 (Discharges in Ditches)

Soil Erosion and Sediment Controls under General Condition 12 are required.

NWP 49 (Coal Remining Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 50 (Underground Coal Mining Activities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 51 (Land-Based Renewal Energy Generation Facilities)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.

NWP 52 (Water-Based Renewal Energy Generation Pilot Projects)

Soil Erosion and Sediment Controls under General Condition 12 are required. Post-construction TSS controls under General Condition 25 are required.



Attachment 2 401 Water Quality Certification Best Management Practices (BMPs) for Nationwide Permits

Below are the 401 water quality certification conditions the Texas Commission on Environmental Quality (TCEQ) added to the February 21, 2012 issuance of Nationwide Permits (NWP), as described in the Federal Register (Vol. 77, No. 34, pages 10184-10290).

Additional information regarding these conditions, including descriptions of the best management practices (BMPs), can be obtained from the TCEQ by contacting the 401 Coordinator, MC-150, P.O. Box 13087, Austin, Texas 78711-3087 or from the appropriate U.S. Army Corps of Engineers district office.

I. Erosion Control

Disturbed areas must be stabilized to prevent the introduction of sediment to adjacent wetlands or water bodies during wet weather conditions (erosion). *At least one* of the following BMPs must be maintained and remain in place until the area has been stabilized for NWPs 3, 6, 7, 12, 13, 14, 15, 17, 18, 19, 21, 22, 25, 27, 29, 30, 31, 32, 33, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, and 52. If the applicant does not choose one of the BMPs listed, an individual 401 certification is required. BMPs for NWP 52 apply only to land-based impacts from attendant features.

- o Temporary Vegetation
- o Blankets/Matting
- o Mulch
- o Sod
- o Interceptor Swale
- o Diversion Dike
- o Erosion Control Compost
- o Mulch Filter Socks
- o Compost Filter Socks

II. Sedimentation Control

Prior to project initiation, the project area must be isolated from adjacent wetlands and water bodies by the use of BMPs to confine sediment. Dredged material shall be placed in such a manner that prevents sediment runoff into water in the state, including wetlands. Water bodies can be isolated by the use of one or more of the required BMPs identified for sedimentation control. These BMPs must be maintained and remain in place until the dredged material is stabilized. *At least one* of the following BMPs must be maintained and remain in place until the area has been stabilized for NWPs 3, 6, 7, 12, 13, 14, 15, 17, 18, 19, 21, 22, 25, 27, 29, 30, 31, 32, 33, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 49, 50, 51, and 52. If the applicant does not choose one of the BMPs listed, an individual 401 certification is required. BMPs for NWP 52 apply only to land-based impacts from attendant features.

- o Sand Bag Berm
- o Rock Berm
- o Silt Fence
- o Hay Bale Dike



Attachment 2
401 Water Quality Certification Best Management Practices (BMPs) for Nationwide Permits

- o Triangular Filter Dike
- o Stone Outlet Sediment Traps
- o Erosion Control Compost
- o Compost Filter Socks
- o Brush Berms
- o Sediment Basins
- o Mulch Filter Socks

III. Post-Construction TSS Control

After construction has been completed and the site is stabilized, total suspended solids (TSS) loadings shall be controlled by *at least one* of the following BMPs for NWP 12, 14, 17, 18, 21, 29, 31, 36, 39, 40, 41, 42, 44, 45, 49, 50, 51, and 52. If the applicant does not choose one of the BMPs listed, an individual 401 certification is required. BMPs for NWP 52 apply only to land-based impacts from attendant features. Runoff from bridge decks has been exempted from the requirement for post construction TSS controls.

- o Retention/Irrigation Systems
- o Extended Detention Basin
- o Vegetative Filter Strips
- o Grassy Swales
- o Erosion Control Compost
- o Compost Filter Socks
- o Constructed Wetlands
- o Wet Basins
- o Vegetation lined drainage ditches
- o Sand Filter Systems
- o Mulch Filter Socks
- o Sedimentation Chambers*

* Only to be used when there is no space available for other approved BMPs.

IV. NWP 16: Return Water from Upland Contained Disposal Areas

Effluent from an upland contained disposal area shall not exceed a TSS concentration of 300 mg/L unless a site-specific TSS limit, or a site specific correlation curve for turbidity (nephelometric turbidity units (NTU)) versus (TSS) has been approved by TCEQ.

V. NWP 29, 39, 40, 42, 43, 44, 50, 51, and 52

The Corps will copy the TCEQ on all authorizations for impacts of greater than 300 linear feet of intermittent and ephemeral streams.



Attachment 2
401 Water Quality Certification Best Management Practices (BMPs) for Nationwide Permits

VI. NWP 13 and 41

The Corps will copy the TCEQ on all authorizations for impacts greater than 500 linear feet in length of ephemeral, intermittent, perennial streams or drainage ditches.

VII. NWP 36

The Corps will copy the TCEQ on all authorizations for discharges greater than the 50 cubic yard limit or boat ramps greater than 20 feet in width.

VIII. All NWPs except NWP 3

These NWPs are not authorized for use in coastal dune swales in Texas.



Attachment 3
Reference to Nationwide Permits Best Management Practices Requirements

NWP	Permit Description	Erosion Control	Sediment Control	Post Construction TSS
1	Aid to Navigation			
2	Structures in Artificial Canals			
3	Maintenance	X	X	
4	Fish and Wildlife Harvesting, Enhancement and Attraction Devices and Activities			
5	Scientific Measurement Devices			
6	Survey Activities *Trenching	X	X	
7	Outfall Structures and Associated Intake Structures	X	X	
8	Oil and Gas Structures on the Outer Continental Shelf			
9	Structures in Fleeting and Anchorage Areas			
10	Mooring Buoys			
11	Temporary Recreational Structures			
12	Utility Line Activities	X	X	X
13	Bank Stabilization	X	X	
14	Linear Transportation Projects	X	X	X
15	U.S. Coast Guard Approved Bridges	X	X	
16	Return Water From Upland Contained Disposal Areas			
17	Hydropower Projects	X	X	X
18	Minor Discharges	X	X	X
19	Minor Dredging	X	X	
20	Response Operations for Oil and Hazardous Substances			
21	Surface Coal Mining Operations	X	X	X
22	Removal of Vessels	X	X	



Attachment 3
Reference to Nationwide Permits Best Management Practices Requirements

NWP	Permit Description	Erosion Control	Sediment Control	Post Construction TSS
23	Approved Categorical Exclusions			
24	Indian Tribe or State Administered Section 404 Programs			
25	Structural Discharges	X	X	
26	[Reserved]			
27	Aquatic Habitat Restoration, Establishment, and Enhancement Activities	X	X	
28	Modifications of Existing Marinas			
29	Residential Developments	X	X	X
30	Moist Soil Management for Wildlife	X	X	
31	Maintenance of Existing Flood Control Facilities	X	X	X
32	Completed Enforcement Actions	X	X	
33	Temporary Construction, Access and Dewatering	X	X	
34	Cranberry Production Activities			
35	Maintenance Dredging of Existing Basins			
36	Boat Ramps	X	X	X
37	Emergency Watershed Protection and Rehabilitation	X	X	
38	Cleanup of Hazardous and Toxic Waste	X	X	
39	Commercial and Institutional Developments	X	X	X
40	Agricultural Activities	X	X	X
41	Reshaping Existing Drainage Ditches	X	X	X
42	Recreational Facilities	X	X	X
43	Stormwater Management Facilities	X	X	
44	Mining Activities	X	X	X



Attachment 3
Reference to Nationwide Permits Best Management Practices Requirements

NWP	Permit Description	Erosion Control	Sediment Control	Post Construction TSS
45.	Repair of Uplands Damaged by Discrete Events	X	X	X
46.	Discharges in Ditches	X	X	
47.	[Reserved]			
48.	Existing Commercial Shellfish Aquaculture Activities			
49.	Coal Remining Activities	X	X	X
50.	Underground Coal Mining Activities	X	X	X
51.	Land-Based Renewable Energy Generation Facilities	X	X	X
52.	Water-Based Renewable Energy Generation Pilot Projects	X	X	X



Attachment 4 **Description of BMPs**

EROSION CONTROL BMPs

Temporary Vegetation

Description: Vegetation can be used as a temporary or permanent stabilization technique for areas disturbed by construction. Vegetation effectively reduces erosion in swales, stockpiles, berms, mild to medium slopes, and along roadways. Other techniques such as matting, mulches, and grading may be required to assist in the establishment of vegetation.

Materials:

- The type of temporary vegetation used on a site is a function of the season and the availability of water for irrigation.
- Temporary vegetation should be selected appropriately for the area.
- County agricultural extension agents are a good source for suggestions for temporary vegetation.
- All seed should be high quality, U.S. Dept. of Agriculture certified seed.

Installation:

- Grading must be completed prior to seeding.
- Slopes should be minimized.
- Erosion control structures should be installed.
- Seedbeds should be well pulverized, loose, and uniform.
- Fertilizers should be applied at appropriate rates.
- Seeding rates should be applied as recommended by the county agricultural extension agent.
- The seed should be applied uniformly.
- Steep slopes should be covered with appropriate soil stabilization matting.

Blankets and Matting

Description: Blankets and matting material can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are in channels, interceptor swales, diversion dikes, short, steep slopes, and on tidal or stream banks.



Attachment 4 **Description of BMPs**

Materials:

New types of blankets and matting materials are continuously being developed. The Texas Department of Transportation (TxDOT) has defined the critical performance factors for these types of products and has established minimum performance standards which must be met for any product seeking to be approved for use within any of TxDOT's construction or maintenance activities. The products that have been approved by TxDOT are also appropriate for general construction site stabilization. TxDOT maintains a web site at http://www.txdot.gov/business/doing_business/product_evaluation/erosion_control.htm which is updated as new products are evaluated.

Installation:

- Install in accordance with the manufacturer's recommendations.
- Proper anchoring of the material.
- Prepare a friable seed bed relatively free from clods and rocks and any foreign material.
- Fertilize and seed in accordance with seeding or other type of planting plan.
- Erosion stops should extend beyond the channel liner to full design cross-section of the channel.
- A uniform trench perpendicular to line of flow may be dug with a spade or a mechanical trencher.
- Erosion stops should be deep enough to penetrate solid material or below level of ruling in sandy soils.
- Erosion stop mats should be wide enough to allow turnover at bottom of trench for stapling, while maintaining the top edge flush with channel surface.

Mulch

Description: Mulching is the process of applying a material to the exposed soil surface to protect it from erosive forces and to conserve soil moisture until plants can become established. When seeding critical sites, sites with adverse soil conditions or seeding on other than optimum seeding dates, mulch material should be applied immediately after seeding. Seeding during optimum seeding dates and with favorable soils and site conditions will not need to be mulched.

Materials:

- Mulch may be small grain straw which should be applied uniformly.
- On slopes 15 percent or greater, a binding chemical must be applied to the surface.



Attachment 4 **Description of BMPs**

- Wood-fiber or paper-fiber mulch may be applied by hydroseeding.
- Mulch nettings may be used.
- Wood chips may be used where appropriate.

Installation:

Mulch anchoring should be accomplished immediately after mulch placement. This may be done by one of the following methods: peg and twine, mulch netting, mulch anchoring tool, or liquid mulch binders.

Sod

Description: Sod is appropriate for disturbed areas which require immediate vegetative covers, or where sodding is preferred to other means of grass establishment. Locations particularly suited to stabilization with sod are waterways carrying intermittent flow, areas around drop inlets or in grassed swales, and residential or commercial lawns where quick use or aesthetics are factors. Sod is composed of living plants and those plants must receive adequate care in order to provide vegetative stabilization on a disturbed area.

Materials:

- Sod should be machine cut at a uniform soil thickness.
- Pieces of sod should be cut to the supplier's standard width and length.
- Torn or uneven pads are not acceptable.
- Sections of sod should be strong enough to support their own weight and retain their size and shape when suspended from a firm grasp.
- Sod should be harvested, delivered, and installed within a period of 36 hours.

Installation:

- Areas to be sodded should be brought to final grade.
- The surface should be cleared of all trash and debris.
- Fertilize according to soil tests.
- Fertilizer should be worked into the soil.
- Sod should not be cut or laid in excessively wet or dry weather.



Attachment 4 **Description of BMPs**

- Sod should not be laid on soil surfaces that are frozen.
- During periods of high temperature, the soil should be lightly irrigated.
- The first row of sod should be laid in a straight line with subsequent rows placed parallel to and butting tightly against each other.
- Lateral joints should be staggered to promote more uniform growth and strength.
- Wherever erosion may be a problem, sod should be laid with staggered joints and secured.
- Sod should be installed with the length perpendicular to the slope (on the contour).
- Sod should be rolled or tamped.
- Sod should be irrigated to a sufficient depth.
- Watering should be performed as often as necessary to maintain soil moisture.
- The first mowing should not be attempted until the sod is firmly rooted.
- Not more than one third of the grass leaf should be removed at any one cutting.

Interceptor Swale

Interceptor swales are used to shorten the length of exposed slope by intercepting runoff, prevent off-site runoff from entering the disturbed area, and prevent sediment-laden runoff from leaving a disturbed site. They may have a v-shape or be trapezoidal with a flat bottom and side slopes of 3:1 or flatter. The outflow from a swale should be directed to a stabilized outlet or sediment trapping device. The swales should remain in place until the disturbed area is permanently stabilized.

Materials:

- Stabilization should consist of a layer of crushed stone three inches thick, riprap or high velocity erosion control mats.
- Stone stabilization should be used when grades exceed 2% or velocities exceed 6 feet per second.
- Stabilization should extend across the bottom of the swale and up both sides of the channel to a minimum height of three inches above the design water surface elevation based on a 2-year, 24-hour storm.



Attachment 4 **Description of BMPs**

Installation:

- An interceptor swale should be installed across exposed slopes during construction and should intercept no more than 5 acres of runoff.
- All earth removed and not needed in construction should be disposed of in an approved spoils site so that it will not interfere with the functioning of the swale or contribute to siltation in other areas of the site.
- All trees, brush, stumps, obstructions and other material should be removed and disposed of so as not to interfere with the proper functioning of the swale.
- Swales should have a maximum depth of 1.5 feet with side slopes of 3:1 or flatter. Swales should have positive drainage for the entire length to an outlet.
- When the slope exceeds 2 percent, or velocities exceed 6 feet per second (regardless of slope), stabilization is required. Stabilization should be crushed stone placed in a layer of at least 3 inches thick or may be high velocity erosion control matting. Check dams are also recommended to reduce velocities in the swales possibly reducing the amount of stabilization necessary.
- Minimum compaction for the swale should be 90% standard proctor density.

Diversion Dikes

A temporary diversion dike is a barrier created by the placement of an earthen embankment to reroute the flow of runoff to an erosion control device or away from an open, easily erodible area. A diversion dike intercepts runoff from small upland areas and diverts it away from exposed slopes to a stabilized outlet, such as a rock berm, sandbag berm, or stone outlet structure. These controls can be used on the perimeter of the site to prevent runoff from entering the construction area. Dikes are generally used for the duration of construction to intercept and reroute runoff from disturbed areas to prevent excessive erosion until permanent drainage features are installed and/or slopes are stabilized.

Materials:

- Stone stabilization (required for velocities in excess of 6 fps) should consist of riprap placed in a layer at least 3 inches thick and should extend a minimum height of 3 inches above the design water surface up the existing slope and the upstream face of the dike.
- Geotextile fabric should be a non-woven polypropylene fabric designed specifically for use as a soil filtration media with an approximate weight of 6 oz./yd², a Mullen burst rating of 140 psi, and having an equivalent opening size (EOS) greater than a #50 sieve.

Installation:

- Diversion dikes should be installed prior to and maintained for the duration of construction and should intercept no more than 10 acres of runoff.



Attachment 4 **Description of BMPs**

- Dikes should have a minimum top width of 2 feet and a minimum height of compacted fill of 18 inches measured from the top of the existing ground at the upslope toe to top of the dike and have side slopes of 3:1 or flatter.
- The soil for the dike should be placed in lifts of 8 inches or less and be compacted to 95 % standard proctor density.
- The channel, which is formed by the dike, must have positive drainage for its entire length to an outlet.
- When the slope exceeds 2 percent, or velocities exceed 6 feet per second (regardless of slope), stabilization is required. In situations where velocities do not exceed 6 feet per second, vegetation may be used to control erosion.

Erosion Control Compost

Description: Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.

Materials:

New types of erosion control compost are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Material used within any TxDOT construction or maintenance activities must meet material specifications in accordance with current TxDOT specifications. TxDOT maintains a website at http://www.txdot.gov/business/contractors_consultants/recycling/compost.htm that provides information on compost specification data.

ECC used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used as an ECC, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission (now named TCEQ) Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on



Attachment 4 **Description of BMPs**

compost products used for ECC to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC. TMECC information can be found at <http://www.tmecc.org/tmecc/index.html>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at http://tmecc.org/sta/STA_program_description.html.

Installation:

- Install in accordance with current TxDOT specification.
- Use on slopes 3:1 or flatter.
- Apply a 2 inch uniform layer unless otherwise shown on the plans or as directed.
- When rolling is specified, use a light corrugated drum roller.

Mulch and Compost Filter Socks

Description: Mulch and compost filter socks (erosion control logs) are used to intercept and detain sediment laden run-off from unprotected areas. When properly used, mulch and compost filter socks can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. Mulch and compost filter socks are used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. The sock should remain in place until the area is permanently stabilized. Mulch and compost filter socks may be installed in construction areas and temporarily moved during the day to allow construction activity provided it is replaced and properly anchored at the end of the day. Mulch and compost filter socks may be seeded to allow for quick vegetative growth and reduction in run-off velocity.

Materials:

New types of mulch and compost filter socks are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Mulch and compost filter socks used within any TxDOT construction or maintenance activities must meet material specifications in accordance with TxDOT specification 5049. TxDOT maintains a website at http://www.txdot.gov/business/contractors_consultants/recycling/compost.htm that provides information on compost specification data.



Attachment 4

Description of BMPs

Mulch and compost filter socks used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used for mulch and compost filter socks, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for mulch and compost filter socks to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC. TMECC information can be found at <http://www.tmecc.org/tmecc/index.html>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at http://tmecc.org/sta/STA_program_description.html.

Installation:

- Install in accordance with TxDOT Special Specification 5049.
- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.
- Inspect and maintain the socks in good condition (including staking, anchoring, etc.). Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.



Attachment 4 **Description of BMPs**

SEDIMENT CONTROL BMPS

Sand Bag Berm

Description: The purpose of a sandbag berm is to detain sediment carried in runoff from disturbed areas. This objective is accomplished by intercepting runoff and causing it to pool behind the sand bag berm. Sediment carried in the runoff is deposited on the upstream side of the sand bag berm due to the reduced flow velocity. Excess runoff volumes are allowed to flow over the top of the sand bag berm. Sand bag berms are used only during construction activities in streambeds when the contributing drainage area is between 5 and 10 acres and the slope is less than 15%, i.e., utility construction in channels, temporary channel crossing for construction equipment, etc. Plastic facing should be installed on the upstream side and the berm should be anchored to the streambed by drilling into the rock and driving in "T" posts or rebar (#5 or #6) spaced appropriately.

Materials:

- The sand bag material should be polypropylene, polyethylene, polyamide or cotton burlap woven fabric, minimum unit weight 4 oz/yd², mullen burst strength exceeding 300 psi and ultraviolet stability exceeding 70 percent.
- The bag length should be 24 to 30 inches, width should be 16 to 18 inches and thickness should be 6 to 8 inches.
- Sandbags should be filled with coarse grade sand and free from deleterious material. All sand should pass through a No. 10 sieve. The filled bag should have an approximate weight of 40 pounds.
- Outlet pipe should be schedule 40 or stronger polyvinyl chloride (PVC) having a nominal internal diameter of 4 inches.

Installation:

- The berm should be a minimum height of 18 inches, measured from the top of the existing ground at the upslope toe to the top of the berm.
- The berm should be sized as shown in the plans but should have a minimum width of 48 inches measured at the bottom of the berm and 16 inches measured at the top of the berm.
- Runoff water should flow over the tops of the sandbags or through 4-inch diameter PVC pipes embedded below the top layer of bags.
- When a sandbag is filled with material, the open end of the sandbag should be stapled or tied with nylon or poly cord.
- Sandbags should be stacked in at least three rows abutting each other, and in staggered arrangement.



Attachment 4 **Description of BMPs**

- The base of the berm should have at least 3 sandbags. These can be reduced to 2 and 1 bag in the second and third rows respectively.
- For each additional 6 inches of height, an additional sandbag must be added to each row width.
- A bypass pump-around system, or similar alternative, should be used on conjunction with the berm for effective dewatering of the work area.

Silt Fence

Description: A silt fence is a barrier consisting of geotextile fabric supported by metal posts to prevent soil and sediment loss from a site. When properly used, silt fences can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. If not properly installed, silt fences are not likely to be effective. The purpose of a silt fence is to intercept and detain water-borne sediment from unprotected areas of a limited extent. Silt fence is used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. This fence should remain in place until the disturbed area is permanently stabilized. Silt fence should not be used where there is a concentration of water in a channel or drainage way. If concentrated flow occurs after installation, corrective action must be taken such as placing a rock berm in the areas of concentrated flow. Silt fencing within the site may be temporarily moved during the day to allow construction activity provided it is replaced and properly anchored to the ground at the end of the day. Silt fences on the perimeter of the site or around drainage ways should not be moved at any time.

Materials:

- Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in², ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Y-bar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/ft², and Brindell hardness exceeding 140.
- Woven wire backing to support the fabric should be galvanized 2" x 4" welded wire, 12 gauge minimum.

Installation:

- Steel posts, which support the silt fence, should be installed on a slight angle toward the anticipated runoff source. Post must be embedded a minimum of 1 foot deep and spaced not more than 8 feet on center. Where water concentrates, the maximum spacing should be 6 feet.
- Lay out fencing down-slope of disturbed area, following the contour as closely as possible. The



Attachment 4

Description of BMPs

fence should be sited so that the maximum drainage area is ¼ acre/100 feet of fence.

- The toe of the silt fence should be trenched in with a spade or mechanical trencher, so that the down-slope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g., pavement or rock outcrop), weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence.
- The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.
- Silt fence should be securely fastened to each steel support post or to woven wire, which is in turn attached to the steel fence post. There should be a 3-foot overlap, securely fastened where ends of fabric meet.

Triangular Filter Dike

Description: The purpose of a triangular sediment filter dike is to intercept and detain water-borne sediment from unprotected areas of limited extent. The triangular sediment filter dike is used where there is no concentration of water in a channel or other drainage way above the barrier and the contributing drainage area is less than one acre. If the uphill slope above the dike exceeds 10%, the length of the slope above the dike should be less than 50 feet. If concentrated flow occurs after installation, corrective action should be taken such as placing rock berm in the areas of concentrated flow. This measure is effective on paved areas where installation of silt fence is not possible or where vehicle access must be maintained. The advantage of these controls is the ease with which they can be moved to allow vehicle traffic and then reinstalled to maintain sediment

Materials:

- Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in², ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No. 30.
- The dike structure should be 6 gauge 6" x 6" wire mesh folded into triangular form being eighteen (18) inches on each side.

Installation:

- The frame of the triangular sediment filter dike should be constructed of 6" x 6", 6 gauge welded wire mesh, 18 inches per side, and wrapped with geotextile fabric the same composition as that used for silt fences.
- Filter material should lap over ends six (6) inches to cover dike to dike junction; each junction should be secured by shoat rings.
- Position dike parallel to the contours, with the end of each section closely abutting the adjacent



Attachment 4 **Description of BMPs**

sections.

- There are several options for fastening the filter dike to the ground. The fabric skirt may be toed-in with 6 inches of compacted material, or 12 inches of the fabric skirt should extend uphill and be secured with a minimum of 3 inches of open graded rock, or with staples or nails. If these two options are not feasible the dike structure may be trenched in 4 inches.
- Triangular sediment filter dikes should be installed across exposed slopes during construction with ends of the dike tied into existing grades to prevent failure and should intercept no more than one acre of runoff.
- When moved to allow vehicular access, the dikes should be reinstalled as soon as possible, but always at the end of the workday.

Rock Berm

Description: The purpose of a rock berm is to serve as a check dam in areas of concentrated flow, to intercept sediment-laden runoff, detain the sediment and release the water in sheet flow. The rock berm should be used when the contributing drainage area is less than 5 acres. Rock berms are used in areas where the volume of runoff is too great for a silt fence to contain. They are less effective for sediment removal than silt fences, particularly for fine particles, but are able to withstand higher flows than a silt fence. As such, rock berms are often used in areas of channel flows (ditches, gullies, etc.). Rock berms are most effective at reducing bed load in channels and should not be substituted for other erosion and sediment control measures further up the watershed.

Materials:

- The berm structure should be secured with a woven wire sheathing having maximum opening of 1 inch and a minimum wire diameter of 20 gauge galvanized and should be secured with shoit rings.
- Clean, open graded 3- to 5-inch diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5- to 8-inch diameter rocks may be used.

Installation:

- Lay out the woven wire sheathing perpendicular to the flow line. The sheathing should be 20 gauge woven wire mesh with 1 inch openings.
- Berm should have a top width of 2 feet minimum with side slopes being 2:1 (H:V) or flatter.
- Place the rock along the sheathing to a height not less than 18".
- Wrap the wire sheathing around the rock and secure with tie wire so that the ends of the sheathing overlap at least 2 inches, and the berm retains its shape when walked upon.



Attachment 4 **Description of BMPs**

- Berm should be built along the contour at zero percent grade or as near as possible.
- The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approximately 3 to 4 inches deep to prevent failure of the control.

Hay Bale Dike

Description: The purpose of a hay or straw bale dike is to intercept and detain small amounts of sediment-laden runoff from relatively small unprotected areas. Straw bales are to be used when it is not feasible to install other, more effective measures or when the construction phase is expected to last less than 3 months. Straw bales should not be used on areas where rock or other hard surfaces prevent the full and uniform anchoring of the barrier.

Materials:

Straw: The best quality straw mulch comes from wheat, oats or barley and should be free of weed and grass seed which may not be desired vegetation for the area to be protected. Straw mulch is light and therefore must be properly anchored to the ground.

Hay: This is very similar to straw with the exception that it is made of grasses and weeds and not grain stems. This form of mulch is very inexpensive and is widely available but does introduce weed and grass seed to the area. Like straw, hay is light and must be anchored.

- Straw bales should weigh a minimum of 50 pounds and should be at least 30 inches long.
- Bales should be composed entirely of vegetable matter and be free of seeds.
- Binding should be either wire or nylon string, jute or cotton binding is unacceptable. Bales should be used for not more than two months before being replaced.

Installation:

- Bales should be embedded a minimum of 4 inches and securely anchored using 2" x 2" wood stakes or 3/8" diameter rebar driven through the bales into the ground a minimum of 6 inches.
- Bales are to be placed directly adjacent to one another leaving no gap between them.
- All bales should be placed on the contour.
- The first stake in each bale should be angled toward the previously laid bale to force the bales together.

Brush Berms

Organic litter and spoil material from site clearing operations is usually burned or hauled away to



Attachment 4 **Description of BMPs**

be dumped elsewhere. Much of this material can be used effectively on the construction site itself. The key to constructing an efficient brush berm is in the method used to obtain and place the brush. It will not be acceptable to simply take a bulldozer and push whole trees into a pile. This method does not assure continuous ground contact with the berm and will allow uncontrolled flows under the berm.

Brush berms may be used where there is little or no concentration of water in a channel or other drainage way above the berm. The size of the drainage area should be no greater than one-fourth of an acre per 100 feet of barrier length; the maximum slope length behind the barrier should not exceed 100 feet; and the maximum slope gradient behind the barrier should be less than 50 percent (2:1).

Materials:

- The brush should consist of woody brush and branches, preferably less than 2 inches in diameter.
- The filter fabric should conform to the specifications for filter fence fabric.
- The rope should be ¼ inch polypropylene or nylon rope.
- The anchors should be 3/8-inch diameter rebar stakes that are 18-inches long.

Installation:

- Lay out the brush berm following the contour as closely as possible.
- The juniper limbs should be cut and hand placed with the vegetated part of the limb in close contact with the ground. Each subsequent branch should overlap the previous branch providing a shingle effect.
- The brush berm should be constructed in lifts with each layer extending the entire length of the berm before the next layer is started.
- A trench should be excavated 6-inches wide and 4-inches deep along the length of the barrier and immediately uphill from the barrier.
- The filter fabric should be cut into lengths sufficient to lay across the barrier from its up-slope base to just beyond its peak. The lengths of filter fabric should be draped across the width of the barrier with the uphill edge placed in the trench and the edges of adjacent pieces overlapping each other. Where joints are necessary, the fabric should be spliced together with a minimum 6-inch overlap and securely sealed.
- The trench should be backfilled and the soil compacted over the filter fabric.
- Set stakes into the ground along the downhill edge of the brush barrier, and anchor the fabric



Attachment 4 **Description of BMPs**

by tying rope from the fabric to the stakes. Drive the rope anchors into the ground at approximately a 45-degree angle to the ground on 6-foot centers.

- Fasten the rope to the anchors and tighten berm securely to the ground with a minimum tension of 50 pounds.
- The height of the brush berm should be a minimum of 24 inches after the securing ropes have been tightened.

Stone Outlet Sediment Traps

A stone outlet sediment trap is an impoundment created by the placement of an earthen and stone embankment to prevent soil and sediment loss from a site. The purpose of a sediment trap is to intercept sediment-laden runoff and trap the sediment in order to protect drainage ways, properties and rights of way below the sediment trap from sedimentation. A sediment trap is usually installed at points of discharge from disturbed areas. The drainage area for a sediment trap is recommended to be less than 5 acres.

Larger areas should be treated using a sediment basin. A sediment trap differs from a sediment basin mainly in the type of discharge structure. The trap should be located to obtain the maximum storage benefit from the terrain, for ease of clean out and disposal of the trapped sediment and to minimize interference with construction activities. The volume of the trap should be at least 3600 cubic feet per acre of drainage area.

Materials:

- All aggregate should be at least 3 inches in diameter and should not exceed a volume of 0.5 cubic foot.
- The geotextile fabric specification should be woven polypropylene, polyethylene or polyamide geotextile, minimum unit weight of 4.5 oz/yd², mullen burst strength at least 250 lb/in², ultraviolet stability exceeding 70%, and equivalent opening size exceeding 40.

Installation:

- **Earth Embankment:** Place fill material in layers not more than 8 inches in loose depth. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content of the material. Compact each layer to 95 percent standard proctor density. Do not place material on surfaces that are muddy or frozen. Side slopes for the embankment are to be 3:1. The minimum width of the embankment should be 3 feet.
- A gap is to be left in the embankment in the location where the natural confluence of runoff crosses the embankment line. The gap is to have a width in feet equal to 6 times the drainage area in acres.



Attachment 4 Description of BMPs

- **Geotextile Covered Rock Core:** A core of filter stone having a minimum height of 1.5 feet and a minimum width at the base of 3 feet should be placed across the opening of the earth embankment and should be covered by geotextile fabric which should extend a minimum distance of 2 feet in either direction from the base of the filter stone core.
- **Filter Stone Embankment:** Filter stone should be placed over the geotextile and is to have a side slope which matches that of the earth embankment of 3:1 and should cover the geotextile/rock core a minimum of 6 inches when installation is complete. The crest of the outlet should be at least 1 foot below the top of the embankment.

Sediment Basins:

The purpose of a sediment basin is to intercept sediment-laden runoff and trap the sediment in order to protect drainage ways, properties and rights of way below the sediment basin from sedimentation. A sediment basin is usually installed at points of discharge from disturbed areas. The drainage area for a sediment basin is recommended to be less than 100 acres.

Sediment basins are effective for capturing and slowly releasing the runoff from larger disturbed areas thereby allowing sedimentation to take place. A sediment basin can be created where a permanent pond BMP is being constructed. Guidelines for construction of the permanent BMP should be followed, but revegetation, placement of underdrain piping, and installation of sand or other filter media should not be carried out until the site construction phase is complete.

Materials:

- Riser should be corrugated metal or reinforced concrete pipe or box and should have watertight fittings or end to end connections of sections.
- An outlet pipe of corrugated metal or reinforced concrete should be attached to the riser and should have positive flow to a stabilized outlet on the downstream side of the embankment.
- An anti-vortex device and rubbish screen should be attached to the top of the riser and should be made of polyvinyl chloride or corrugated metal.

Basin Design and Construction:

- For common drainage locations that serve an area with ten or more acres disturbed at one time, a sediment basin should provide storage for a volume of runoff from a two-year, 24-hour storm from each disturbed acre drained.
- The basin length to width ratio should be at least 2:1 to improve trapping efficiency. The shape may be attained by excavation or the use of baffles. The lengths should be measured at the elevation of the riser de-watering hole.
- Place fill material in layers not more than 8 inches in loose depth. Before compaction, moisten or aerate each layer as necessary to provide the optimum moisture content of the material. Compact each layer to 95 percent standard proctor density. Do not place material



Attachment 4 **Description of BMPs**

on surfaces that are muddy or frozen. Side slopes for the embankment should be 3:1 (H:V).

- An emergency spillway should be installed adjacent to the embankment on undisturbed soil and should be sized to carry the full amount of flow generated by a 10-year, 3-hour storm with 1 foot of freeboard less the amount which can be carried by the principal outlet control device.
- The emergency spillway should be lined with riprap as should the swale leading from the spillway to the normal watercourse at the base of the embankment.
- The principal outlet control device should consist of a rigid vertically oriented pipe or box of corrugated metal or reinforced concrete. Attached to this structure should be a horizontal pipe, which should extend through the embankment to the toe of fill to provide a de-watering outlet for the basin.
- An anti-vortex device should be attached to the inlet portion of the principal outlet control device to serve as a rubbish screen.
- A concrete base should be used to anchor the principal outlet control device and should be sized to provide a safety factor of 1.5 (downward forces = 1.5 buoyant forces).
- The basin should include a permanent stake to indicate the sediment level in the pool and marked to indicate when the sediment occupies 50% of the basin volume (not the top of the stake).
- The top of the riser pipe should remain open and be guarded with a trash rack and anti-vortex device. The top of the riser should be 12 inches below the elevation of the emergency spillway. The riser should be sized to convey the runoff from the 2-year, 3-hour storm when the water surface is at the emergency spillway elevation. For basins with no spillway the riser must be sized to convey the runoff from the 10-yr, 3-hour storm.
- Anti-seep collars should be included when soil conditions or length of service make piping through the backfill a possibility.
- The 48-hour drawdown time will be achieved by using a riser pipe perforated at the point measured from the bottom of the riser pipe equal to ½ the volume of the basin. This is the maximum sediment storage elevation. The size of the perforation may be calculated as follows:

$$A_o = \frac{A_s \times \sqrt{2h}}{C_d \times 980,000}$$

Where:



Attachment 4 **Description of BMPs**

A_o = Area of the de-watering hole, ft²

A_s = Surface area of the basin, ft²

C_d = Coefficient of contraction, approximately 0.6

h = head of water above the hole, ft

Perforating the riser with multiple holes with a combined surface area equal to A_o is acceptable.

Erosion Control Compost

Description: Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.

Materials:

New types of erosion control compost are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Material used within any TxDOT construction or maintenance activities must meet material specifications in accordance with current TxDOT specifications. TxDOT maintains a website at http://www.txdot.gov/business/contractors_consultants/recycling/compost.htm that provides information on compost specification data.

ECC used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used as an ECC, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission (now named TCEQ) Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

Testing standards are dependent upon the intended use for the compost and ensures product safety, and product performance regarding the product's specific use. The appropriate compost sampling and testing protocols included in the United States Composting Council (USCC) Test Methods for the Examination of Composting and Compost (TMECC) should be conducted on compost products used for ECC to ensure that the products used will not impact public health, safety, and the environment and to promote production and marketing of quality composts that meet analytical standards. TMECC is a laboratory manual that provides protocols for the composting industry and test methods for compost analysis. TMECC provides protocols to sample, monitor, and analyze materials during all stages of the composting process. Numerous



Attachment 4 **Description of BMPs**

parameters that might be of concern in compost can be tested by following protocols or test methods listed in TMECC. TMECC information can be found at <http://www.tmecc.org/tmecc/index.html>. The USCC Seal of Testing Assurance (STA) program contains information regarding compost STA certification. STA program information can be found at http://tmecc.org/sta/STA_program_description.html.

Installation:

- Install in accordance with current TxDOT specification.
- Use on slopes 3:1 or flatter.
- Apply a 2 inch uniform layer unless otherwise shown on the plans or as directed.
- When rolling is specified, use a light corrugated drum roller.

Mulch and Compost Filter Socks

Description: Mulch and compost filter socks (erosion control logs) are used to intercept and detain sediment laden run-off from unprotected areas. When properly used, mulch and compost filter socks can be highly effective at controlling sediment from disturbed areas. They cause runoff to pond which allows heavier solids to settle. Mulch and compost filter socks are used during the period of construction near the perimeter of a disturbed area to intercept sediment while allowing water to percolate through. The sock should remain in place until the area is permanently stabilized. Mulch and compost filter socks may be installed in construction areas and temporarily moved during the day to allow construction activity provided it is replaced and properly anchored at the end of the day. Mulch and compost filter socks may be seeded to allow for quick vegetative growth and reduction in run-off velocity.

Materials:

New types of mulch and compost filter socks are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Mulch and compost filter socks used within any TxDOT construction or maintenance activities must meet material specifications in accordance with TxDOT specification 5049. TxDOT maintains a website at http://www.txdot.gov/business/contractors_consultants/recycling/compost.htm that provides information on compost specification data.

Mulch and compost filter socks used for projects not related to TxDOT should also be of quality materials by meeting performance standards and compost specification data. To ensure the quality of compost used for mulch and compost filter socks, products should meet all applicable state and federal regulations, including but not limited to the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR), Title 40, Part 503 Standards for Class A biosolids and Texas Natural Resource Conservation Commission Health and Safety Regulations as defined in the Texas Administration Code (TAC), Chapter 332, and all other



Attachment 4 **Description of BMPs**

relevant requirements for compost products outlined in TAC, Chapter 332. Testing requirements required by the TCEQ are defined in TAC Chapter 332, including Sections §332.71 Sampling and Analysis Requirements for Final Products and §332.72 Final Product Grades. Compost specification data approved by TxDOT are appropriate to use for ensuring the use of quality compost materials or for guidance.

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Installation:

- Install in accordance with TxDOT Special Specification 5049.
- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.
- Inspect and maintain the socks in good condition (including staking, anchoring, etc.). Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.

POST-CONSTRUCTION TSS CONTROLS

Retention/Irrigation Systems

Description: Retention/irrigation systems refer to the capture of runoff in a holding pond, then use of the captured water for irrigation of appropriate landscape areas. Retention/irrigation systems are characterized by the capture and disposal of runoff without direct release of captured flow to receiving streams. Retention systems exhibit excellent pollutant removal but can require regular, proper maintenance. Collection of roof runoff for subsequent use (rainwater harvesting) also qualifies as a retention/irrigation practice, but should be operated and sized to provide adequate volume. This technology, which emphasizes beneficial use of stormwater runoff, is



Attachment 4 **Description of BMPs**

particularly appropriate for arid regions because of increasing demands on water supplies for agricultural irrigation and urban water supply.

Design Considerations: Retention/irrigation practices achieve 100% removal efficiency of total suspended solids contained within the volume of water captured. Design elements of retention/irrigation systems include runoff storage facility configuration and sizing, pump and wet well system components, basin lining, basin detention time, and physical and operational components of the irrigation system. Retention/irrigation systems are appropriate for large drainage areas with low to moderate slopes. The retention capacity should be sufficient considering the average rainfall event for the area.

Maintenance Requirements: Maintenance requirements for retention/irrigation systems include routine inspections, sediment removal, mowing, debris and litter removal, erosion control, and nuisance control.

Extended Detention Basin

Description: Extended detention facilities are basins that temporarily store a portion of stormwater runoff following a storm event. Extended detention basins are normally used to remove particulate pollutants and to reduce maximum runoff rates associated with development to their pre-development levels. The water quality benefits are the removal of sediment and buoyant materials. Furthermore, nutrients, heavy metals, toxic materials, and oxygen-demanding materials associated with the particles also are removed. The control of the maximum runoff rates serves to protect drainage channels below the device from erosion and to reduce downstream flooding. Although detention facilities designed for flood control have different design requirements than those used for water quality enhancement, it is possible to achieve these two objectives in a single facility.

Design Considerations: Extended detention basins can remove approximately 75% of the total suspended solids contained within the volume of runoff captured in the basin. Design elements of extended detention basins include basin sizing, basin configuration, basin side slopes, basin lining, inlet/outlet structures, and erosion controls. Extended detention basins are appropriate for large drainage areas with low to moderate slopes. The retention capacity should be sufficient considering the average rainfall event for the area.

Maintenance Requirements: Maintenance requirements for extended detention basins include routine inspections, mowing, debris and litter removal, erosion control, structural repairs, nuisance control, and sediment removal.

Vegetative Filter Strips

Description: Filter strips, also known as vegetated buffer strips, are vegetated sections of land similar to grassy swales except they are essentially flat with low slopes, and are designed only to accept runoff as overland sheet flow. They may appear in any vegetated form from grassland to forest, and are designed to intercept upstream flow, lower flow velocity, and spread water out as sheet flow. The dense vegetative cover facilitates conventional pollutant removal through detention, filtration by vegetation, and infiltration.



Attachment 4 **Description of BMPs**

Filter strips cannot treat high velocity flows, and do not provide enough storage or infiltration to effectively reduce peak discharges to predevelopment levels for design storms. This lack of quantity control favors use in rural or low-density development; however, they can provide water quality benefits even where the impervious cover is as high as 50%. The primary highway application for vegetative filter strips is along rural roadways where runoff that would otherwise discharge directly to a receiving water passes through the filter strip before entering a conveyance system. Properly designed roadway medians and shoulders make effective buffer strips. These devices also can be used on other types of development where land is available and hydraulic conditions are appropriate.

Flat slopes and low to fair permeability of natural subsoil are required for effective performance of filter strips. Although an inexpensive control measure, they are most useful in contributing watershed areas where peak runoff velocities are low as they are unable to treat the high flow velocities typically associated with high impervious cover.

Successful performance of filter strips relies heavily on maintaining shallow unconcentrated flow. To avoid flow channelization and maintain performance, a filter strip should:

- Be equipped with a level spreading device for even distribution of runoff
- Contain dense vegetation with a mix of erosion resistant, soil binding species
- Be graded to a uniform, even and relatively low slope
- Laterally traverse the contributing runoff area

Filter strips can be used upgradient from watercourses, wetlands, or other water bodies along toes and tops of slopes and at outlets of other stormwater management structures. They should be incorporated into street drainage and master drainage planning. The most important criteria for selection and use of this BMP are soils, space, and slope.

Design Considerations: Vegetative filter strips can remove approximately 85% of the total suspended solids contained within the volume of runoff captured. Design elements of vegetative filter strips include uniform, shallow overland flow across the entire filter strip area, hydraulic loading rate, inlet structures, slope, and vegetative cover. The area should be free of gullies or rills which can concentrate flow. Vegetative filter strips are appropriate for small drainage areas with moderate slopes. Other design elements include the following:

- Soils and moisture are adequate to grow relatively dense vegetative stands
- Sufficient space is available
- Slope is less than 12%
- Comparable performance to more expensive structural controls



Attachment 4

Description of BMPs

Maintenance Requirements: Maintenance requirements for vegetative filter strips include pest management, seasonal mowing and lawn care, routine inspections, debris and litter removal, sediment removal, and grass reseeding and mulching.

Constructed Wetlands

Description: Constructed wetlands provide physical, chemical, and biological water quality treatment of stormwater runoff. Physical treatment occurs as a result of decreasing flow velocities in the wetland, and is present in the form of evaporation, sedimentation, adsorption, and/or filtration. Chemical processes include chelation, precipitation, and chemical adsorption. Biological processes include decomposition, plant uptake and removal of nutrients, plus biological transformation and degradation. Hydrology is one of the most influential factors in pollutant removal due to its effects on sedimentation, aeration, biological transformation, and adsorption onto bottom sediments.

The wetland should be designed such that a minimum amount of maintenance is required. The natural surroundings, including such things as the potential energy of a stream or flooding river, should be utilized as much as possible. The wetland should approximate a natural situation and unnatural attributes, such as rectangular shape or rigid channel, should be avoided.

Site considerations should include the water table depth, soil/substrate, and space requirements. Because the wetland must have a source of flow, it is desirable that the water table is at or near the surface. If runoff is the only source of inflow for the wetland, the water level often fluctuates and establishment of vegetation may be difficult. The soil or substrate of an artificial wetland should be loose loam to clay. A perennial baseflow must be present to sustain the artificial wetland. The presence of organic material is often helpful in increasing pollutant removal and retention. A greater amount of space is required for a wetland system than is required for a detention facility treating the same amount of area.

Design Considerations: Constructed wetlands can remove over 90% of the total suspended solids contained within the volume of runoff captured in the wetland. Design elements of constructed wetlands include wetland sizing, wetland configuration, sediment forebay, vegetation, outflow structure, depth of inundation during storm events, depth of micropools, and aeration. Constructed wetlands are appropriate for large drainage areas with low to moderate slopes.

Maintenance Requirements: Maintenance requirements for constructed wetlands include mowing, routine inspections, debris and litter removal, erosion control, nuisance control, structural repairs, sediment removal, harvesting, and maintenance of water levels.

Wet Basins

Description: Wet basins are runoff control facilities that maintain a permanent wet pool and a standing crop of emergent littoral vegetation. These facilities may vary in appearance from natural ponds to enlarged, bermed (manmade) sections of drainage systems and may function as online or offline facilities, although offline configuration is preferable. Offline designs can prevent scour and other damage to the wet pond and minimize costly outflow structure elements



Attachment 4 **Description of BMPs**

needed to accommodate extreme runoff events.

During storm events, runoff inflows displace part or all of the existing basin volume and are retained and treated in the facility until the next storm event. The pollutant removal mechanisms are settling of solids, wetland plant uptake, and microbial degradation. When the wet basin is adequately sized, pollutant removal performance can be excellent, especially for the dissolved fraction. Wet basins also help provide erosion protection for the receiving channel by limiting peak flows during larger storm events. Wet basins are often perceived as a positive aesthetic element in a community and offer significant opportunity for creative pond configuration and landscape design. Participation of an experienced wetland designer is suggested. A significant potential drawback for wet ponds in arid climates is that the contributing watershed for these facilities is often incapable of providing an adequate water supply to maintain the permanent pool, especially during the summer months. Makeup water (i.e., well water or municipal drinking water) is sometimes used to supplement the rainfall/runoff process, especially for wet basin facilities treating watersheds that generate insufficient runoff.

Design Considerations: Wet basins can remove over 90% of the total suspended solids contained within the volume of runoff captured in the basin. Design elements of wet basins include basin sizing, basin configuration, basin side slopes, sediment forebay, inflow and outflow structures, vegetation, depth of permanent pool, aeration, and erosion control. Wet basins are appropriate for large drainage areas with low to moderate slopes.

Maintenance Requirements: Maintenance requirements for wet basins include mowing, routine inspections, debris and litter removal, erosion control, nuisance control, structural repairs, sediment removal, and harvesting.

Grassy Swales

Grassy swales are vegetated channels that convey stormwater and remove pollutants by filtration through grass and infiltration through soil. They require shallow slopes and soils that drain well. Pollutant removal capability is related to channel dimensions, longitudinal slope, and type of vegetation. Optimum design of these components will increase contact time of runoff through the swale and improve pollutant removal rates.

Grassy swales are primarily stormwater conveyance systems. They can provide sufficient control under light to moderate runoff conditions, but their ability to control large storms is limited. Therefore, they are most applicable in low to moderate sloped areas or along highway medians as an alternative to ditches and curb and gutter drainage. Their performance diminishes sharply in highly urbanized settings, and they are generally not effective enough to receive construction stage runoff where high sediment loads can overwhelm the system. Grassy swales can be used as a pretreatment measure for other downstream BMPs, such as extended detention basins. Enhanced grassy swales utilize check dams and wide depressions to increase runoff storage and promote greater settling of pollutants.

Grassy swales can be more aesthetically pleasing than concrete or rock-lined drainage systems and are generally less expensive to construct and maintain. Swales can slightly reduce



Attachment 4 **Description of BMPs**

impervious area and reduce the pollutant accumulation and delivery associated with curbs and gutters. The disadvantages of this technique include the possibility of erosion and channelization over time, and the need for more right-of-way as compared to a storm drain system. When properly constructed, inspected, and maintained, the life expectancy of a swale is estimated to be 20 years.

Design Considerations:

- Comparable performance to wet basins
- Limited to treating a few acres
- Availability of water during dry periods to maintain vegetation
- Sufficient available land area

The suitability of a swale at a site will depend on land use, size of the area serviced, soil type, slope, imperviousness of the contributing watershed, and dimensions and slope of the swale system. In general, swales can be used to serve areas of less than 10 acres, with slopes no greater than 5 %. The seasonal high water table should be at least 4 feet below the surface. Use of natural topographic lows is encouraged, and natural drainage courses should be regarded as significant local resources to be kept in use.

Maintenance Requirements:

Research in the Austin area indicates that vegetated controls are effective at removing pollutants even when dormant. Therefore, irrigation is not required to maintain growth during dry periods, but may be necessary only to prevent the vegetation from dying.

Vegetation Lined Drainage Ditches

Vegetation lined drainage ditches are similar to grassy swales. These drainage ditches are vegetated channels that convey storm water and remove pollutants by filtration through grass and infiltration through soil. They require soils that drain well. Pollutant removal capability is related to channel dimensions, longitudinal slope, and type of vegetation. Optimum design of these components will increase contact time of runoff through the ditch and improve pollutant removal rates. Vegetation lined drainage ditches are primarily storm water conveyance systems. They have vegetation lined in the low flow channel and may include vegetated shelves.

Vegetation in drainage ditches reduces erosion and removes pollutants by lowering water velocity over the soil surface, binding soil particles with roots, and by filtration through grass and infiltration through soil. Vegetation lined drainage ditches can be used where:

- A vegetative lining can provide sufficient stability for the channel grade by increasing maximum permissible velocity
- Slopes are generally less than 5%, with protection from sheer stress as needed through the use



Attachment 4 **Description of BMPs**

of BMPs, such as erosion control blankets

- Site conditions required to establish vegetation, i.e. climate, soils, topography, are present

Design Criteria: The suitability of a vegetation lined drainage ditch at a site will depend on land use, size of the area serviced, soil type, slope, imperviousness of the contributing watershed, and dimensions and slope of the ditch system. The hydraulic capacity of the drainage ditch and other elements such as erosion, siltation, and pollutant removal capability, must be taken into consideration. Use of natural topographic lows is encouraged, and natural drainage courses should be regarded as significant local resources to be kept in use. Other items to consider include the following:

- Capacity, cross-section shape, side slopes, and grade
- Select appropriate native vegetation
- Construct in stable, low areas to conform with the natural drainage system. To reduce erosion potential, design the channel to avoid sharp bends and steep grades.
- Design and build drainage ditches with appropriate scour and erosion protection. Surface water should be able to enter over the vegetated banks without erosion occurring.
- BMPs, such as erosion control blankets, may need to be installed at the time of seeding to provide stability until the vegetation is fully established. It may also be necessary to divert water from the channel until vegetation is established or to line the channel with sod.
- Vegetated ditches must not be subject to sedimentation from disturbed areas.
- Sediment traps may be needed at channel inlets to prevent entry of muddy runoff and channel sedimentation.
- Availability of water during dry periods to maintain vegetation
- Sufficient available land area

Maintenance:

During establishment, vegetation lined drainage ditches should be inspected, repaired, and vegetation reestablished if necessary. After the vegetation has become established, the ditch should be checked periodically to determine if the channel is withstanding flow velocities without damage. Check the ditch for debris, scour, or erosion and immediately make repairs if needed. Check the channel outlet and all road crossings for bank stability and evidence of piping or scour holes and make repairs immediately. Remove all significant sediment accumulations to maintain the designed carrying capacity. Keep the vegetation in a healthy condition at all times, since it is the primary erosion protection for the channel. Vegetation lined drainage ditches should be seasonally maintained by mowing or irrigating, depending on the vegetation selected. The long-



Attachment 4 Description of BMPs

term management of ditches as stable, vegetated, "natural" drainage systems with native vegetation buffers is highly recommended due to the inherent stability offered by grasses, shrubs, trees, and other vegetation.

Research in the Austin area indicates that vegetated controls are effective at removing pollutants even when dormant. Therefore, irrigation is not required to maintain growth during dry periods, but may be necessary only to prevent the vegetation from dying.

Sand Filter Systems

The objective of sand filters is to remove sediment and the pollutants from the first flush of pavement and impervious area runoff. The filtration of nutrients, organics, and coliform bacteria is enhanced by a mat of bacterial slime that develops during normal operations. One of the main advantages of sand filters is their adaptability; they can be used on areas with thin soils, high evaporation rates, low-soil infiltration rates, in limited-space areas, and where groundwater is to be protected.

Since their original inception in Austin, Texas, hundreds of intermittent sand filters have been implemented to treat stormwater runoff. There have been numerous alterations or variations in the original design as engineers in other jurisdictions have improved and adapted the technology to meet their specific requirements. Major types include the Austin Sand Filter, the District of Columbia Underground Sand Filter, the Alexandria Dry Vault Sand Filter, the Delaware Sand Filter, and peat-sand filters which are adapted to provide a sorption layer and vegetative cover to various sand filter designs .

Design Considerations:

- Appropriate for space-limited areas
- Applicable in arid climates where wet basins and constructed wetlands are not appropriate
- High TSS removal efficiency

Cost Considerations:

Filtration Systems may require less land than some other BMPs, reducing the land acquisition cost; however the structure itself is one of the more expensive BMPs. In addition, maintenance cost can be substantial.

Erosion Control Compost

Description: Erosion control compost (ECC) can be used as an aid to control erosion on critical sites during the establishment period of protective vegetation. The most common uses are on steep slopes, swales, diversion dikes, and on tidal or stream banks.



Attachment 4 **Description of BMPs**

Materials:

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Installation:

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Materials:

New types of mulch and compost filter socks are continuously being developed. The Texas Department of Transportation (TxDOT) has established minimum performance standards which must be met for any products seeking to be approved for use within any of TxDOT's construction or maintenance activities. Mulch and compost filter socks used within any TxDOT construction or maintenance activities must meet material specifications in accordance with TxDOT specification 5049. TxDOT maintains a website at http://www.txdot.gov/business/contractors_consultants/recycling/compost.htm that provides information on compost specification data.

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Installation:

- Install in accordance with TxDOT Special Specification 5049.
- Install socks (erosion control logs) near the downstream perimeter of a disturbed area to intercept sediment from sheet flow.
- Secure socks in a method adequate to prevent displacement as a result of normal rain events such that flow is not allowed under the socks.
- Inspect and maintain the socks in good condition (including staking, anchoring, etc.). Maintain the integrity of the control, including keeping the socks free of accumulated silt, debris, etc., until the disturbed area has been adequately stabilized.

Sedimentation Chambers (only to be used when there is no space available for other approved BMP's)

Description: Sedimentation chambers are stormwater treatment structures that can be used when space is limited such as urban settings. These structures are often tied into stormwater drainage systems for treatment of stormwater prior to entering state waters. The water quality benefits are the removal of sediment and buoyant materials. These structures are not designed as a catch basin or detention basin and not typically used for floodwater attenuation.

Design Considerations: Average rainfall and surface area should be considered when following manufacturer's recommendations for chamber sizing and/or number of units needed to achieve effective TSS removal. If properly sized, 50-80% removal of TSS can be expected.

Maintenance Requirements: Maintenance requirements include routine inspections, sediment, debris and litter removal, erosion control and nuisance control.



DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1229
GALVESTON, TEXAS 77553-1229

March 13, 2014

REPLY TO
ATTENTION OF:

Evaluation Section

SUBJECT: Permit No. SWG-2013-00161; Nationwide Permit Verification

Bruce Parker
West Harris County Regional Water Authority
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027-7537

Dear Mr. Parker:

This is in reference to your request, dated February 19, 2013, submitted on your behalf by Terracon Consultants, Inc., to install 10 miles of a 96-inch-diameter water line from its starting point at the intersection of Water Works Boulevard and Beltway 8 to its ending point east of the intersection of Langley Road and Interstate 69 in Houston, Harris County, Texas. The open-cut installation of the pipeline will temporarily discharge fill material into 1.94 acres of palustrine emergent wetlands and 28.32 acres of palustrine forested wetlands. Within the 50-foot easement for the water line, the vegetation will be mechanically cleared, converted to, and maintained as, herbaceous wetlands. The project site is located in wetlands near Greens Bayou, starting at the intersection of Water Works Boulevard and Beltway 8, following the existing railroad right-of-way and the right-of-way of Little York Road to the ending point east of the intersection of Langley Road and Interstate 69, in Houston, Harris County, Texas.

This request is verified by Nationwide Permit (NWP) 12 pursuant to Section 404 of the Clean Water Act (CWA). This NWP verification is valid provided the activity is compliant with the enclosed plans, in 24 sheets, and the mitigation plan, Attachment A, in 34 sheets, the NWP General/Regional Conditions and the Texas Commission on Environmental Quality's Best Management Practice Guidelines.

NWP 12 authorizes activities required for the construction, maintenance, repair and removal of utility lines and associated facilities in waters of the United States (U.S.), provided the activity does not result in the loss of greater than 0.5 acre of waters of the U.S. for each single and complete project.

The NWP verification is valid until the NWP is modified, reissued or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 19, 2017. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant NWP is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP.

The following special conditions have been added to your authorization:

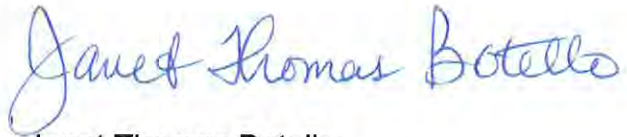
1. The permittee must notify the Corps of Engineers (CE), Galveston District, Chief, Compliance Section, Regulatory Branch, in writing, at the start of construction within the jurisdictional areas.
2. The permittee must provide a copy of the executed and recorded conservation easement within 6 months of the start of construction within the jurisdictional areas to the CE, Galveston District, Chief, Compliance Section, Regulatory Branch.
3. Monitoring and maintenance will proceed according to the mitigation plan included in Attachment A. The mitigation success criteria must be achieved for the mitigation requirement to be considered complete.
4. Should mitigation be determined to be unsuccessful by CE, Galveston District personnel at the end of the monitoring period, the permittee will be required to take necessary corrective measures, as approved by the CE. Once the corrective measures are completed, the permittee will notify the CE and a determination will be made regarding success of the mitigation.

The impacts to waters of the U.S. associated with this NWP verification are based on a preliminary jurisdictional determination (JD) for your subject site. If you wish, you may request an approved JD, which may be appealed, by submitting a written request to us within 30 days from the date of this letter. Please note that if you request an approved JD and then decide to appeal it, the appeal will not be accepted if any work has started in waters of the U.S. or that would alter the hydrology of waters of the U.S.

Corps determinations are conducted to identify the limits of the Corps CWA jurisdiction for particular sites. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

If you have any question regarding this verification, please contact Elizabeth Shelton at the letterhead address or by telephone at 409-766-3937. Please notify the Chief of the Compliance Section in the Galveston District Regulatory Branch, in writing at the letterhead address, upon completion of the authorized project.

FOR THE DISTRICT COMMANDER:



Janet Thomas Botello
Leader, North Evaluation Unit

Enclosures

Copies Furnished:

Eighth Coast Guard District, New Orleans, LA

Texas General Land Office, La Porte, TX

Texas General Land Office, Austin, TX

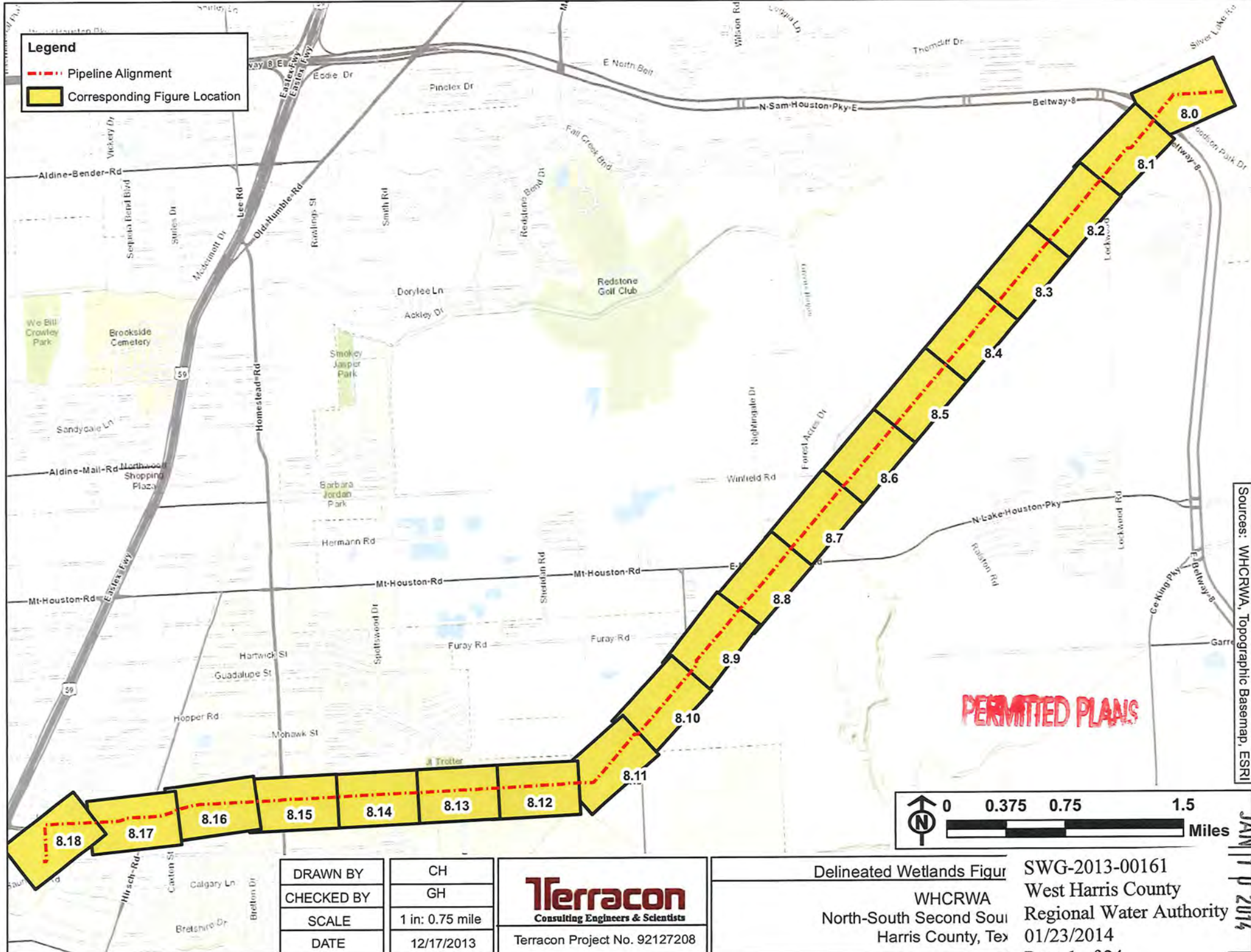
U.S. Fish and Wildlife Service, Houston, TX

Houston/Galveston Resident Office, Galveston, TX

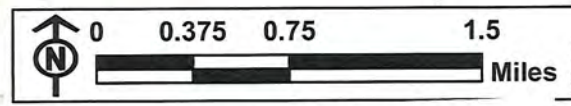
Carland Holstead, Terracon Consultants, Inc., 11555 Clay Rd., Ste. 100, Houston, TX
77043-1239

Legend

- Pipeline Alignment
- Corresponding Figure Location



PERMITTED PLANS



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SCALE	1 in: 0.75 mile
DATE	12/17/2013

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 Consulting Engineers & Scientists
 Terracon Project No. 92127208

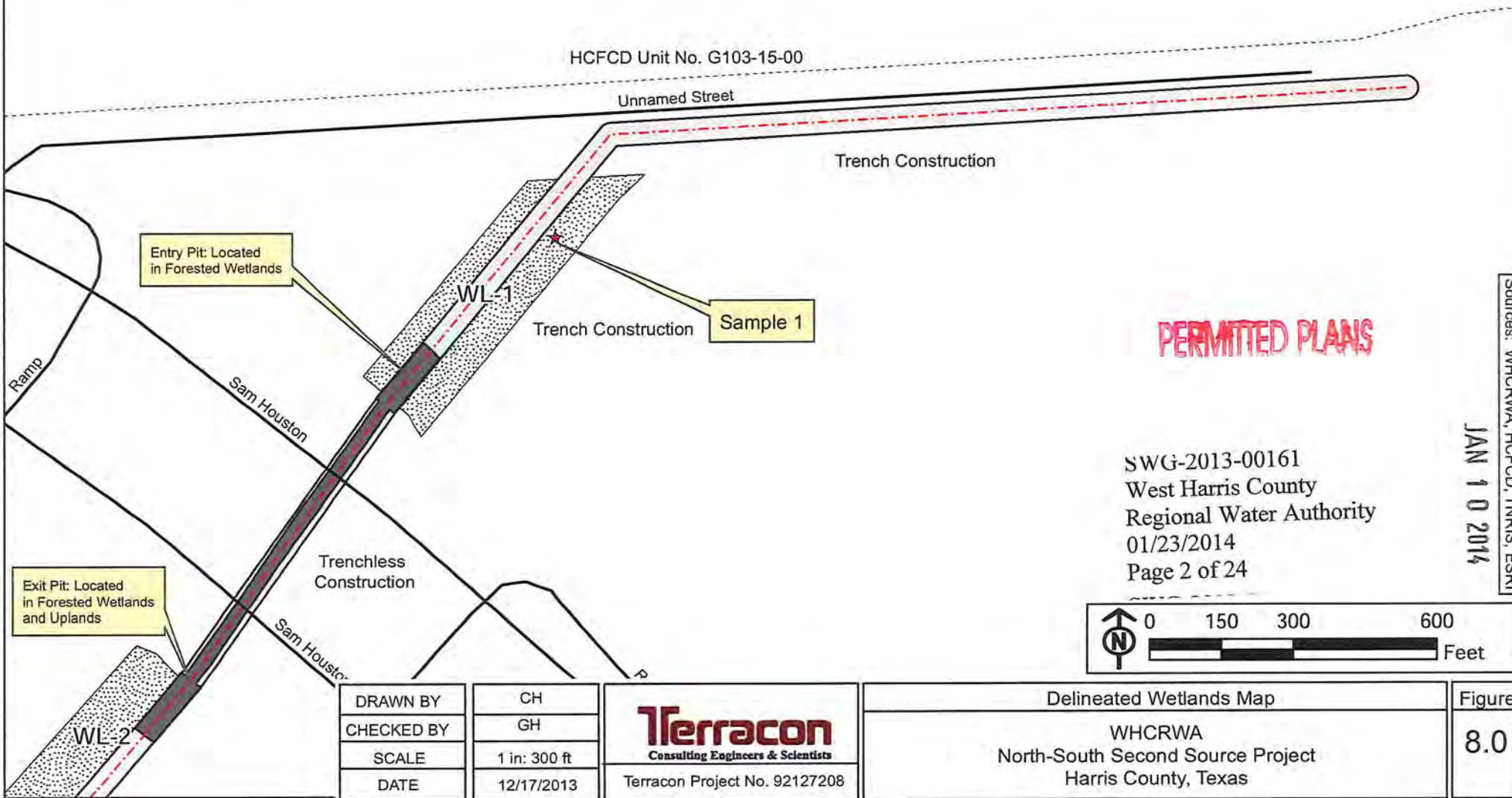
Delineated Wetlands Figure
 WHCROWA
 North-South Second South
 Harris County, Tex

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 1 of 24

Sources: WHCROWA, Topographic Basemap, ESRI
 JAN 10 2014

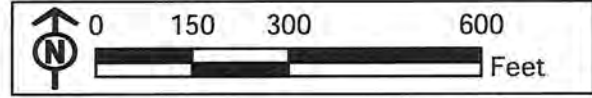
- Legend**
- ★ Sample Points
 - Streets
 - - - Pipeline Alignment
 - - - Streams, Rivers & Bayous
 - Trenchless Work Space
 - 50-ft Easement
 - Delineated Wetlands**
 - ▨ Forested
 - ▧ Freshwater Emergent

Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-1: 0.692 acre cleared
 WL-2: 0.967 acre cleared



PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 2 of 24



Sources: WHCRWA, HCFCO, TNRS, ESRI

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SCALE	1 in: 300 ft
DATE	12/17/2013

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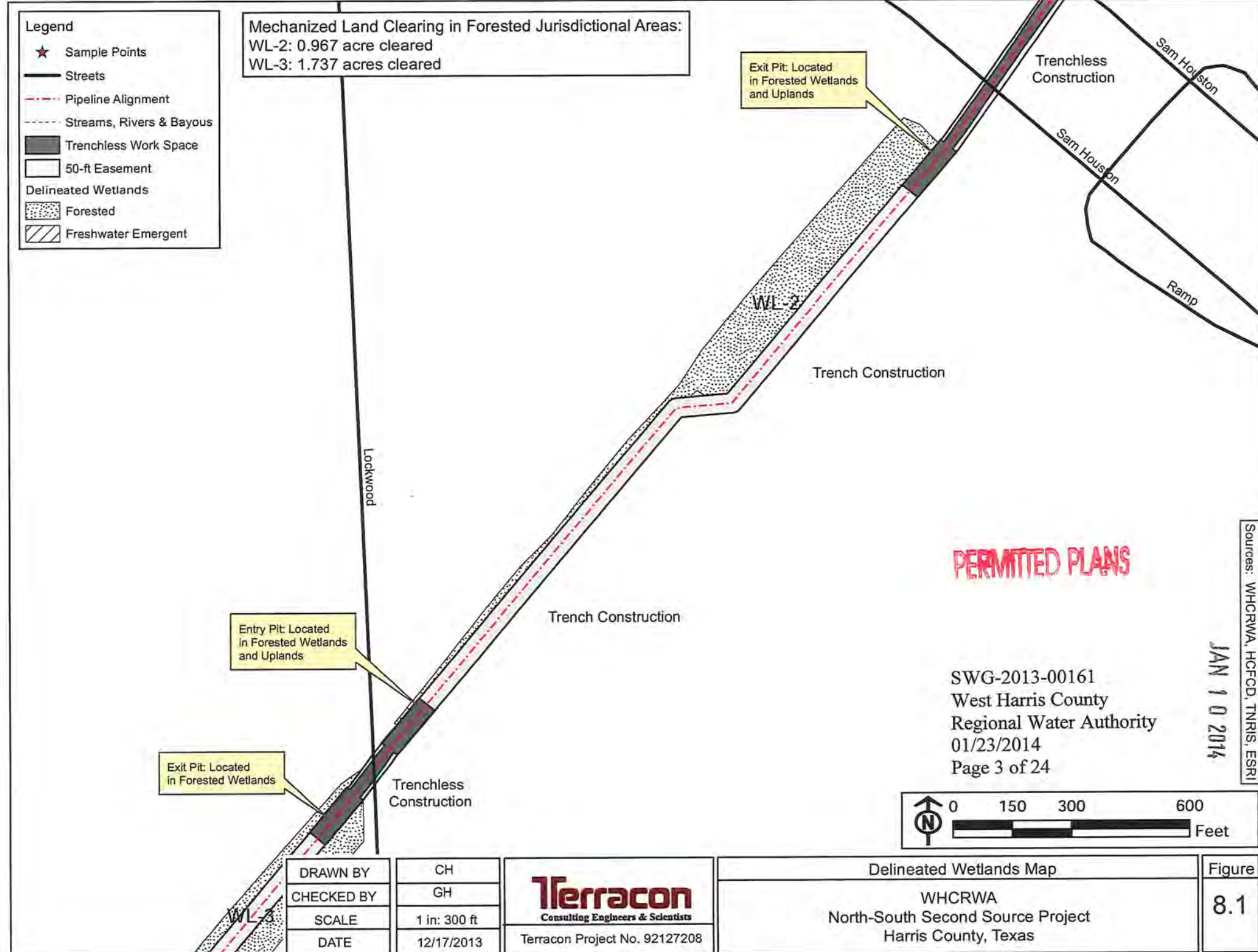
Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
8.0

Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-2: 0.967 acre cleared
 WL-3: 1.737 acres cleared

Legend

- ★ Sample Points
- Streets
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- Trenchless Work Space
- 50-ft Easement
- Delineated Wetlands**
- ▨ Forested
- ▧ Freshwater Emergent

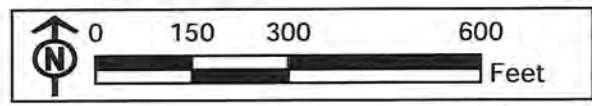


PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 3 of 24

JAN 10 2014

Sources: WHCRWA, HCFCD, TNRS, ESRI



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DATE	12/17/2013

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Terracon Project No. 92127208

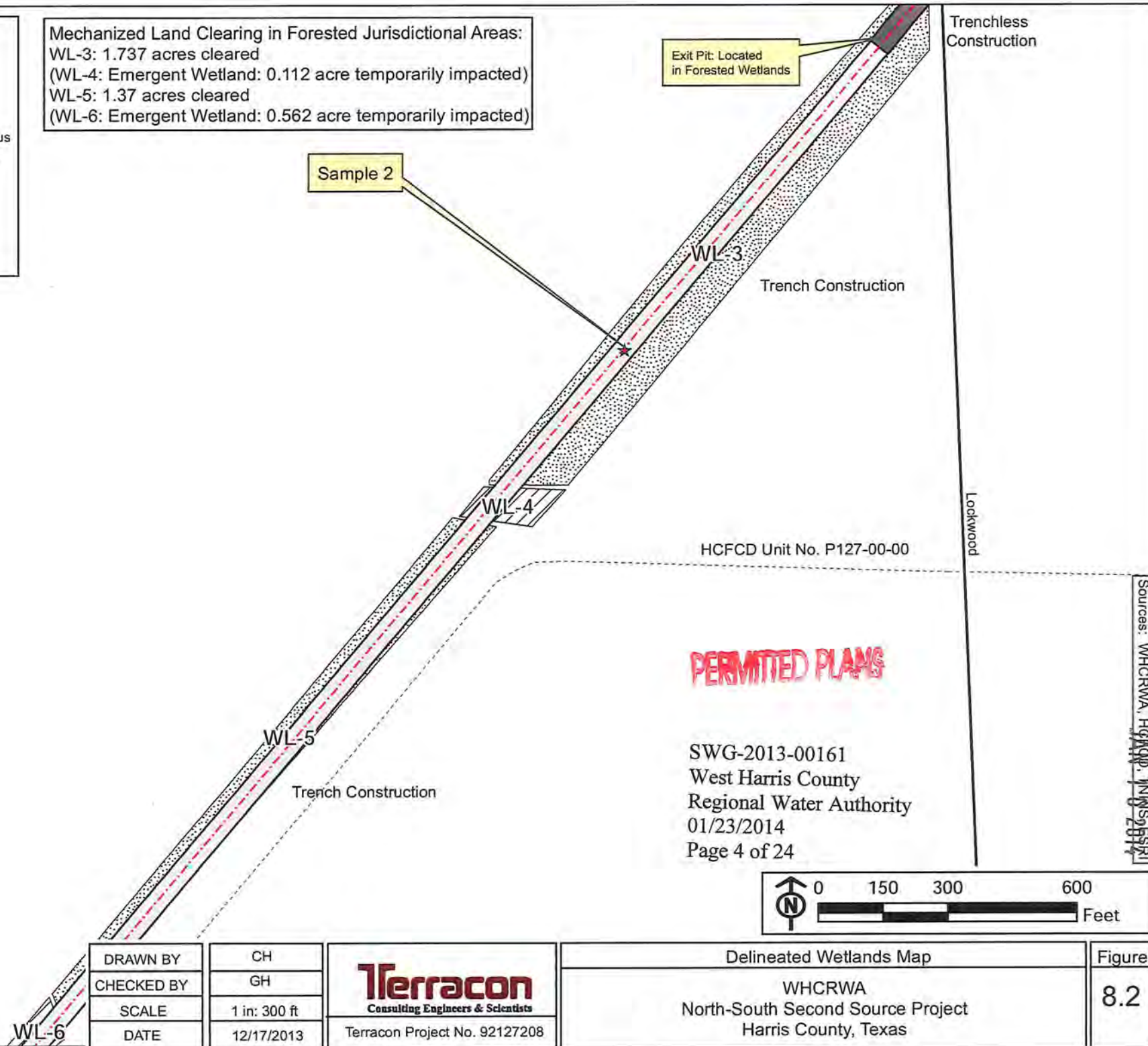
Delineated Wetlands Map

WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
8.1

- Legend**
- ★ Sample Points
 - Streets
 - - - Pipeline Alignment
 - - - Streams, Rivers & Bayous
 - Trenchless Work Space
 - 50-ft Easement
 - Delineated Wetlands**
 - ▨ Forested
 - ▧ Freshwater Emergent

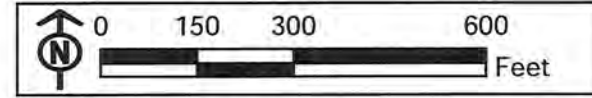
Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-3: 1.737 acres cleared
 (WL-4: Emergent Wetland: 0.112 acre temporarily impacted)
 WL-5: 1.37 acres cleared
 (WL-6: Emergent Wetland: 0.562 acre temporarily impacted)



HCFC Unit No. P127-00-00

PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 4 of 24



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DATE	12/17/2013

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 Terracon Project No. 92127208

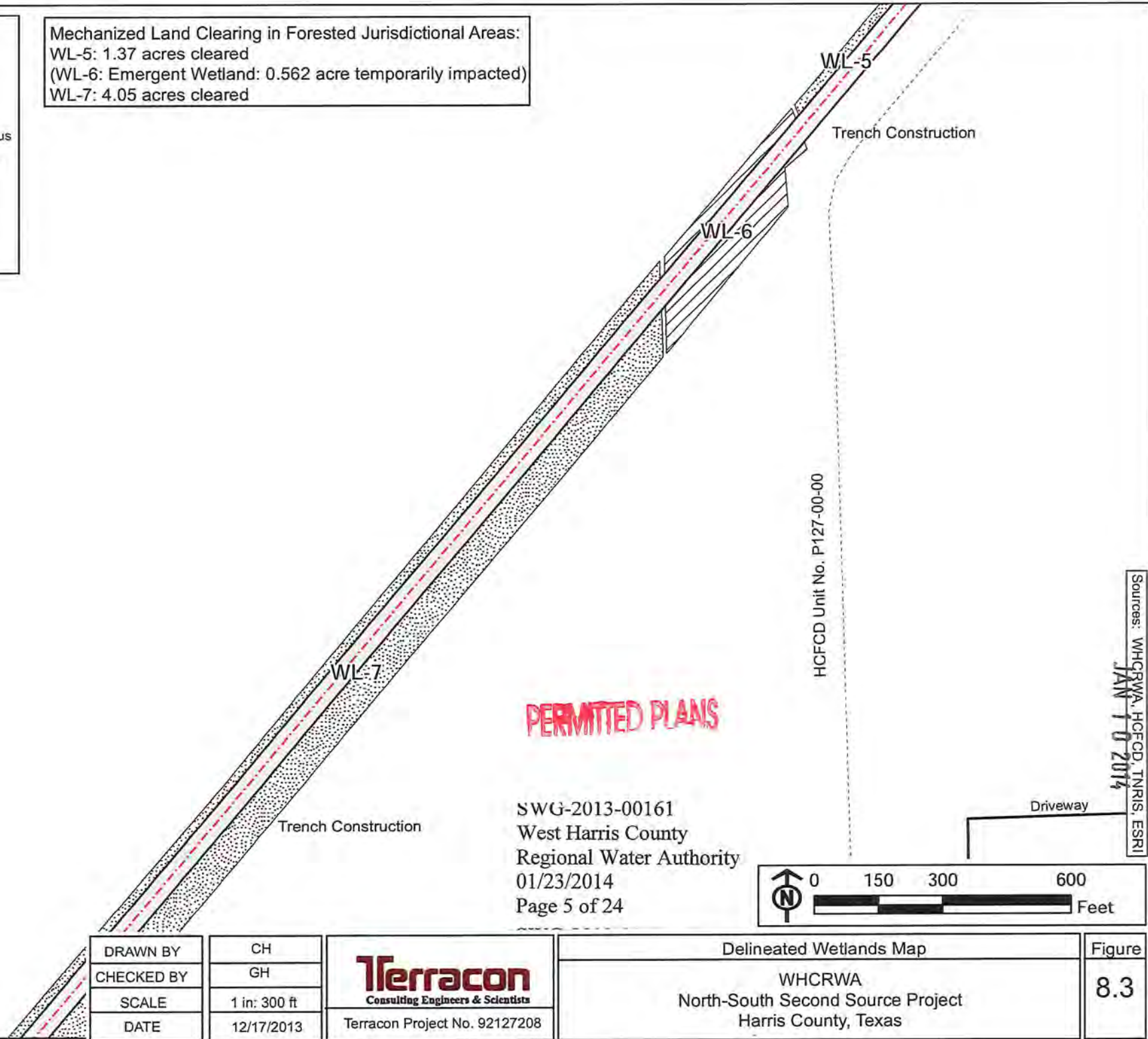
Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
8.2

Sources: WHCRWA, HQAPP, TINS, ESRI
 01/23/2014

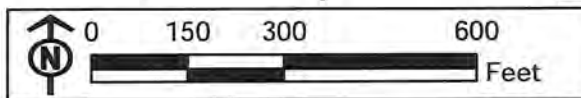
- Legend**
- ★ Sample Points
 - Streets
 - - - Pipeline Alignment
 - - - Streams, Rivers & Bayous
 - Trenchless Work Space
 - 50-ft Easement
 - Delineated Wetlands**
 - ▨ Forested
 - ▧ Freshwater Emergent

Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-5: 1.37 acres cleared
 (WL-6: Emergent Wetland: 0.562 acre temporarily impacted)
 WL-7: 4.05 acres cleared



PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 5 of 24



Sources: WHCRWA, HCFCU, TNRS, ESRI
 JAN 10 2014

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DATE	12/17/2013

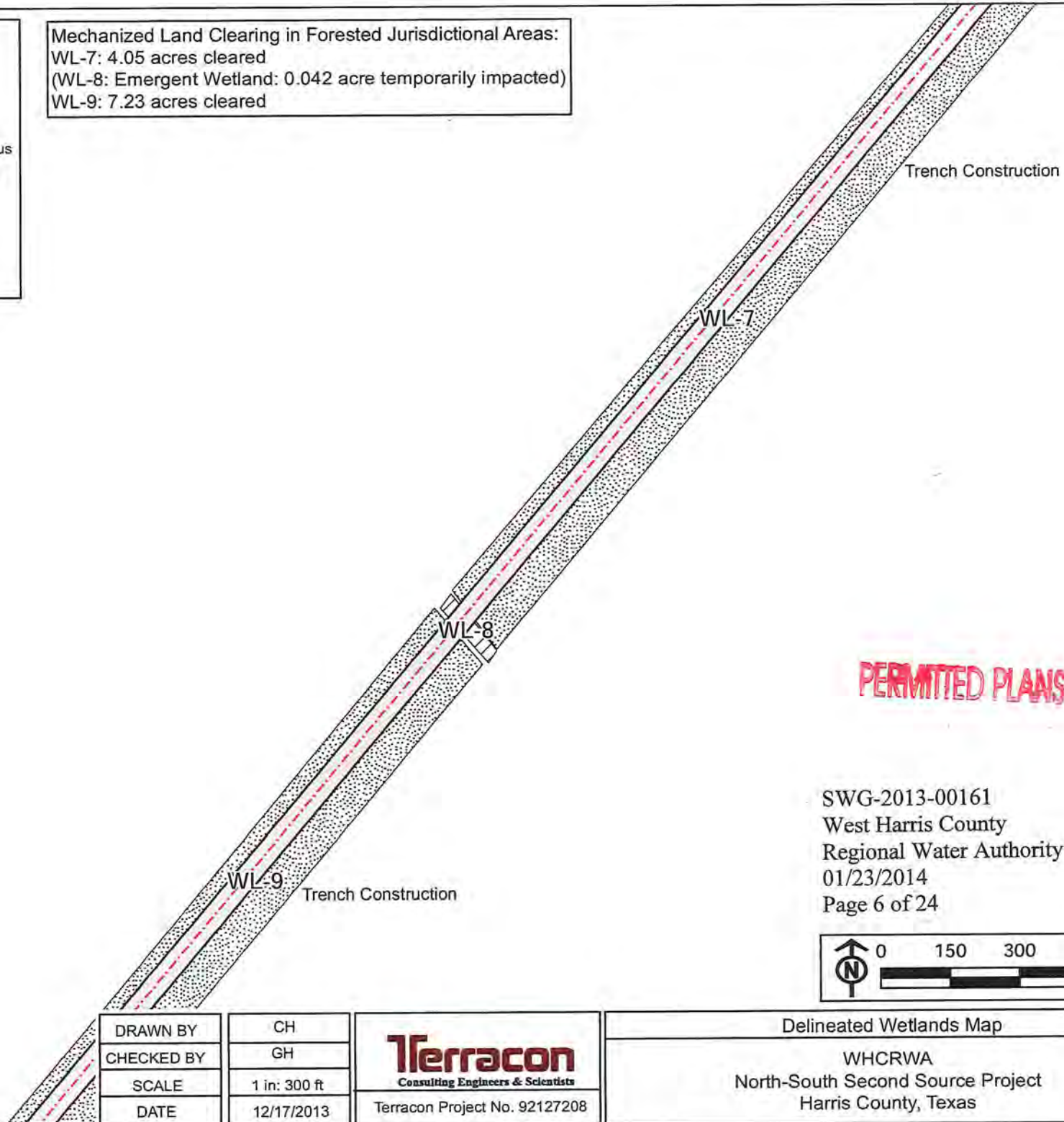
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 Terracon Project No. 92127208

Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
8.3

- Legend**
- ★ Sample Points
 - Streets
 - - - Pipeline Alignment
 - - - Streams, Rivers & Bayous
 - Trenchless Work Space
 - 50-ft Easement
 - Delineated Wetlands**
 - ▨ Forested
 - ▧ Freshwater Emergent

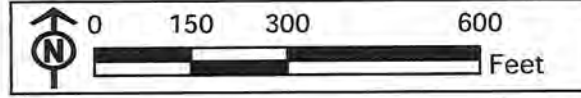
Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-7: 4.05 acres cleared
 (WL-8: Emergent Wetland: 0.042 acre temporarily impacted)
 WL-9: 7.23 acres cleared



PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 6 of 24

Sources: WHCRWA, HCFCD, TNRS, ESRI
 JAN 10 2014



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DATE	12/17/2013

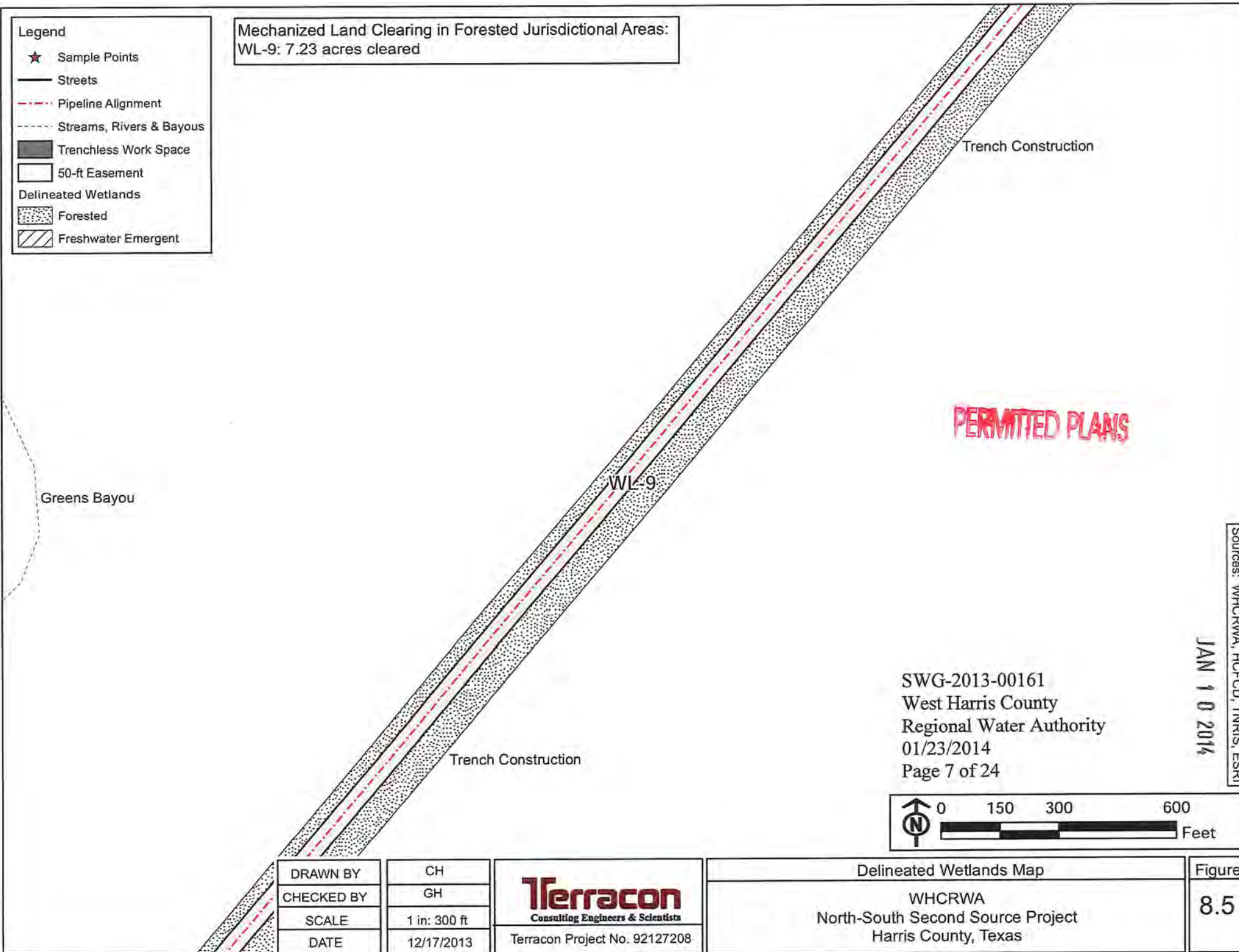
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 Terracon Project No. 92127208

Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
 8.4

- Legend**
- ★ Sample Points
 - Streets
 - - - Pipeline Alignment
 - - - Streams, Rivers & Bayous
 - Trenchless Work Space
 - 50-ft Easement
 - Delineated Wetlands**
 - ▨ Forested
 - ▧ Freshwater Emergent

Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-9: 7.23 acres cleared



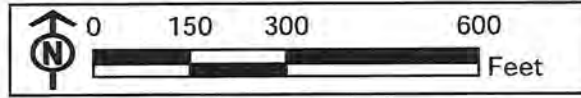
PERMITTED PLANS

Greens Bayou

WL-9

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 7 of 24

Sources: WHCRWA, HCFCD, TNRS, ESRI
 JAN 10 2014



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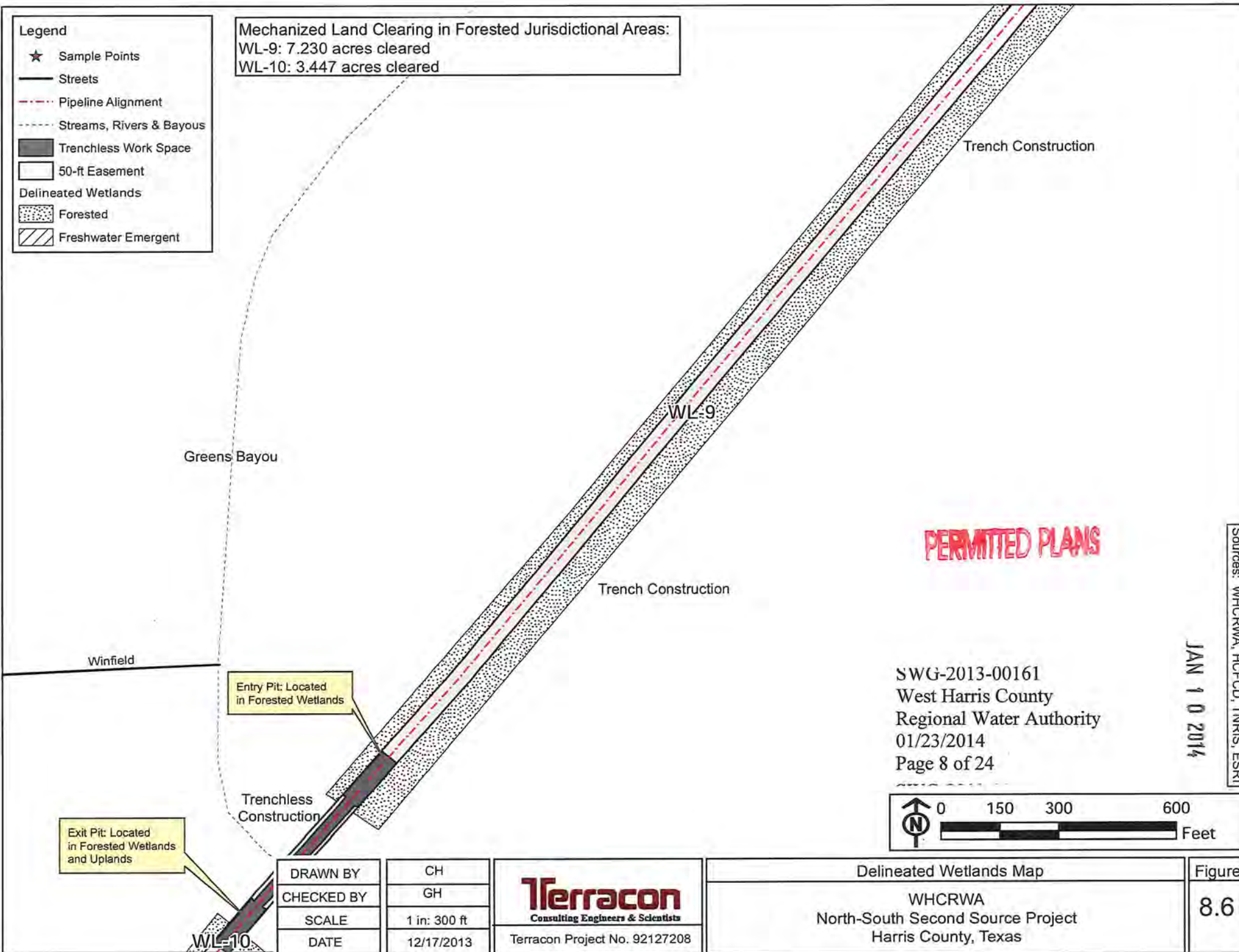
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Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
 8.5

- Legend**
- ★ Sample Points
 - Streets
 - - - Pipeline Alignment
 - - - Streams, Rivers & Bayous
 - Trenchless Work Space
 - 50-ft Easement
 - Delineated Wetlands**
 - ▨ Forested
 - ▧ Freshwater Emergent

Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-9: 7.230 acres cleared
 WL-10: 3.447 acres cleared

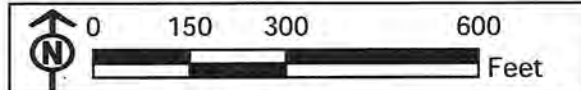


PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 8 of 24

JAN 10 2014

Sources: WHCRWA, HCFCD, TNRS, ESRI



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DATE	12/17/2013

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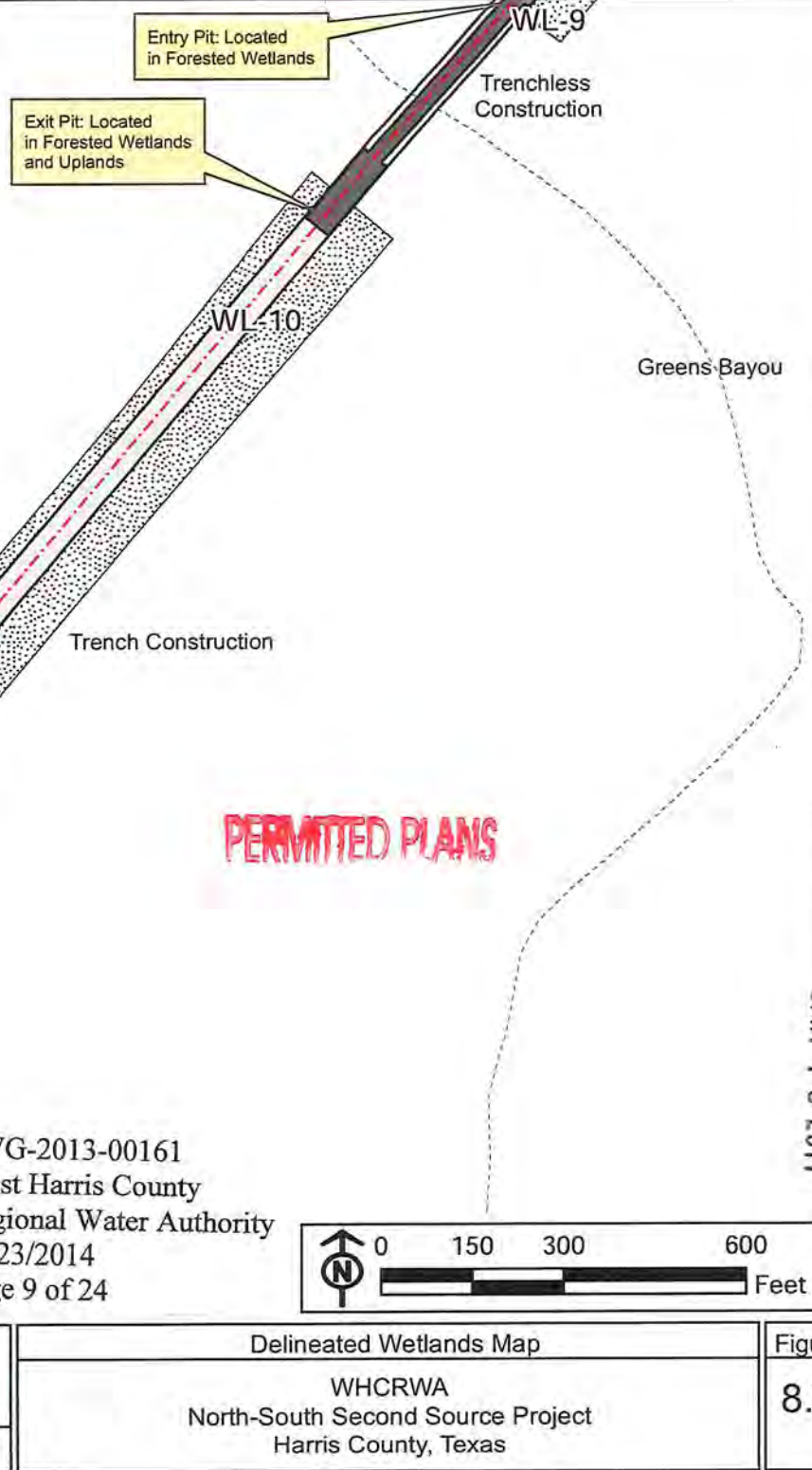
Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
8.6

Legend

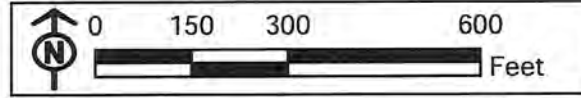
- ★ Sample Points
- Streets
- - - Pipeline Alignment
- Streams, Rivers & Bayous
- Trenchless Work Space
- 50-ft Easement
- Delineated Wetlands**
- ▨ Forested
- ▧ Freshwater Emergent

Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-9: 7.230 acres cleared
 WL-10: 3.447 acres cleared



Sources: WHCRWA, HECOD, TNRS, ESRI
 JAN 7 2014

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 9 of 24



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DATE	12/17/2013

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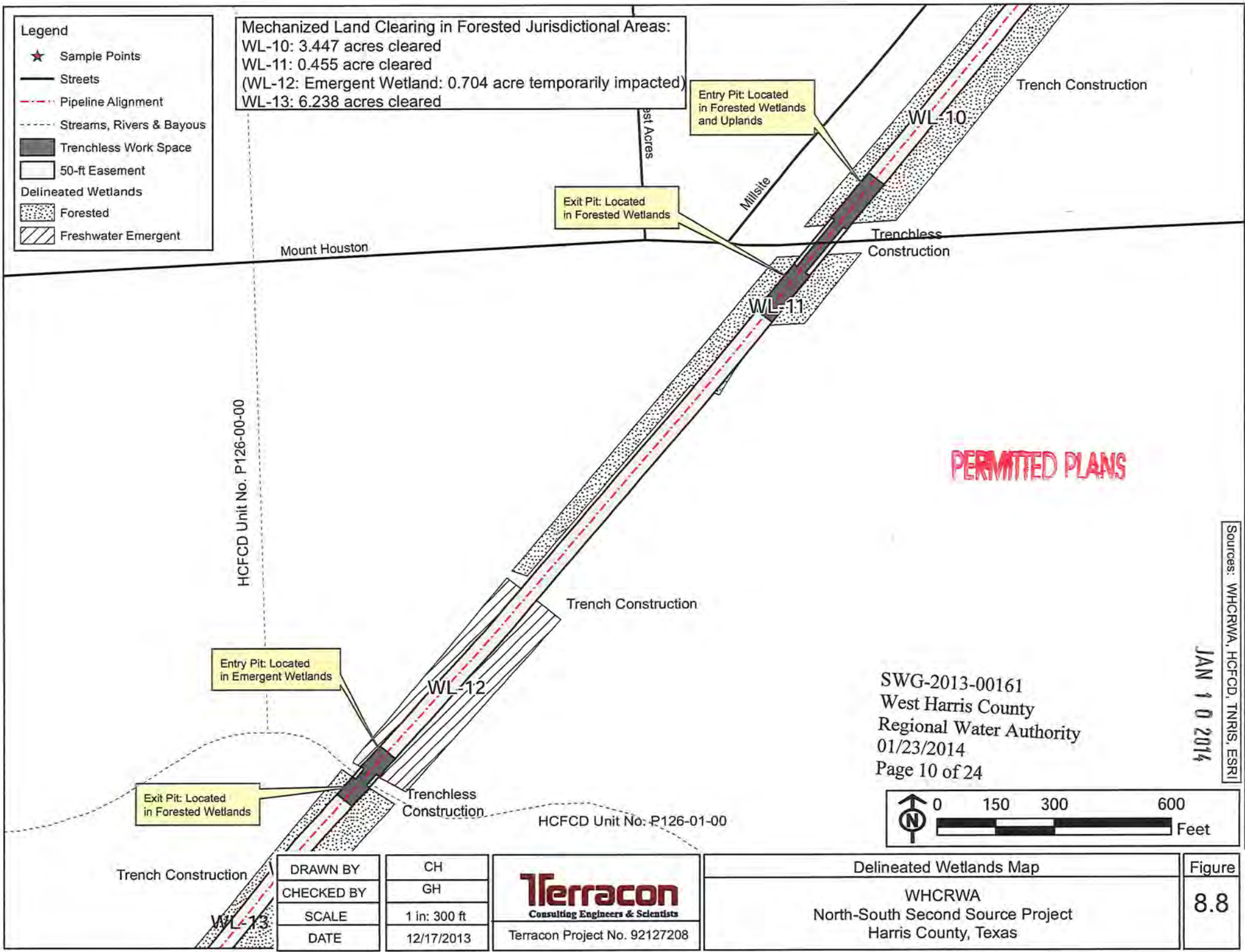
Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
8.7

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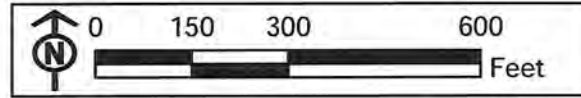
- ★ Sample Points
- Streets
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- ▬ Trenchless Work Space
- 50-ft Easement
- Delineated Wetlands**
- ▨ Forested
- ▧ Freshwater Emergent

Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-10: 3.447 acres cleared
 WL-11: 0.455 acre cleared
 (WL-12: Emergent Wetland: 0.704 acre temporarily impacted)
 WL-13: 6.238 acres cleared



PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 10 of 24



Sources: WHCRWA, HCFCU, TNRS, ESRI
 JAN 10 2014

Trench Construction
 WL-13

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DATE	12/17/2013

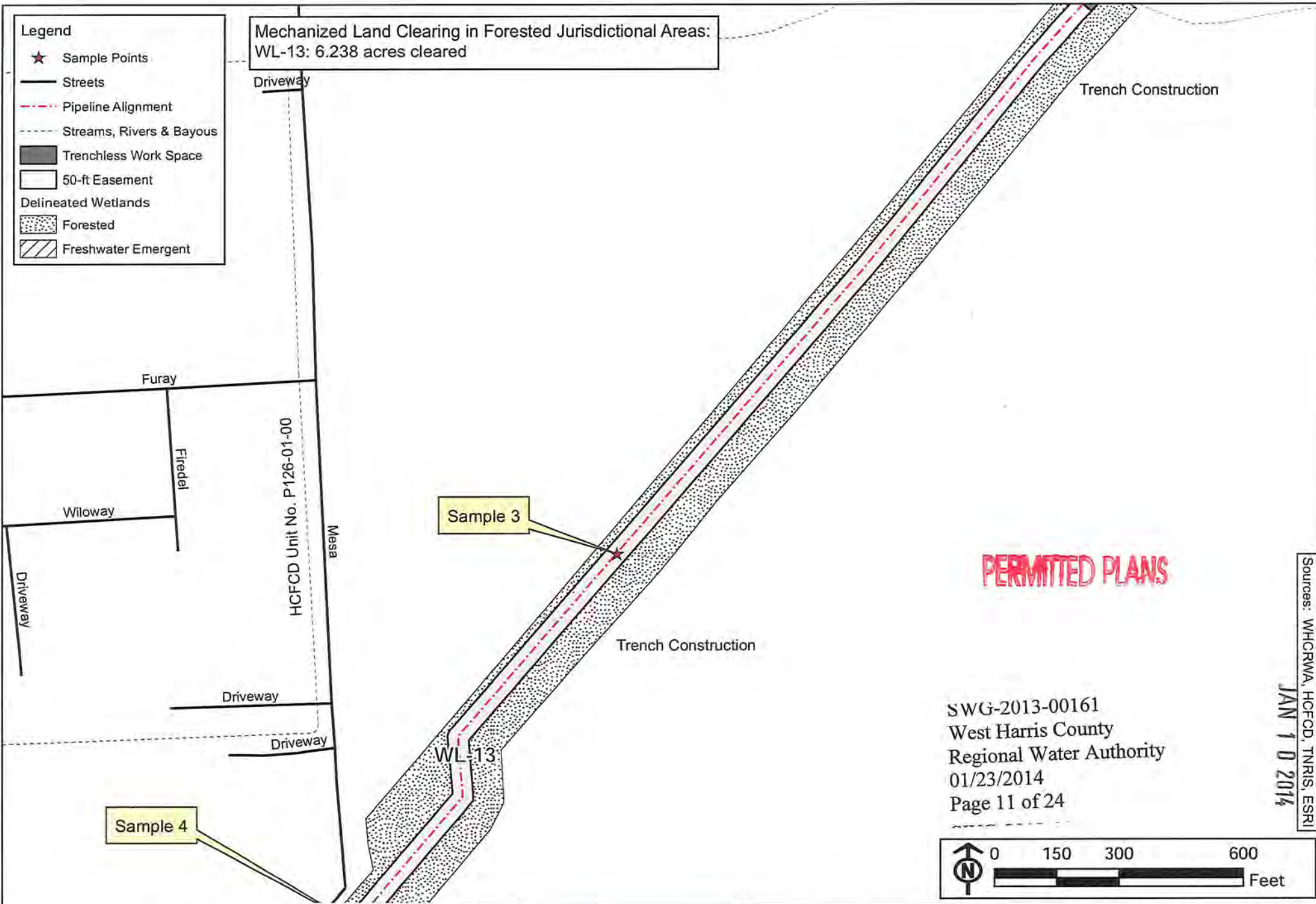
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Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
8.8

- Legend**
- ★ Sample Points
 - Streets
 - - - Pipeline Alignment
 - - - Streams, Rivers & Bayous
 - Trenchless Work Space
 - 50-ft Easement
 - ▨ Delineated Wetlands
 - ▧ Forested
 - ▩ Freshwater Emergent

Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-13: 6.238 acres cleared



PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 11 of 24

Sources: WHCRWA, HCFCD, TNRS, ESRI
 JAN 10 2014

Sample 4

Sample 3

HCFC Unit No. P126-01-00

Mesa

Furay

Firebel

Wiloway

Driveway

Driveway

Driveway

Trench Construction

Trench Construction

WL-13

Trench Construction

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DATE	12/17/2013

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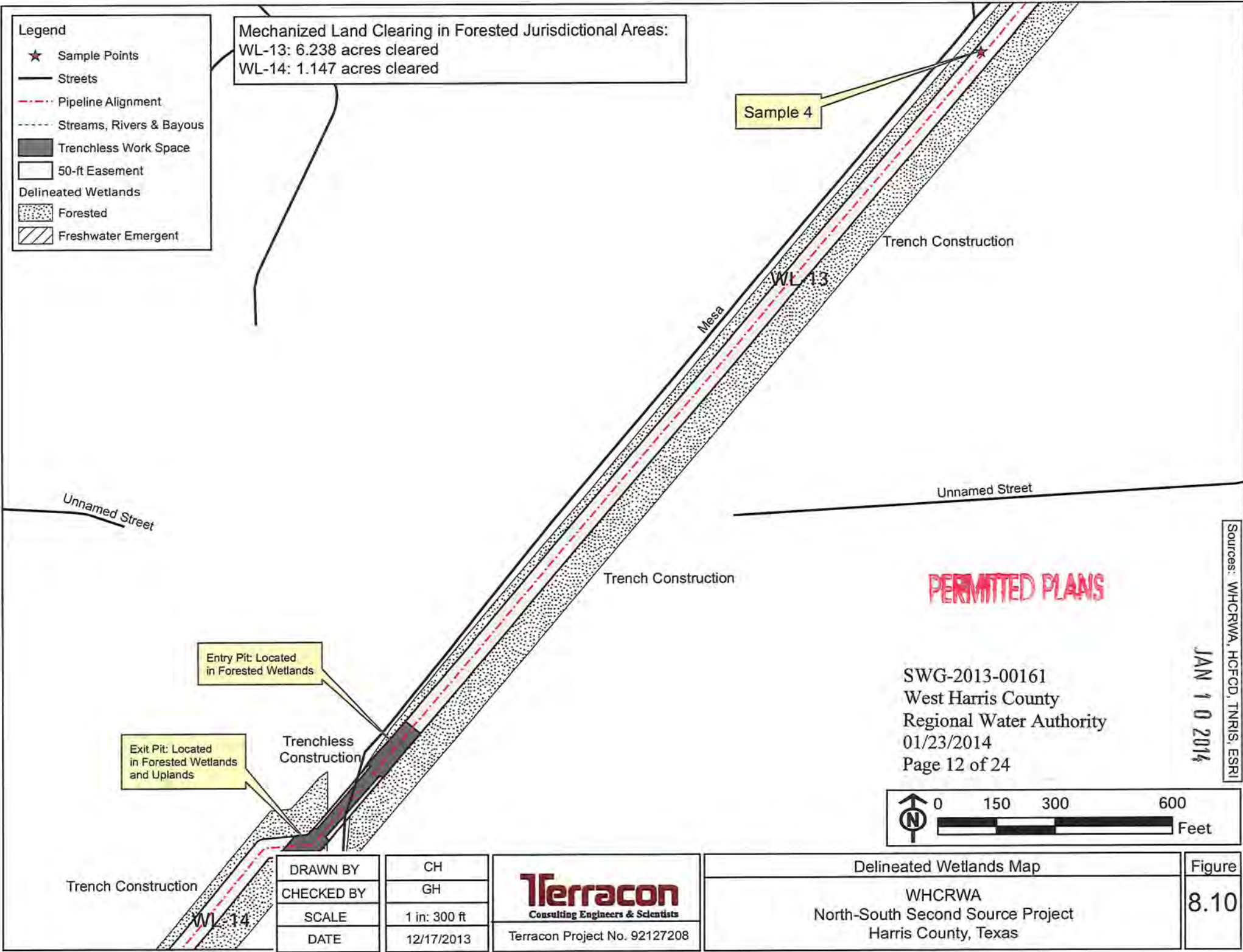
Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
 8.9

- Legend**
- ★ Sample Points
 - Streets
 - - - Pipeline Alignment
 - - - Streams, Rivers & Bayous
 - Trenchless Work Space
 - 50-ft Easement
 - Delineated Wetlands**
 - ▨ Forested
 - ▧ Freshwater Emergent

Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-13: 6.238 acres cleared
 WL-14: 1.147 acres cleared

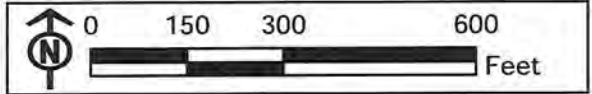
Sample 4



PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 12 of 24

Sources: WHCRWA, HCFCD, TNRS, ESRI
 JAN 10 2014



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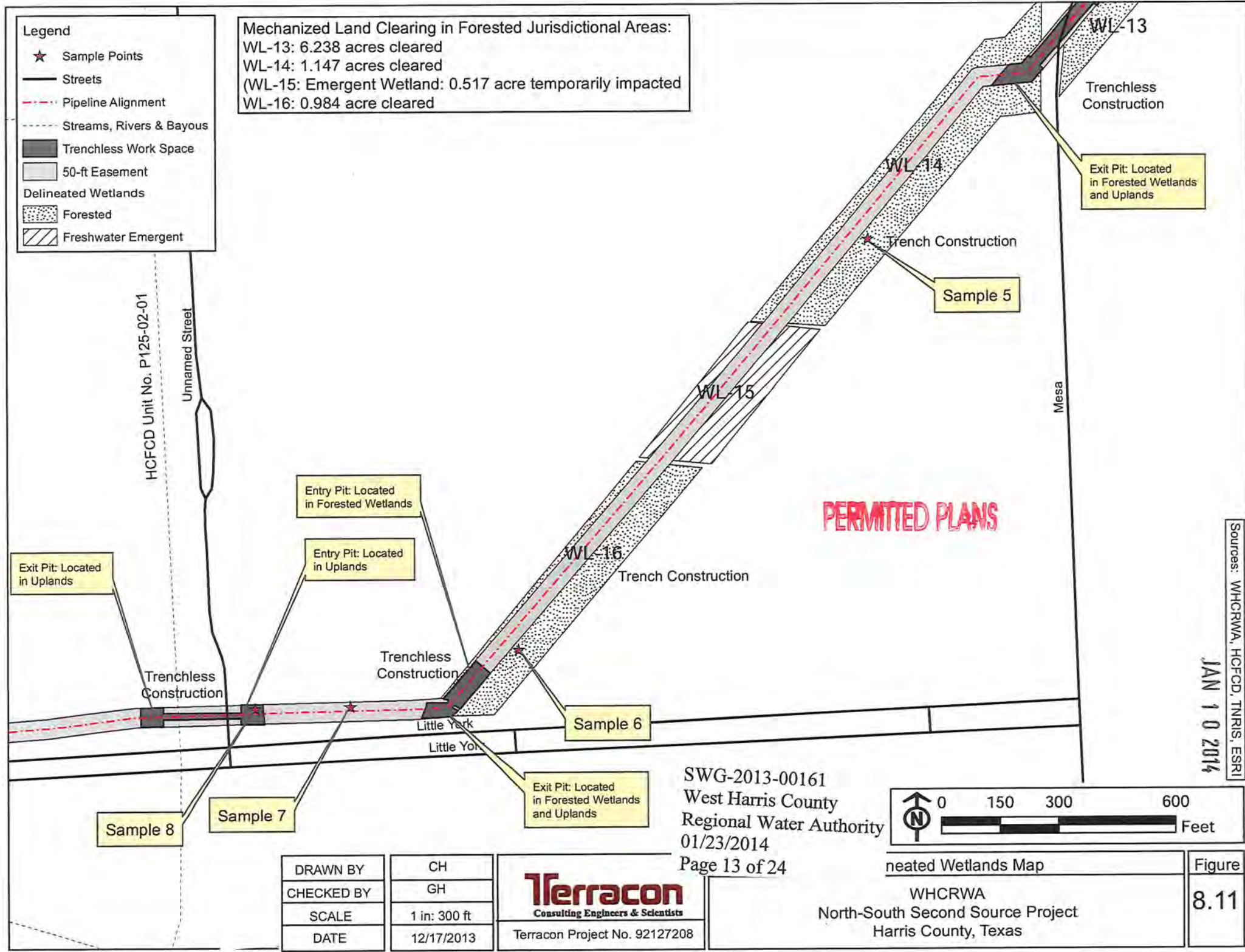
Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
8.10

Legend

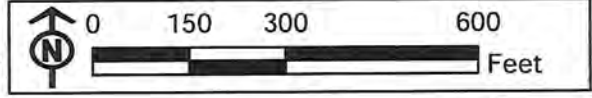
- ★ Sample Points
- Streets
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- Trenchless Work Space
- 50-ft Easement
- Delineated Wetlands**
- ▨ Forested
- ▧ Freshwater Emergent

Mechanized Land Clearing in Forested Jurisdictional Areas:
 WL-13: 6.238 acres cleared
 WL-14: 1.147 acres cleared
 (WL-15: Emergent Wetland: 0.517 acre temporarily impacted)
 WL-16: 0.984 acre cleared



Sources: WHCRWA, HCFCD, TNRS, ESRI
 JAN 10 2014

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 13 of 24



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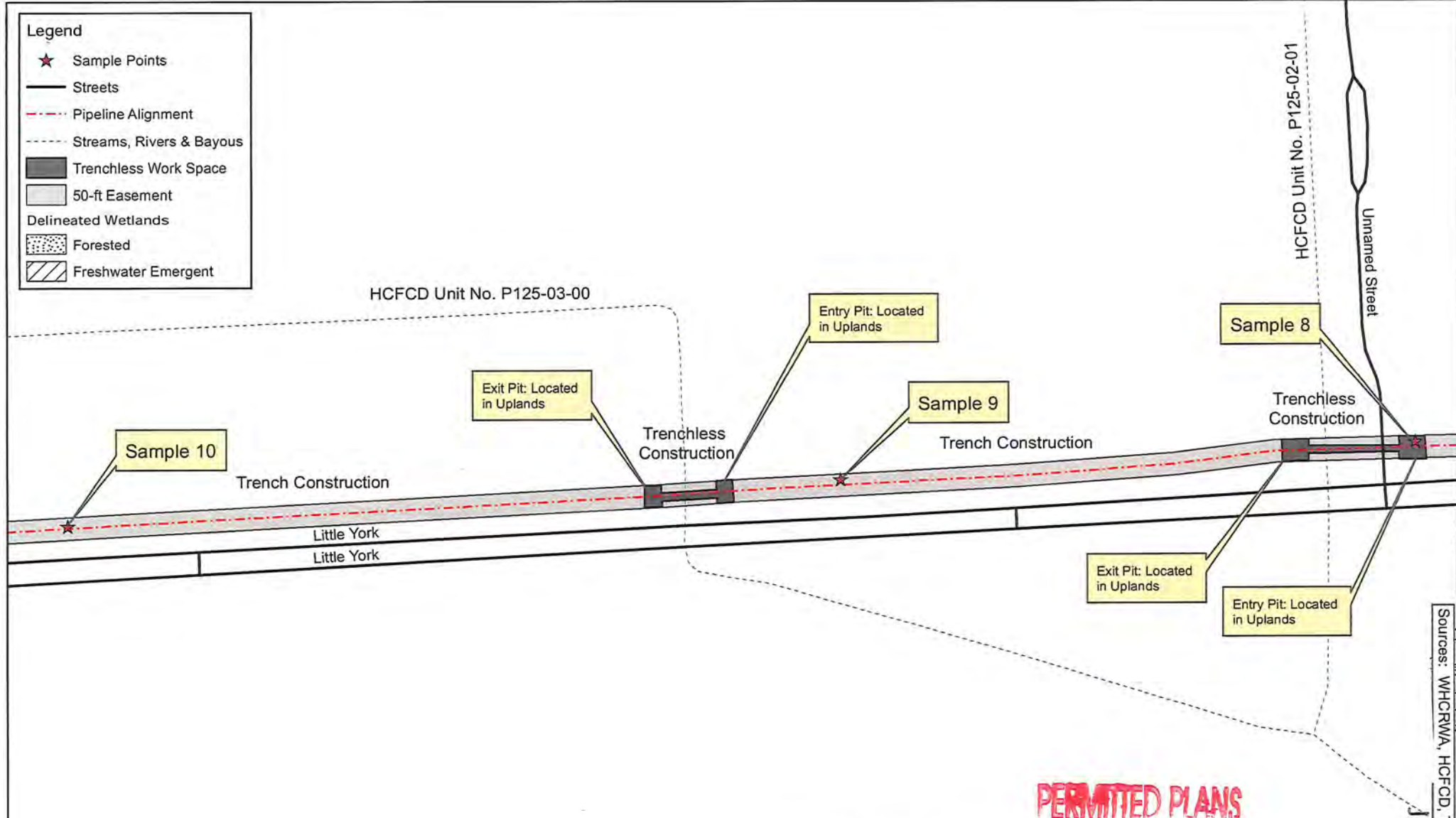


Terracon Project No. 92127208

Delineated Wetlands Map		Figure
WHCRWA North-South Second Source Project Harris County, Texas		8.11

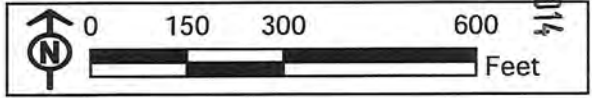
Legend

- ★ Sample Points
- Streets
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- Trenchless Work Space
- 50-ft Easement
- ▨ Delineated Wetlands
 - ▨ Forested
 - ▨ Freshwater Emergent



PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 14 of 24



Sources: WHCRWA, HCFCU, TNRS, ESRI
 JAN 10 2014

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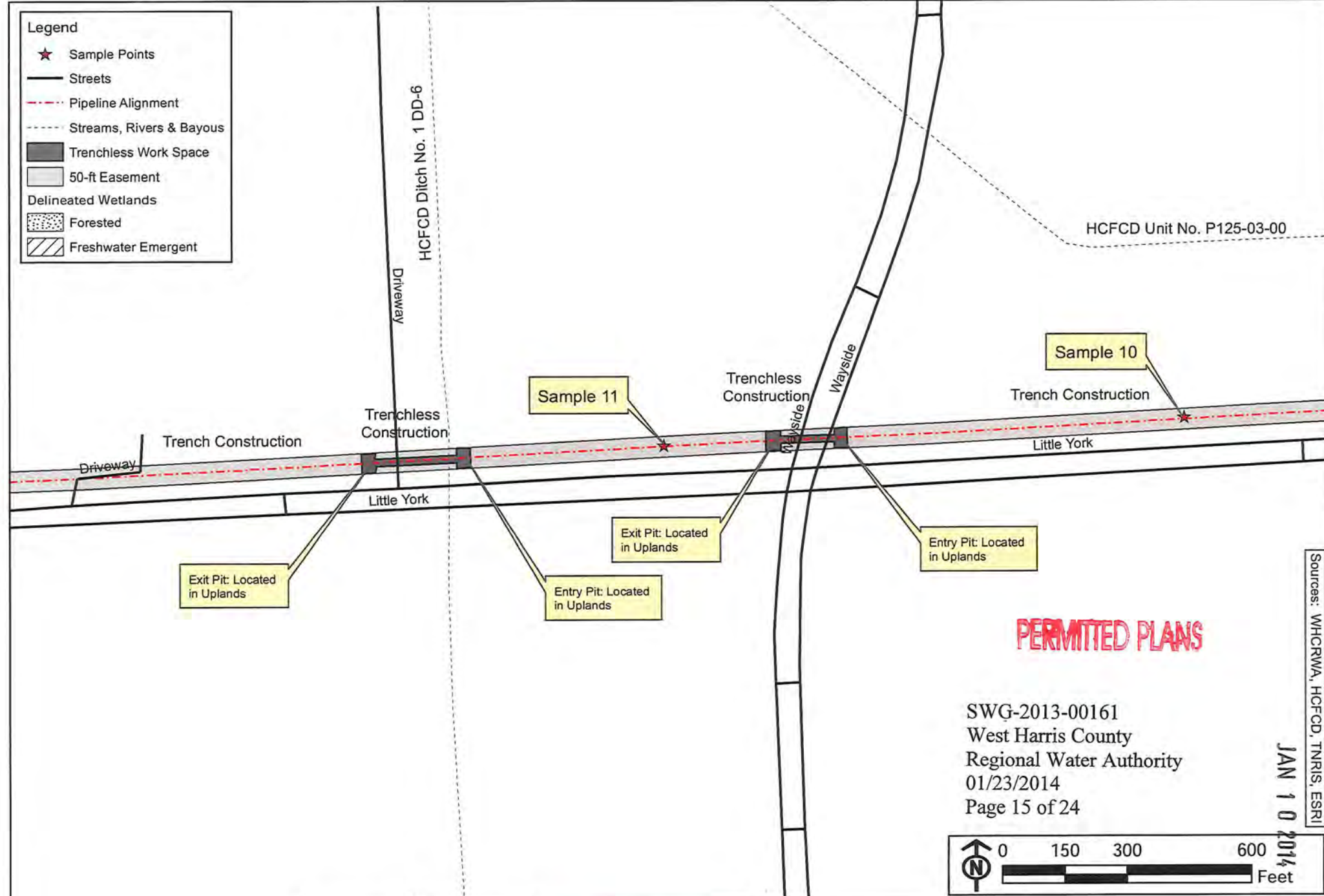
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Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

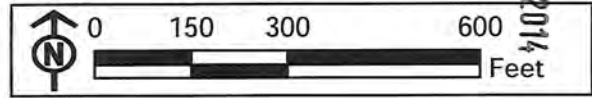
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- Legend**
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 - Streets
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 - - - Streams, Rivers & Bayous
 - Trenchless Work Space
 - 50-ft Easement
 - Delineated Wetlands
 - ▨ Forested
 - ▧ Freshwater Emergent



PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 15 of 24



Sources: WHCRWA, HCFC, TNRS, ESRI

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DATE	12/17/2013

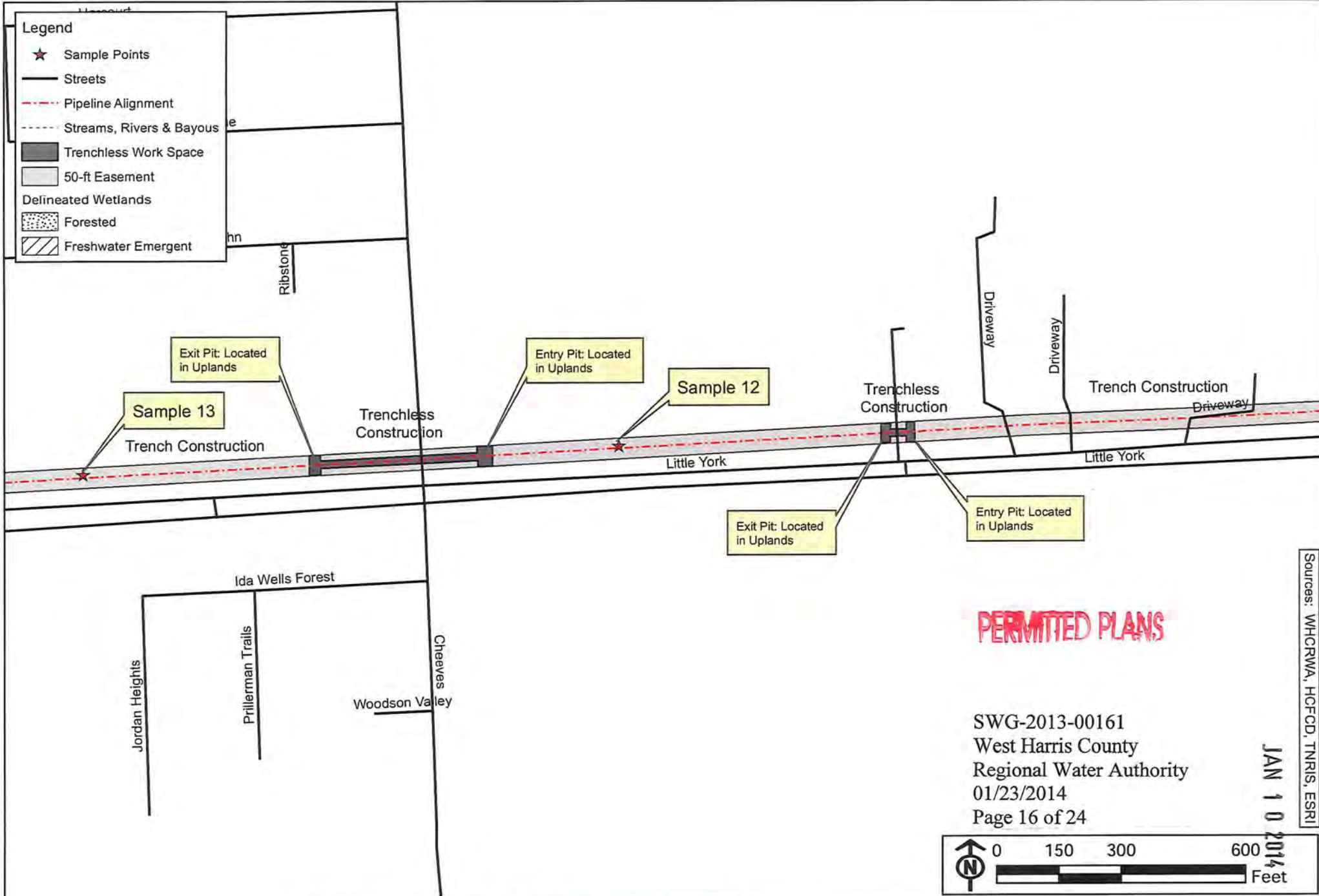
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1 in: 300 ft
12/17/2013

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 Terracon Project No. 92127208

Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
8.13

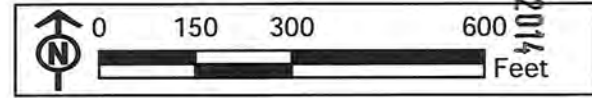
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 - Streets
 - - - Pipeline Alignment
 - - - Streams, Rivers & Bayous
 - Trenchless Work Space
 - 50-ft Easement
 - ▨ Delineated Wetlands
 - ▨ Forested
 - ▨ Freshwater Emergent



Sources: WHCRWA, HCFCD, TNRS, ESRI

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 16 of 24

JAN 10 2014



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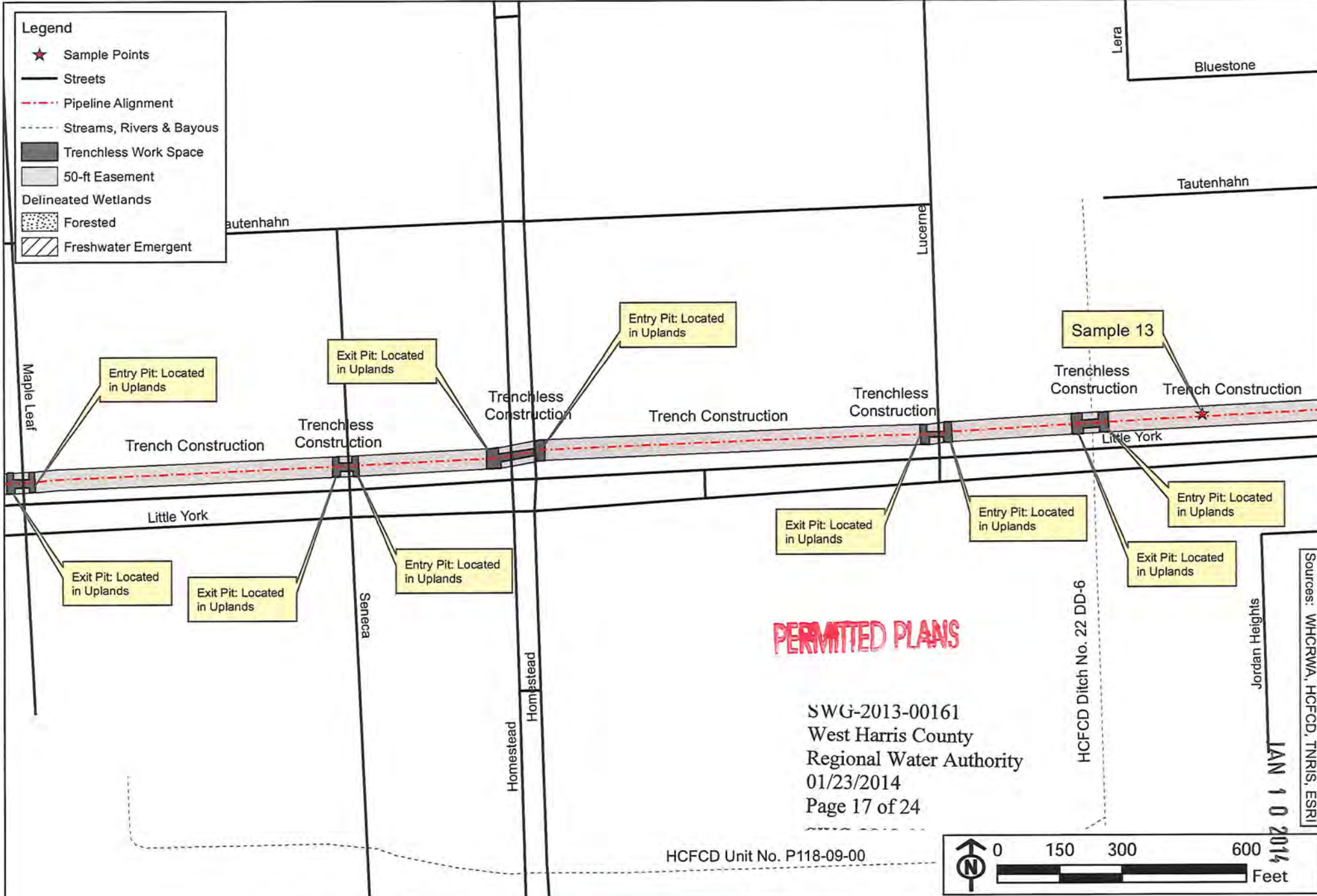
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 Terracon Project No. 92127208

Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
8.14

Legend

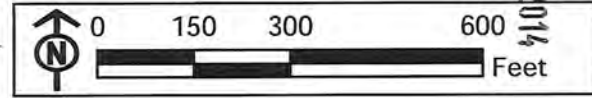
- ★ Sample Points
- Streets
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- Trenchless Work Space
- 50-ft Easement
- ▨ Delineated Wetlands
 - ▨ Forested
 - ▨ Freshwater Emergent



PERMITTED PLANS

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 17 of 24

HCFCU Unit No. P118-09-00



Sources: WHCRWA, HCFCU, TNRS, ESRI

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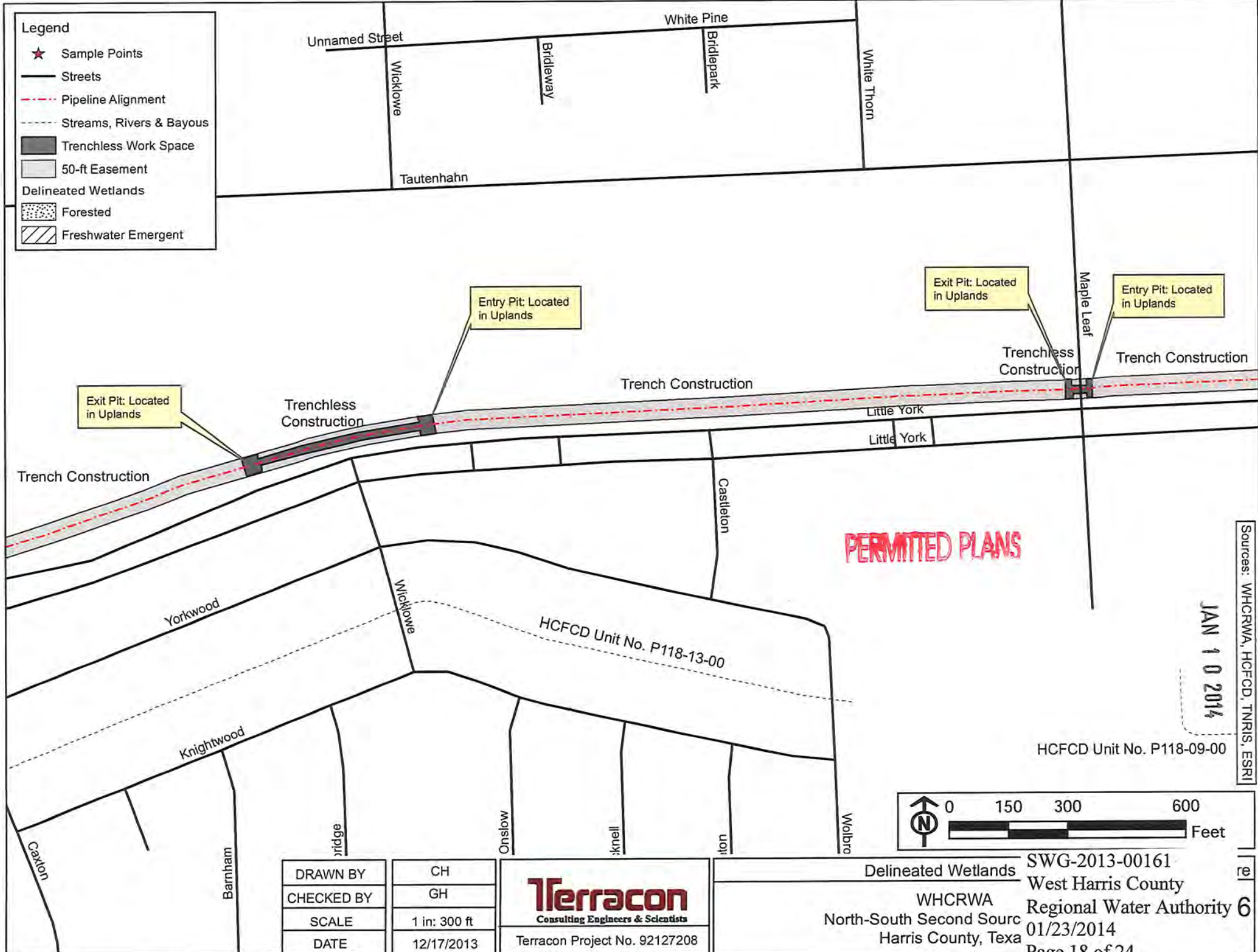
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 Consulting Engineers & Scientists
 Terracon Project No. 92127208

Delineated Wetlands Map
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

Figure
8.15

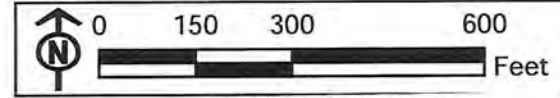
Legend

- ★ Sample Points
- Streets
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- Trenchless Work Space
- 50-ft Easement
- Delineated Wetlands**
- ▨ Forested
- ▧ Freshwater Emergent



Sources: WHCRWA, HCFC, TNRS, ESRI

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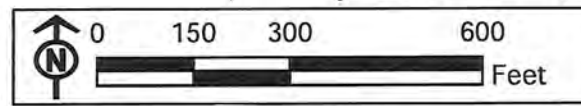
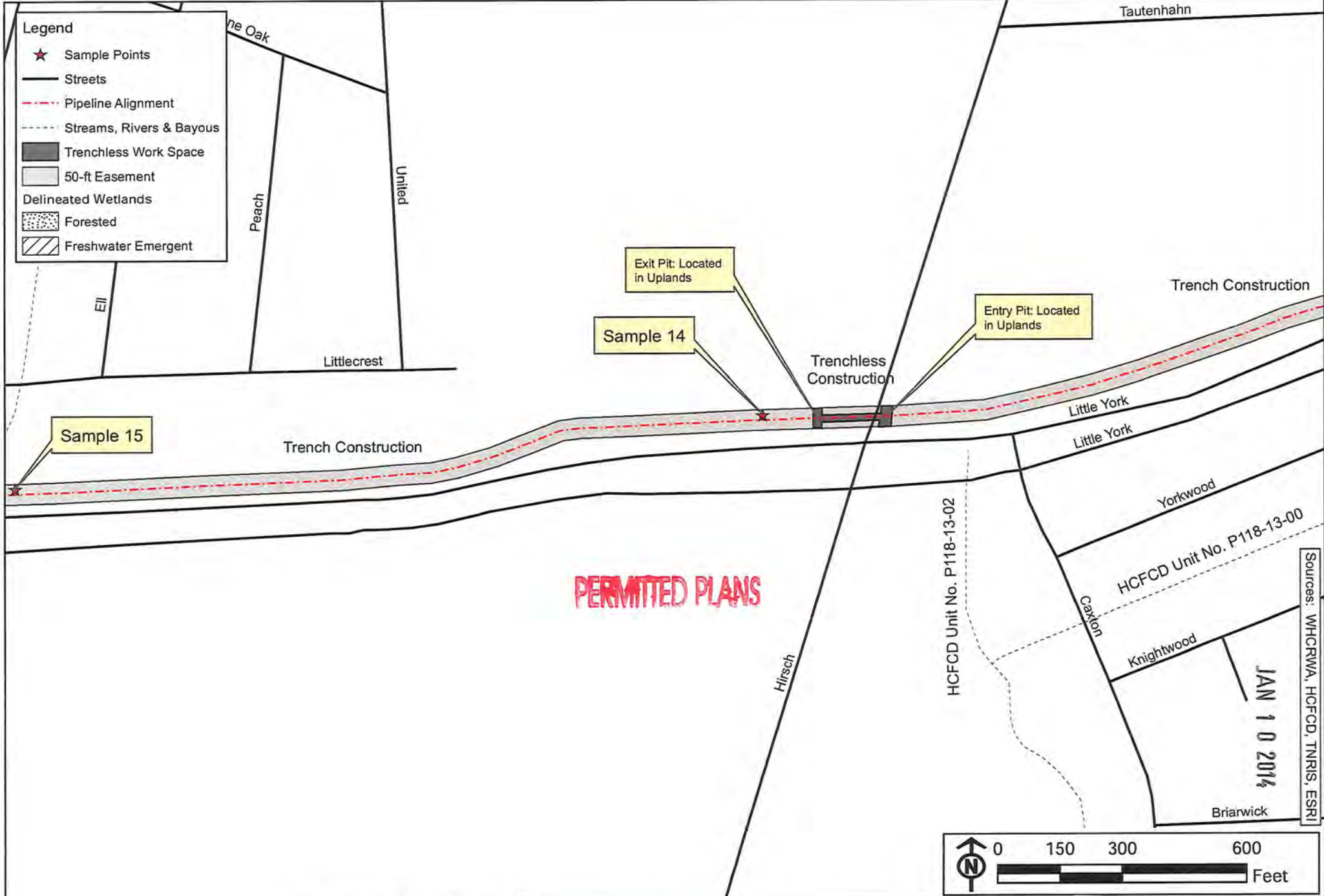
Delineated Wetlands
 WHCRWA
 North-South Second Sourc
 Harris County, Texas

SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014

6
 Page 18 of 24

Legend

- ★ Sample Points
- Streets
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- Trenchless Work Space
- 50-ft Easement
- Delineated Wetlands**
- ▨ Forested
- ▧ Freshwater Emergent



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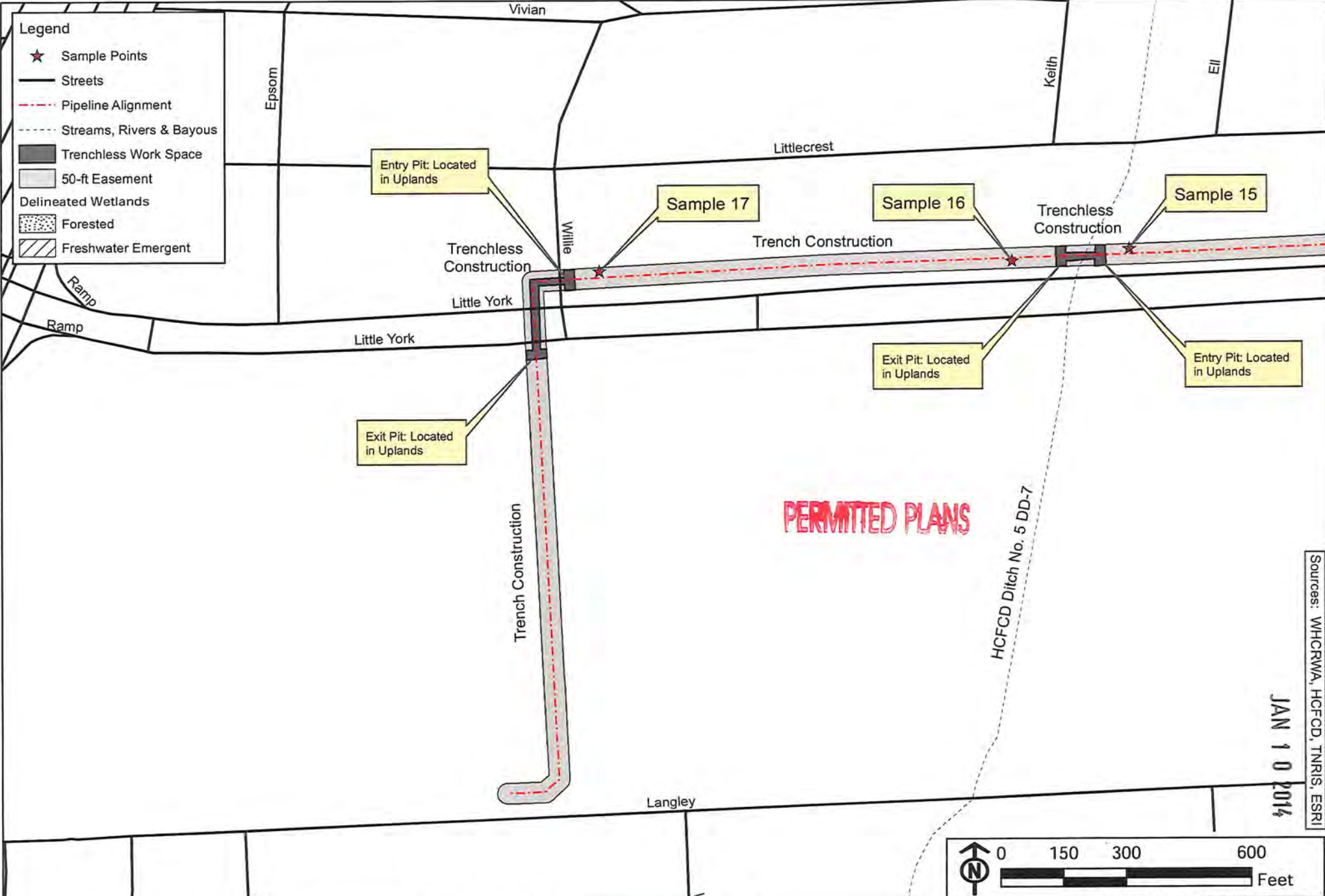
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Delineated Wetlands	SWG-2013-00161	ure
WHCRWA	West Harris County	17
North-South Second Sourc	Regional Water Authority	
Harris County, Tex	01/23/2014	

Sources: WHCRWA, HCFCD, TNRS, ESRI

JAN 10 2014

- Legend**
- ★ Sample Points
 - Streets
 - - - Pipeline Alignment
 - Streams, Rivers & Bayous
 - Trenchless Work Space
 - 50-ft Easement
 - ▨ Delineated Wetlands
 - ▨ Forested
 - ▨ Freshwater Emergent

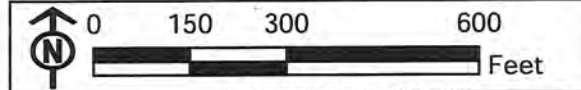


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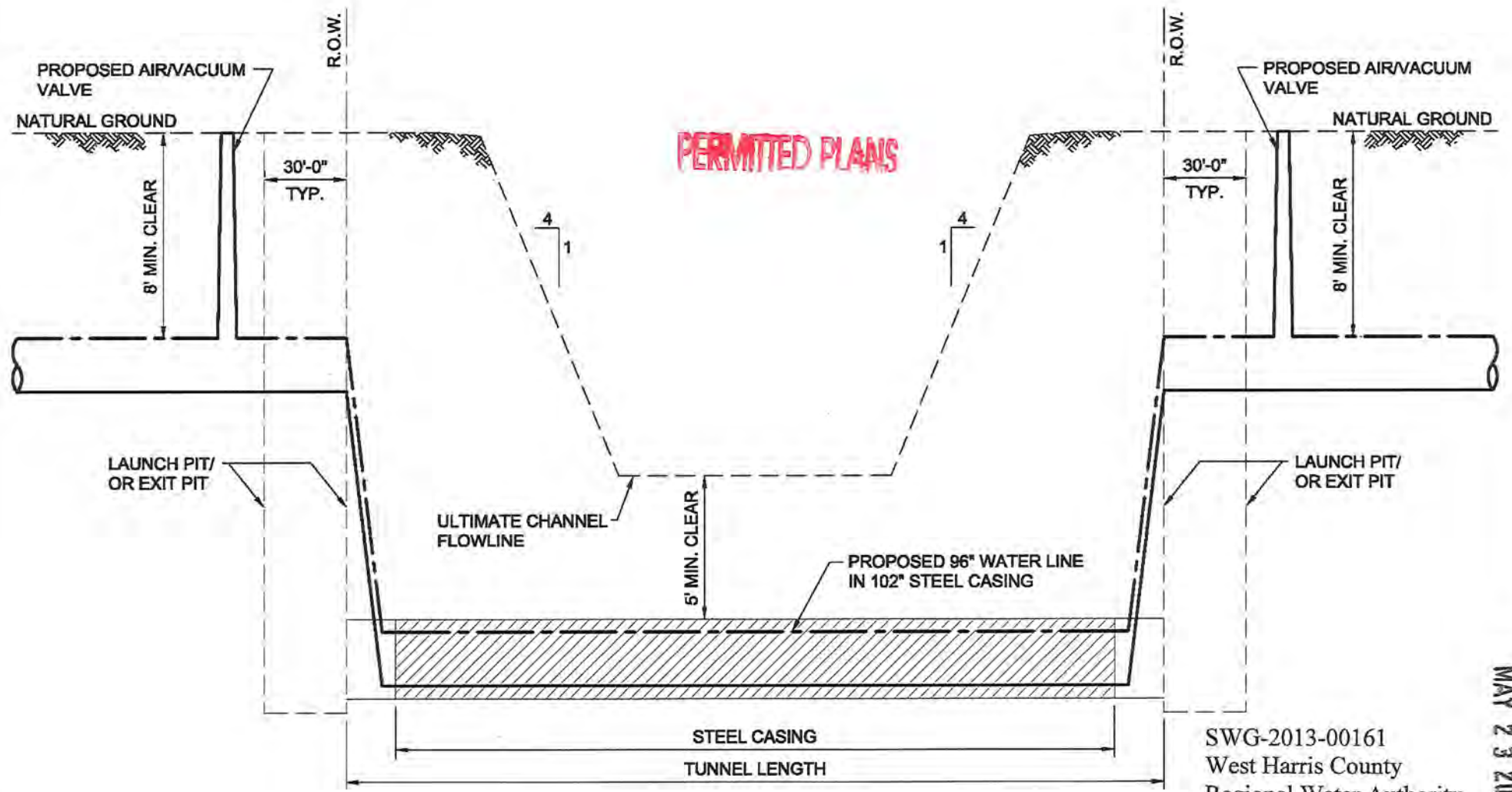
Sources: WHCRWA, HCFCO, TNRS, ESRI



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Delineated Wetlands	SWG-2013-00161
WHCRWA	West Harris County Regional Water Authority
North-South Second Source	01/23/2014
Harris County, Texas	Page 20 of 24



SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 21 of 24

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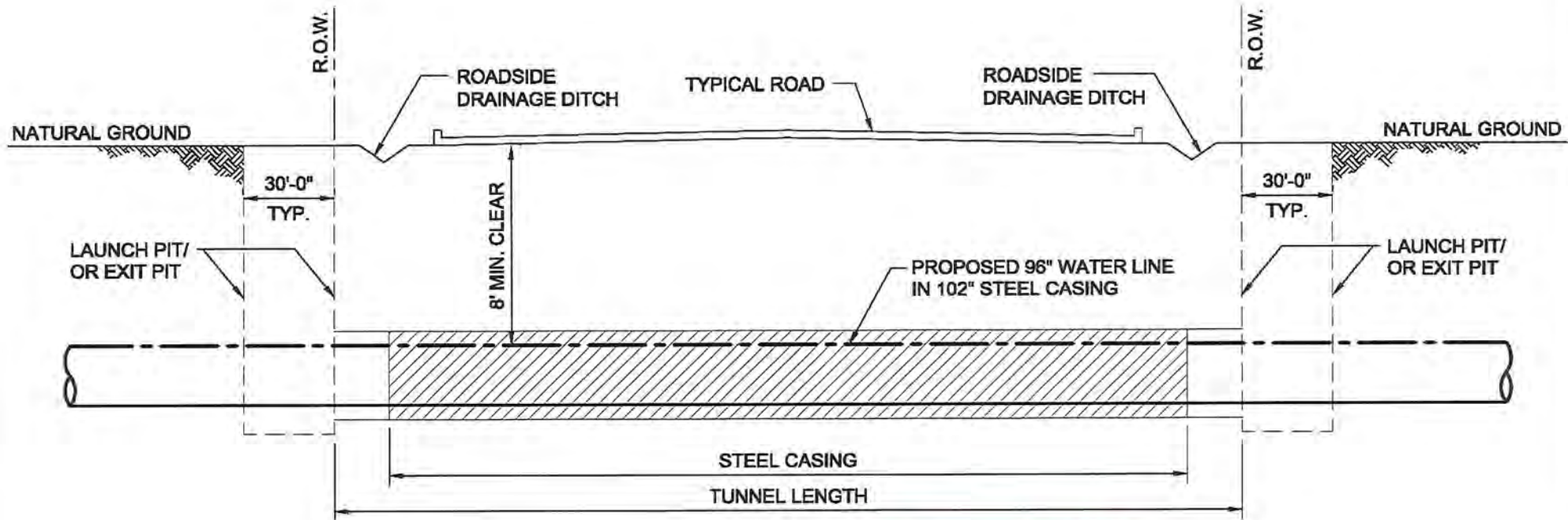
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Typical Harris County Flood Control Channel Crossing
WHCRWA North-South Second Source Project Harris County, Texas

Figure	9.0
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SWG-2013-00161
 West Harris County
 Regional Water Authority
 01/23/2014
 Page 22 of 24

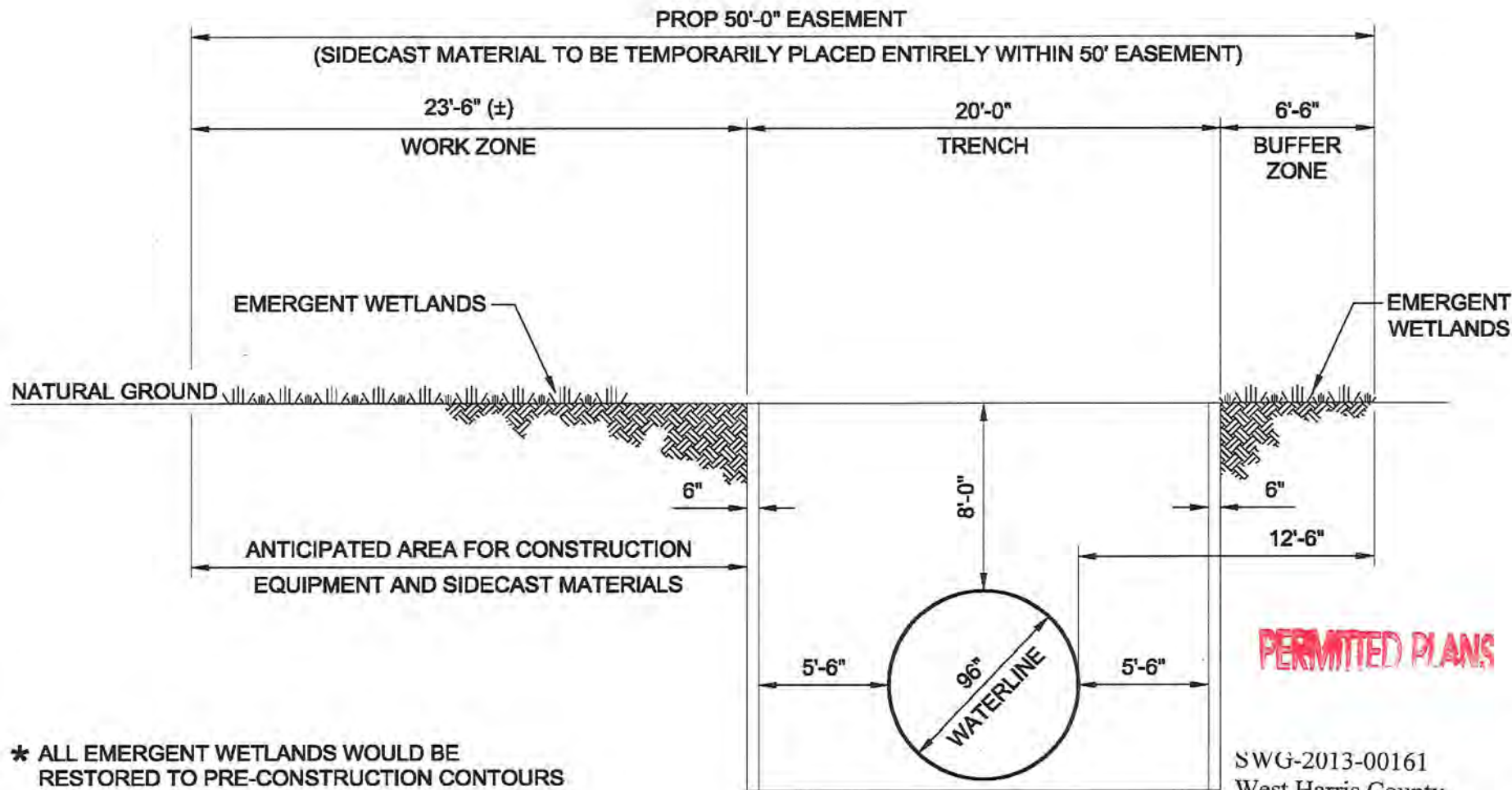
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Typical Road Crossing Section
WHCRWA North-South Second Source Project Harris County, Texas

Figure
9.1



* ALL EMERGENT WETLANDS WOULD BE RESTORED TO PRE-CONSTRUCTION CONTOURS AND CONDITIONS.

SWG-2013-00161
West Harris County
Regional Water Authority
01/23/2014
Page 23 of 24

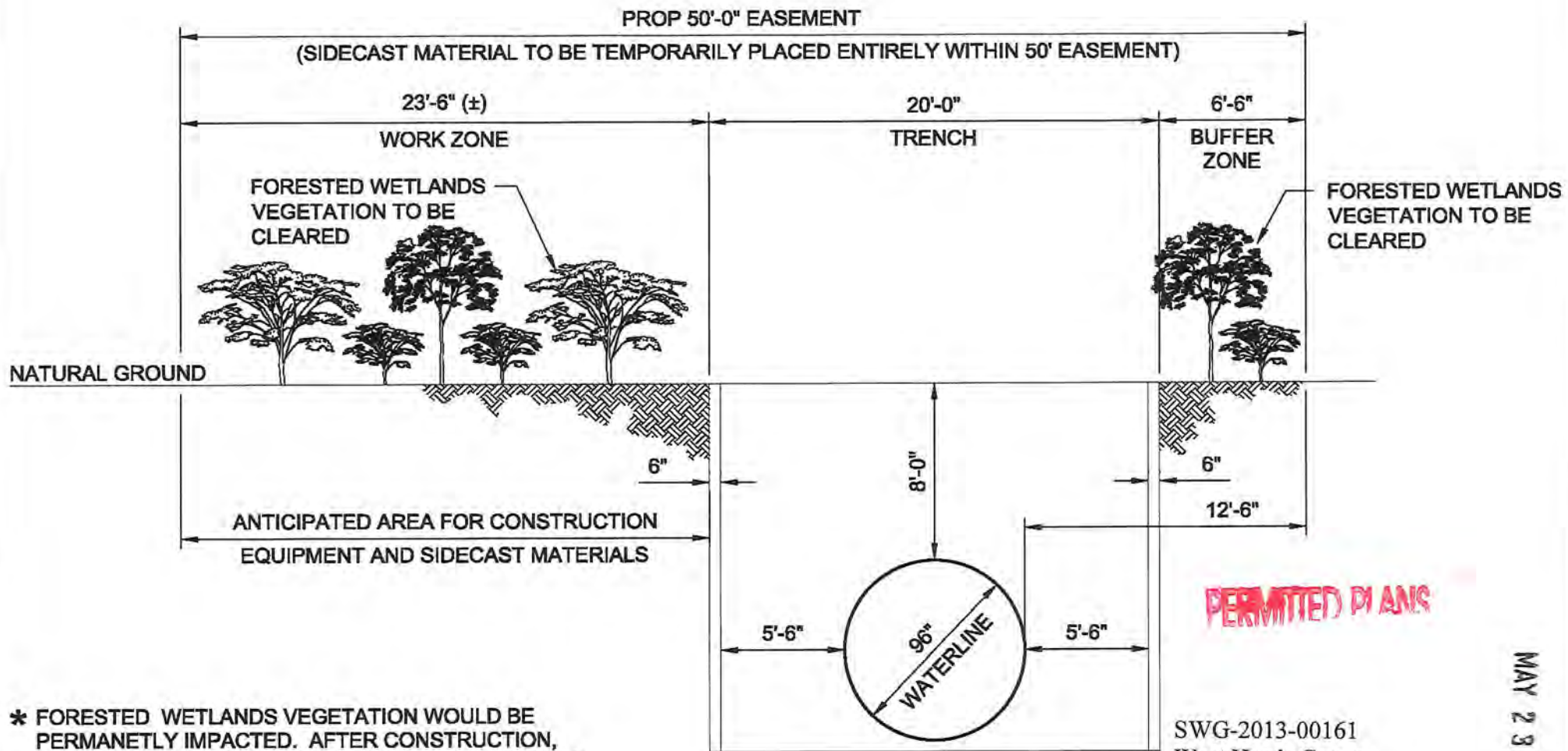
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Typical Trench Emergent Wetland Crossing
WHCRWA North-South Second Source Project Harris County, Texas

Figure
9.2



* FORESTED WETLANDS VEGETATION WOULD BE PERMANENTLY IMPACTED. AFTER CONSTRUCTION, AREAS WOULD FUNCTION AS EMERGENT WETLANDS

SWG-2013-00161
West Harris County
Regional Water Authority
01/23/2014
Page 24 of 24

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Typical Trench Forested Wetland Crossing	Figure
WHCRWA North-South Second Source Project Harris County, Texas	9.3



Compensatory Mitigation Plan

SWG-2013-00161
Off-Site Mitigation Area



**ADVANCED
ECOLOGY**
enhancing natural resource value

Prepared For

**West Harris County Regional
Water Authority**

Prepared By

**Advanced Ecology
Revised February 2014**

Corporate Office

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Table of Contents

Part I: Project Information.....	1
Part II: Compensatory Mitigation Plan	1
1. Objectives	1
2. Site Selection	2
3. Site Protection Instrument.....	3
4. Baseline Information	3
5. Determination of Credits.....	3
6. Mitigation Work Plan	4
7. Maintenance Plan.....	4
8. Performance Standards	4
9. Monitoring Requirements.....	4
10. Long-term Management Plan	5
11. Adaptive Management Plan.....	5
12. Financial Assurances.....	6
Part III: Supplemental Information	7

Mitigation Plan

Part I: Project Information

Project Name: West Harris County Regional Water Authority Off-Site Mitigation Area
SWG Permit No.: SWG-2013-00161
Applicant: West Harris County Regional Water Authority
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027
Project Location: Houston, TX
County: Harris

West Harris County Regional Water Authority (WHCRWA) is proposing the construction of approximately nine miles of 96-inch diameter waterline in Harris County, Texas (the Project). Terracon Consultants, Inc. (Terracon) prepared a *Preliminary Waters of the U.S. Delineation* on behalf of WHCRWA for use in the preliminary determination of the jurisdictional status of wetlands and other non-wetland waters of the U.S. for the project. During this review, Terracon found that the construction of the project would result in the permanent conversion of approximately 28.3 acres of potentially jurisdictional forested wetland habitat to emergent wetland habitat (impact areas).

Terracon conducted a functional analysis of the wetlands using the U.S. Army Corps of Engineers (USACE) Galveston District (SWG) approved Riverine Forested Hydrogeomorphic Interim Method (iHGM) (Appendices C and D). The total estimated functional loss (reported in Functional Capacity Units (FCUs)) associated with construction of the project is as follows:

Functional Category	Total
Physical: Temporary Storage & Detention of Surface Water (TSSW)	2.82
Biological: Maintenance of Plant & Animal Communities (MPAC)	13.20
Chemical: Removal & Sequestration of Elements and Compounds (RSEC)	8.38

Advanced Ecology, Ltd. (AEL) has prepared this Compensatory Mitigation Plan (MP) on behalf of WHCRWA to provide compensatory mitigation for the proposed impacts to jurisdictional waters of the U.S., including wetlands resulting from construction of the Project. This MP has been developed to meet the standards outlined in 33 CFR 332.4(c).

Part II: Compensatory Mitigation Plan

1. Objectives

The goal of the WHCRWA Off-Site Mitigation Area (MA) is to provide a source of off-site compensatory mitigation for adverse impacts to waters of the U.S., including wetlands, resulting from implementation of the Project. The ecological objective of the MA is to preserve 51 acres of a high quality, forested wetland community adjacent to Green's Bayou (Appendices A, B, and C).

2. Site Selection

Both the Project and MA are located within the Buffalo-San Jacinto (HUC-12040104). The MA is located approximately 1.3 miles away from the central portion of the proposed impact area (Appendix A). Currently, no approved mitigation banks or in-lieu fee projects have credits available to service the impacts associated with the project. Therefore, WHCRWA proposes to develop a suitable permittee responsible off-site mitigation area.

Efforts undertaken by WHCRWA to locate an ecologically suitable permittee responsible off-site mitigation area have resulted in the proposed MA. Multiple restoration, enhancement, and preservation sites were evaluated by habitat type, availability, potential aquatic uplift, and proximity to the project; and it was determined that the proposed MA was the most appropriate (based on availability, aquatic resource, proximity, and timing of the Project). The MA represents an ecologically suitable compensatory mitigation site, determined using a watershed approach, for a number of reasons:

1. The MA consists of high functioning wetlands, as determined using the SWG Riverine Forested iHGM, that provide important aquatic function to the watershed encompassing the Project.
2. Hydrologic connectivity: Both the MA and the Project are located in Buffalo-San Jacinto (HUC-12040104).
3. The MA is within close proximity to the Project.
4. Both the MA and the Project include the same aquatic resource type (Riverine HGM Class)
5. The acreage which composes the MA is adjacent to Green's Bayou and under significant threat of timber harvesting.
6. The MA is contiguous with another proposed mitigation site and is directly across Green's Bayou from Green's Bayou Mitigation Bank (Appendix A, Figure 4).
7. The appropriateness of utilizing preservation as a management option for compensatory purposes for the area which composes the MA has been approved and verified by the USACE-SWG.

In general, the MA is conducive to fulfilling local watershed needs, achieving long-term sustainability and site integrity, providing potential for aquatic habitat diversity, habitat connectivity, and consolidation of wetland conservation projects (compatibility with adjacent land uses). Due to the location and similarity of wetland classification of the MA to the impact site, the ecological suitability of the MA is justifiable as compensatory mitigation for unavoidable losses of aquatic resources resulting from implementation of the WHCRWA project.

3. Site Protection Instrument

WHCRWA shall dedicate the MA upon issuance of the permit as an aquatic ecosystem preserve in perpetuity with a conservation easement held by a third party approved by the USACE. The conservation easement holder will be an accredited land conservancy, preferably a non-governmental, non-profit organization dedicated to the protection of land. The Texas Land Conservancy's Lands Committee agreed to hold the conservation easement for the MA. The MA shall not be disturbed, except by those USACE-approved activities that would not adversely affect the intended extent, condition, and function of the MA, or those activities specifically provided for in this MP. WHCRWA shall record the USACE-approved conservation easement with the Harris County Clerk and provide a copy of the recorded conservation easement to the Regulatory Branch, USACE, Galveston District within 180 days of impact to a jurisdictional area at the Project site. The conservation easement shall not be removed or modified without written approval of the USACE. The conservation easement will contain a clause requiring 60 days' notice to the USACE before any change in the recorded document can be allowed. Conveyance of any interest in the property shall be subject to the recorded conservation easement.

4. Baseline Information

Presently, the MA acreage is comprised of approximately 51 acres of high quality, forested wetlands adjacent to Green's Bayou (Appendix B). The MA is characterized by woody tree species 20 feet in height or taller. The species composition of these areas is dominated by hardwood tree species including willow oak, water oak, sweetgum, sugarberry, red maple, American elm, and notably, a substantial portion of the PFO1A habitat supports large, bald cypress trees. The sapling/shrub component and understory supports a robust population of dwarf palmetto as well as young oaks, red maple, and other shade tolerant species. The herbaceous/vine component includes plants such as red vine, Cherokee sedge, and several species of *Chasmanthium*. Habitat found immediately adjacent to the MA includes forested wetlands, forested uplands, and Green's Bayou. Scattered Chinese tallowtrees were observed in the uplands adjacent to the MA; however none were encountered within the MA while conducting the baseline evaluation. While there were subtle differences within the vegetative community descriptions collected on the wetland delineation sheets, these subtle differences did not necessitate a need to break out the MA into separate WAAs. The MA is represented by a single, highly functional, bottomland hardwood stand and was assessed as such.

5. Determination of Credits

FCUs are established for the MA using the iHGM, as required by the memorandum *SWG-Standard Operating Procedures (SOP); Using HGM to determine Potential Wetland Functions and the Appropriate Compensatory Mitigation for Unavoidable Wetland Impacts* (dated September 11, 2008). The MA is designated as a preservation area and meets the criteria regarding preservation standards as outlined in 33 CFR 332.3(h)(1). The preserved functional capacity of the MA was determined by evaluating and projecting the functional loss associated with timber harvest activities (Appendix B, Table 1). The loss of functional capacity, in FCUs, associated with the implementation of the Project was calculated by determining the baseline conditions of the Project site and subtracting the projected loss of functional capacity associated with the implementation of the Project. The table below shows a comparison of the

preserved functional capacity of the MA and lost functional capacity associated the implementation of the Project.

AOI	Functional Capacity Units		
	TSSW	MPAC	RSEC
Mitigation Site	8.12	17.64	8.50
Project Site*	2.82	13.20	8.38
Delta	5.30	4.44	0.12

*The iHGM evaluation of the Project was conducted by Terracon

6. Mitigation Work Plan

Due to the unique site characteristics in relation to the location of the MA which incorporate high quality wetlands possessing high variable subindex values, preservation is the prescribed management regime. No other restoration or enhancement activities are planned to occur. Site monitoring and exotic species control are discussed in the following Sections.

7. Maintenance Plan

Management practices such as mechanical vegetation control, selective herbicide treatments, prescribed burning, temporary plantings intended to suppress invasive or weed species, erosion control, selective tree removal, and water regime management can be valuable management tools available to WHCRWA in order to maintain a highly functioning system within the MA. These activities may be conducted within the MA provided the activity will enhance aquatic ecosystem functions and not interfere with the long-term ecological objectives of the MA. In the event that the MA is out of compliance with performance standard 3 (detailed below), selective herbicide treatments and/or selective tree falling will be the primary tools utilized in order to minimize unintended tree mortality and to ensure that the performance standard is met.

8. Performance Standards

1. Endowing and Filing of the CE
2. Establishment of financial assurances
3. Exotic species control to ensure that no more than 5% of the MA is comprised of exotic undesirable species, i.e. Chinese tallowtree

9. Monitoring Requirements

Monitoring and reporting requirements are to be in accordance with USACE Regulatory Guidance Letter 08-03 Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources (RGL 08-03). Within six months of approval of this MP, WHCRWA will conduct a baseline assessment to document the baseline conditions have not changed. Annual reports presenting documentation of monitoring findings will be submitted to the USACE by January 31st of each year, for the first 7 years following implementation of this MP. WHCRWA

will conduct annual pedestrian surveys of the MA to evaluate the performance of the MP in accomplishing the goals and objectives of the MA and to ensure that exotic invasive species (i.e. Chinese tallowtree) do not exceed 5% coverage in each strata.

10. Long-term Management Plan

The MA will be managed in perpetuity as a wetland preserve. Any mitigation area is vulnerable to acts of nature such as wildfires, climatic instability, and disease that are beyond the control of WHCRWA. The occurrence of such events may necessitate changes to the MA, including revision of the MP, or activation of adaptive management activities or other pertinent management plans, to allow for actions that would offset and counteract the negative environmental impacts of the events. Depending upon the circumstances, however, allowing nature to take its course may be appropriate, particularly when acceptable environmental conditions are expected to reestablish without intervention. Any change to the MA necessitated by an act of nature beyond the control of WHCRWA shall be specified in a revised MP or other appropriate document and require the approval of both WHCRWA and the USACE. The third party CE holder will be responsible for monitoring the encumbered area to ensure that the conservation values discussed in the CE are maintained in perpetuity.

Valuable mineral resources may exist under the land in this MA. Other parties may own subsurface rights to such mineral resources in whole or in part. Recognizing that surface landowners in the State of Texas cannot wholly control a mineral owner's access to those minerals the landowner, 366 Properties, LLC, shall take all reasonable steps to develop a Mineral Management Plan (MMP) with the mineral owner(s) prior to the initiation of any mineral exploration, production, or transportation activities. The MMP shall include a list of known surface and subsurface ownership interests, a description of anticipated activities and resulting short and long-term impacts on aquatic ecosystem functions and values, and a set of guidelines and best management practices to minimize the adverse impacts. It is important to note that exploration and development of mineral resources within the MA may require a USACE permit. The landowner shall, whenever practicable, work with the subsurface mineral owner(s) to develop leases, easements, and other surface use agreements that are consistent with the MMP. The landowner has agreed to set aside 20-acres, with road access, outside of the MA for exploration and development of minerals (Appendix A, Figure 3).

The exploration for, and production and transportation of, subsurface mineral resources beneath this MA is acceptable provided that the ground-disturbing activities and surface alterations are minimized to the maximum extent practicable; activities are conducted in a manner that minimizes adverse environmental impacts; impacted areas are restored to pre-existing conditions as soon as practicable; reasonable and appropriate compensatory mitigation is achieved, and the entity conducting these activities complies with all applicable regulatory requirements, including those under Section 404 of the Clean Water Act. The permittee will be responsible for replacing any wetland functions impacted by mineral resource projects.

11. Adaptive Management Plan

The adaptive management framework for the MA is based upon the performance standards that serve to indicate the success of the management activities (Section 8), and regular monitoring (Section 9).

Implementation of any adaptive management plan(s) will be based upon the following analysis adapted from the article *Conceptualizing Mitigation Performance Standards* (Martin et al. 2005):

1. Compare the analysis of the monitoring data to the performance standards
2. Evaluate whether the site is progressing toward the desired outcome(s)
3. Determine whether any corrective measures are necessary, and , if so, what type
4. Implement any prescribed corrective measures
5. Continue monitoring site progression toward the desired outcome(s)

In the event that monitoring or other information indicates that the MA is not meeting the performance standards as anticipated, WHCRWA shall notify the USACE as soon as possible. WHCRWA will submit to the USACE an adaptive management plan identifying the adaptive management considerations, proposed measures, and an appropriate schedule for implementation of any measures (Items 1-3, above). The permittee will recommend any changes needed and submit them to the USACE. An additional three year monitoring period will be required in order to evaluate the success of any adaptive management activity.

12. Financial Assurances

Long term financial assurances (LTFA) will be provided via the endowment paid to the third party CE holder. The endowment provides funding for long-term monitoring activities, legal defense, and minerals damage restoration. An additional \$25,000.00 LTFA will be established in order to fund long term maintenance activities (i.e. boundary line maintenance and Chinese tallowtree control) and adaptive management.

Short term financial assurances (STFA) can be in the form of a letter of credit (LOC), performance bond (PB), or other appropriate vehicle. A \$25,000.00 STFA LOC will be established to ensure that short term monitoring requirements and Chinese tallowtree control are performed in accordance with this MP. Once the seven year monitoring period is complete, any monies tied to the STFA requirement will be released. The financial assurances, both long and short term, will be fully funded within 180 days of impact to a jurisdictional area at the Project site.

Part III: Supplemental Information

Appendices

- A. MA Project Figures
- B. MA Functional Value
- C. iHGM Evaluation of the Project Site
- D. Project Site Figures
- E. MA WDD

Appendix A

MA Project Figures

Figure 1
Location Map
SWG-2013-00161 Off-Site Mitigation Area

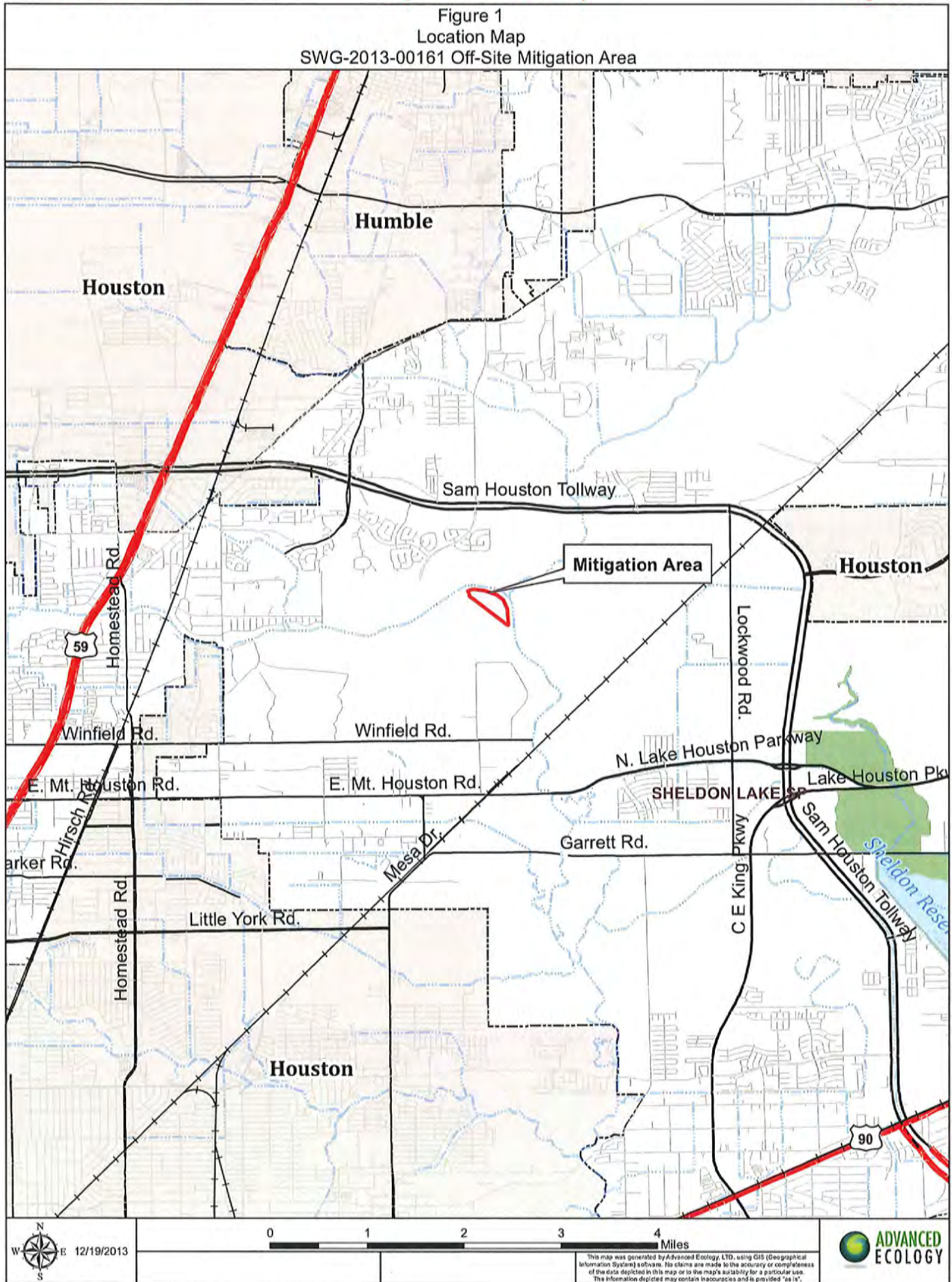
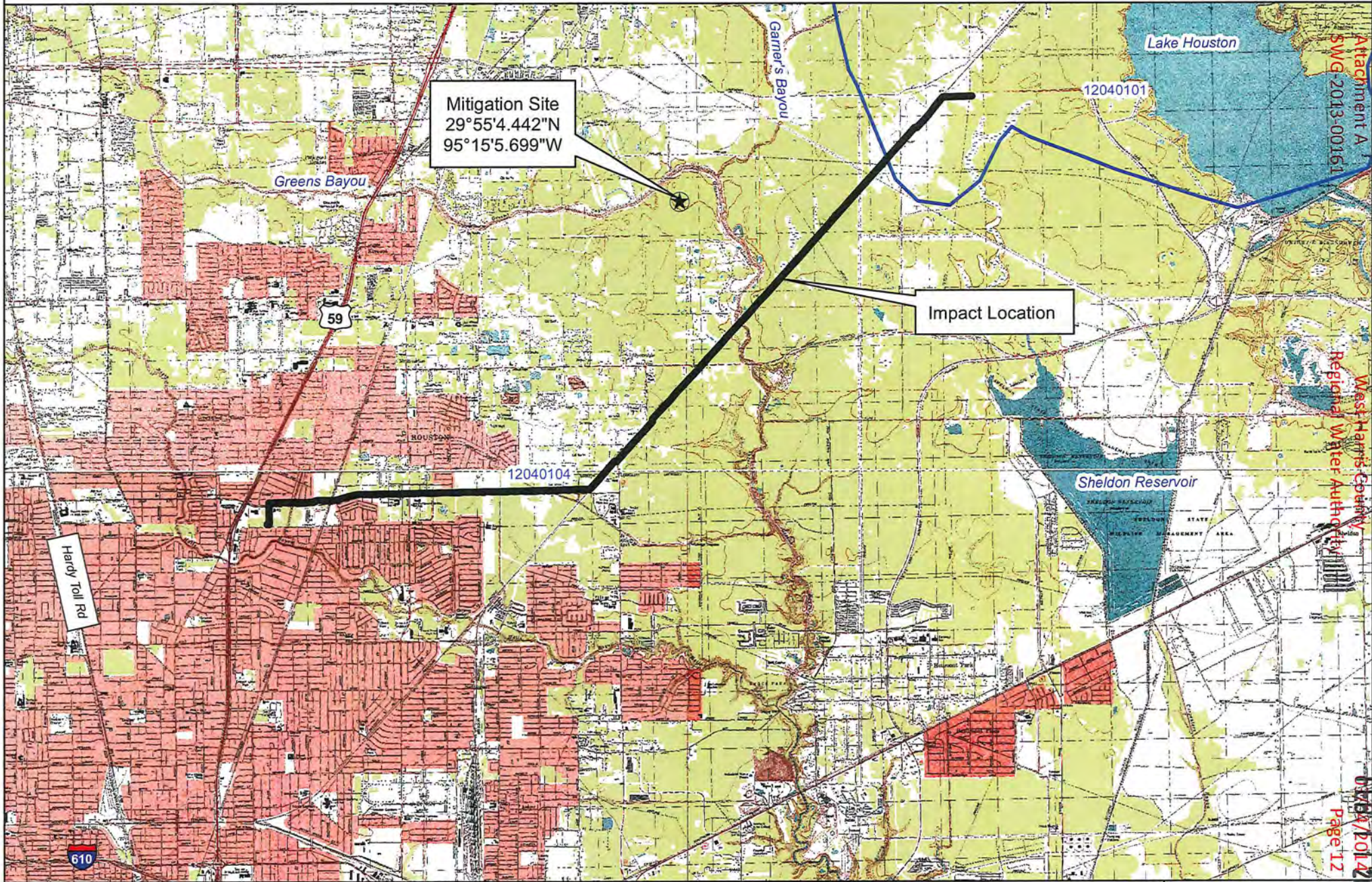


Figure 2
Impact and Mitigation Proximity
SWG-2013-00161



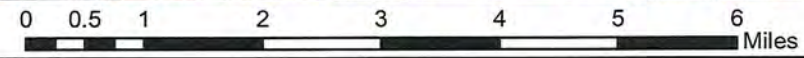
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SWG-2013-00161

West Harris County
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Page 17



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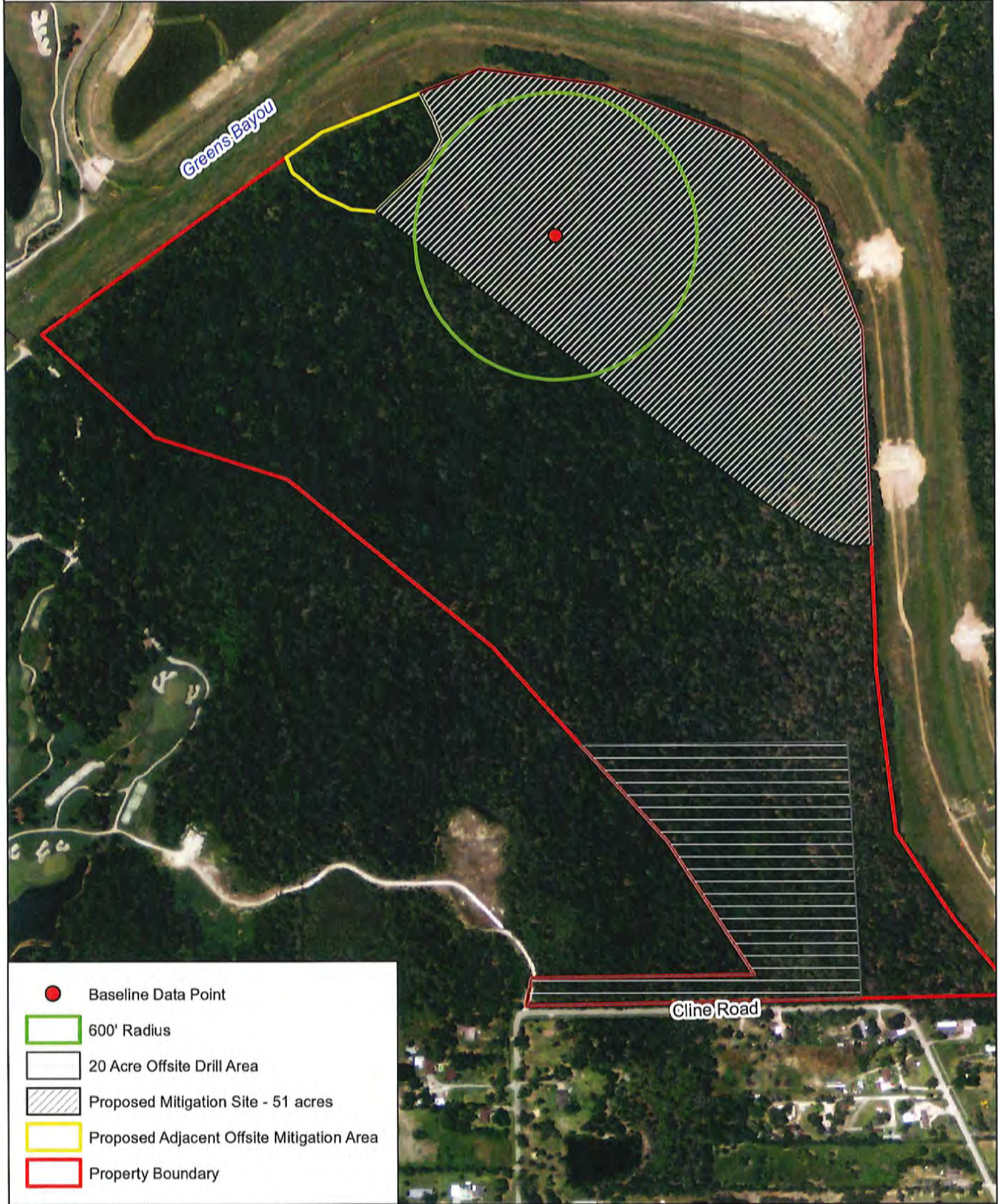


Humble and Aldine Quadrangles

Vector data are for representation only and
should not be used for legal description



Figure 3
2012 Aerial Photography
SWG-2013-00161 Off-Site Mitigation Area



-  Baseline Data Point
-  600' Radius
-  20 Acre Offsite Drill Area
-  Proposed Mitigation Site - 51 acres
-  Proposed Adjacent Offsite Mitigation Area
-  Property Boundary



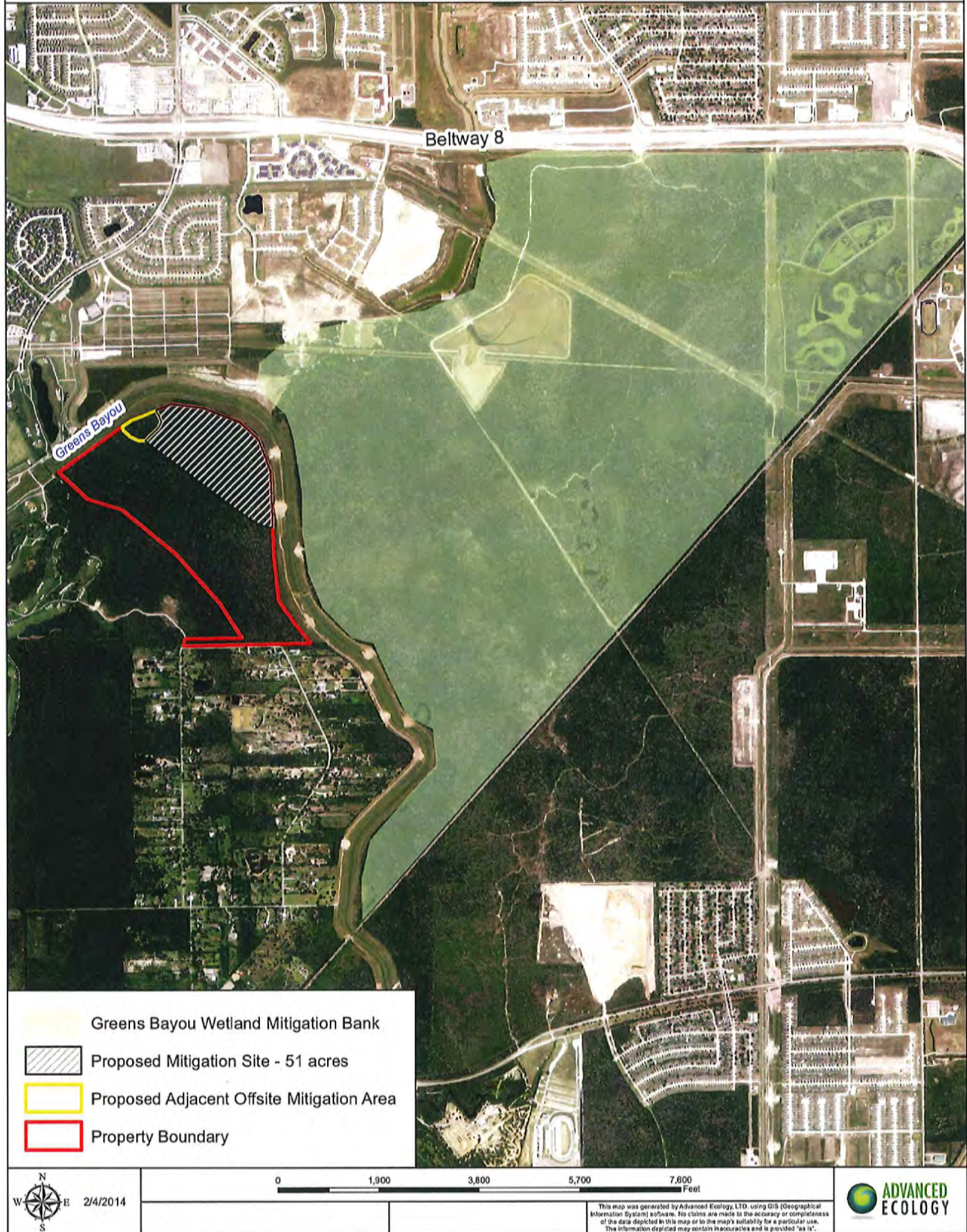
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0 520 1,040 1,560 2,080
Foot

This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or in the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is."



Figure 4
2012 Aerial Photography
SWG-2013-00161 Off-Site Mitigation Area



Appendix B

MA Functional Value

Figure 1. Baseline Data collected on a 1/10th acre plot representative of the MA.

Tree Species	DBH	Basal Area
<i>Quercus nigra</i>	40	87.27
<i>Quercus nigra</i>	10	5.45
<i>Quercus nigra</i>	8	3.49
<i>Taxodium distichum</i>	15	12.27
<i>Taxodium distichum</i>	18	17.67
<i>Acer rubrum</i>	7	2.67
<i>Quercus phellos</i>	20	21.82
<i>Quercus phellos</i>	12	7.85
<i>Quercus phellos</i>	5	1.36
<i>Liquidambar styraciflua</i>	22	26.40

Analysis of Baseline Tree Data:

Total Basal Area/Acre (BAPA): 186.25

Total Trees/Acre (TPA): 100

Number of Tree Species Present (represent greater than 5% TPA): 5

% TPA of Desirable Mast Producers: 90

% TPA of Un-Desirable Species: 0

Additional Plot Level Information:

% Herbaceous Component: 20

Coarse Woody Debris: >7

% Midstory Cover: 30

% Woody Cover of the MA: 100

Figure 2. Baseline Riverine Forested iHGM variable subindex scores and resulting Functional Capacity Index (FCI) and subsequent Functional Capacity Unit (FCU) values for each functional class within the MA.

Variable	Baseline Subindex Score
Vdur	0.75
Vfrq	0.75
Vtopo	1.00
Vcwd	1.00
Vwood	1.00
Vtree	1.00
Vrich	1.00
Vbasal	1.00
Vdensity	1.00
Vmid	0.50
Vherb	1.00
Vedtritus	1.00
Vredox	1.00
Vsorp	1.00
Vconnect	1.00
Baseline TSSW FCI	0.8660
Baseline MPAC FCI	0.9583
Baseline RSEC FCI	0.9000

Table 1. WHCRWA Off-Site MA							Acres: 51.0
Variables	Baseline	Projected YR1	Projected YR10	Projected YR20	Projected YR30	Projected YR50	
Vdur	0.75	0.75	0.75	0.75	0.75	0.75	
Vfrq	0.75	0.75	0.75	0.75	0.75	0.75	
Vlopo	1.00	1.00	1.00	1.00	1.00	1.00	
Vcwd	1.00	0.10	0.30	0.30	0.30	1.00	
Vwood	1.00	0.10	1.00	1.00	1.00	1.00	
Vtree	1.00	0.10	0.30	0.30	0.50	1.00	
Vrich	1.00	0.10	0.40	0.60	0.80	1.00	
Vbasal	1.00	0.10	0.40	0.60	0.60	1.00	
Vdensity	1.00	0.10	0.40	0.60	0.80	1.00	
Vmid	0.50	0.10	0.25	0.25	0.25	0.50	
Vherb	1.00	0.30	0.30	0.30	0.50	1.00	
Vdetritus	1.00	0.50	0.50	0.50	1.00	1.00	
Vredox	1.00	1.00	1.00	1.00	1.00	1.00	
Vsorp	1.00	1.00	1.00	1.00	1.00	1.00	
Vconnect	1.00	1.00	1.00	1.00	1.00	1.00	
TSSW FCI	0.8660	0.5477	0.7583	0.7583	0.7583	0.8660	
MPAC FCI	0.9583	0.2667	0.4458	0.5125	0.6125	0.9583	
RSEC FCI	0.9000	0.5667	0.8200	0.8200	0.8533	0.9000	
TSSW FCU CALC	44.1673	27.9339	38.6727	38.6727	38.6727	44.1673	
MPAC FCU CALC	48.8750	13.6000	22.7375	26.1375	31.2375	48.8750	
RSEC FCU CALC	45.9000	28.9000	41.8200	41.8200	43.5200	45.9000	
Preservation Summary	Baseline (FCUs)	Projected YR1 FCUs	*Projected YR 1 Loss (FCUs)	**Projected YR 50 (FCUs)			
TSSW	44.1673	27.9339	16.2334	44.1673			
MPAC	48.8750	13.6000	35.2750	48.8750			
RSEC	45.9000	28.9000	17.0000	45.9000			

Estimated f(x) Lift associated with preservation from timbering		*Estimated f(x) loss associated with implementation of the impact	
TSSW	8.12	TSSW	2.82
MPAC	17.64	MPAC	13.20
RSEC	8.50	RSEC	8.38

*Projected YR1 loss was calculated by subtracting the projected YR1 FCUs from the Baseline FCUs

**AEL estimates an approximately 50 year recovery period (recovery of Baseline f(x) capacity)

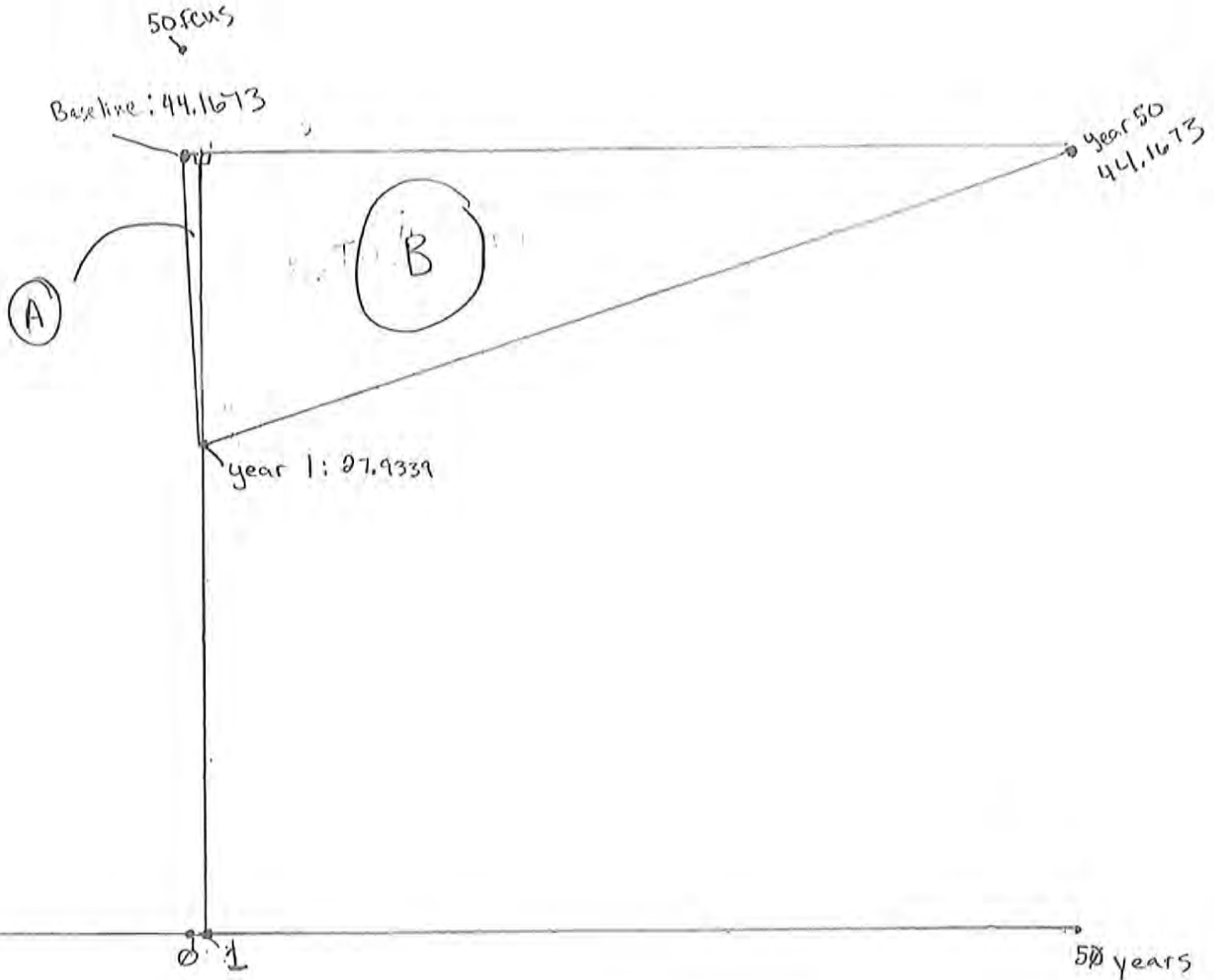
*** See calculation on following pages

**** Provided by Terracon

Estimated fcr lift associated with preservation from timbering:

* TSSW = 8.1 FCUs

* see work below



Right triangles A+B =

$$\text{area} = \left(\frac{1}{2}\right) BH$$

$$\text{area of A} = \left(\frac{1}{2}\right) 1 \times 16.2334$$

$$\text{area of A} = \underline{8.1167}$$

$$\text{area of B} = \left(\frac{1}{2}\right) 49 \times 16.2334$$

$$\text{area of B} = \underline{397.7183}$$

$$\text{Preservation TSSW FCUs} = (A + B) / \# \text{ of years}$$

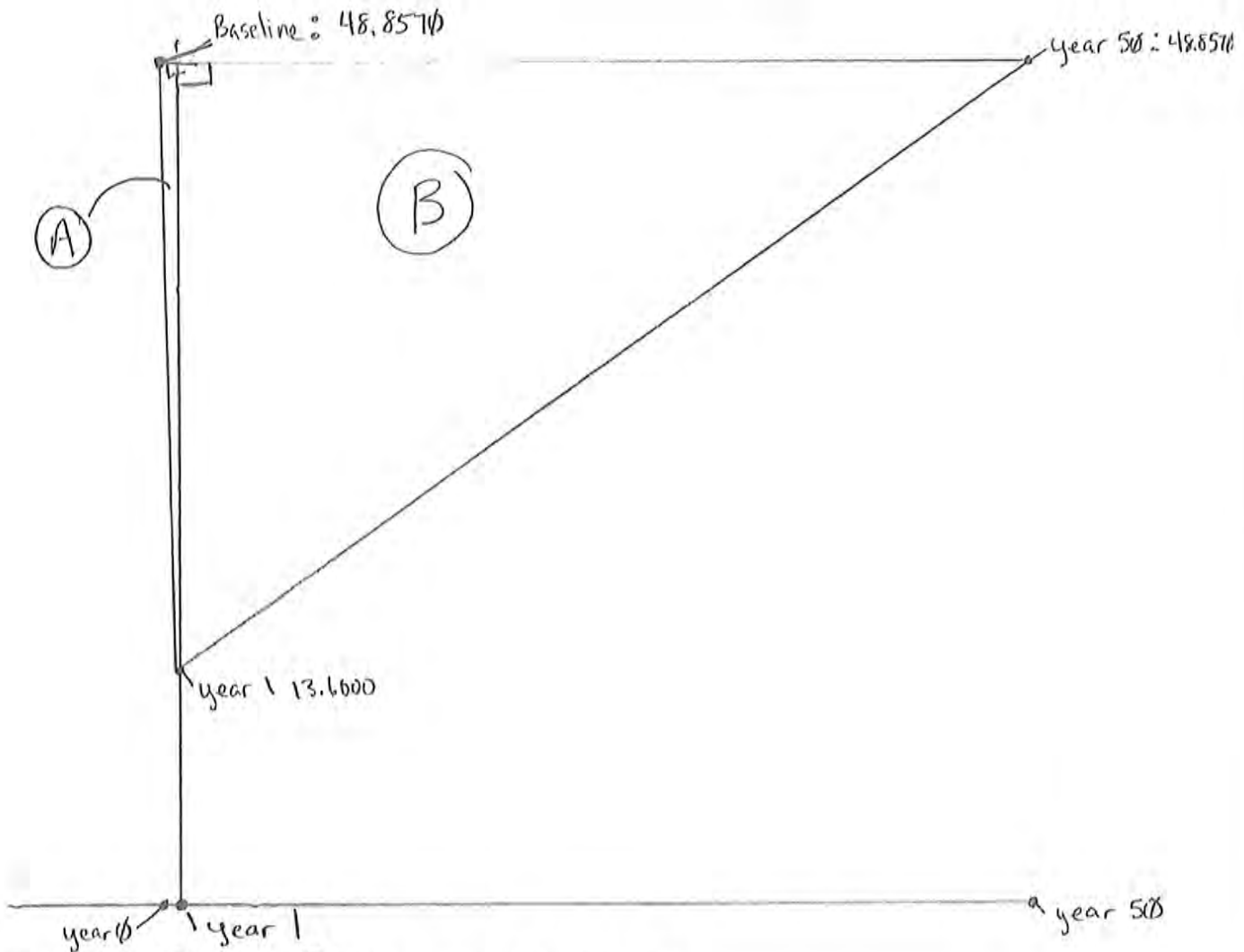
$$\text{Preservation TSSW FCUs} = (8.1167 + 397.7183) \div 50 = \underline{\underline{8.1177}} \text{ FCUs/yr}$$

Estimated f(x) lift associated with preservation from timbering:

* MPAC = 17.6 FCUs

FEB 11 2014

* See work below



Triangles (A) and (B) are right triangles

$$\text{Area} = \left(\frac{1}{2}\right) BH$$

$$\text{Area of (A)} = \left(\frac{1}{2}\right) 1 \times 35.2570$$

$$\text{Area of (B)} = \left(\frac{1}{2}\right) 49 \times 35.2570$$

$$\text{Area of (A)} = \underline{17.6375}$$

$$\text{Area of (B)} = \underline{864.2375}$$

$$\text{Preservation FCUs} = \frac{(\text{A}) + (\text{B})}{\# \text{ of years}}$$

$$\text{Preservation of MPAC FCUs} = \frac{(17.6375 + 864.2375)}{50 \text{ years}} =$$

$$\boxed{17.6375 \text{ FCUs/year}}$$

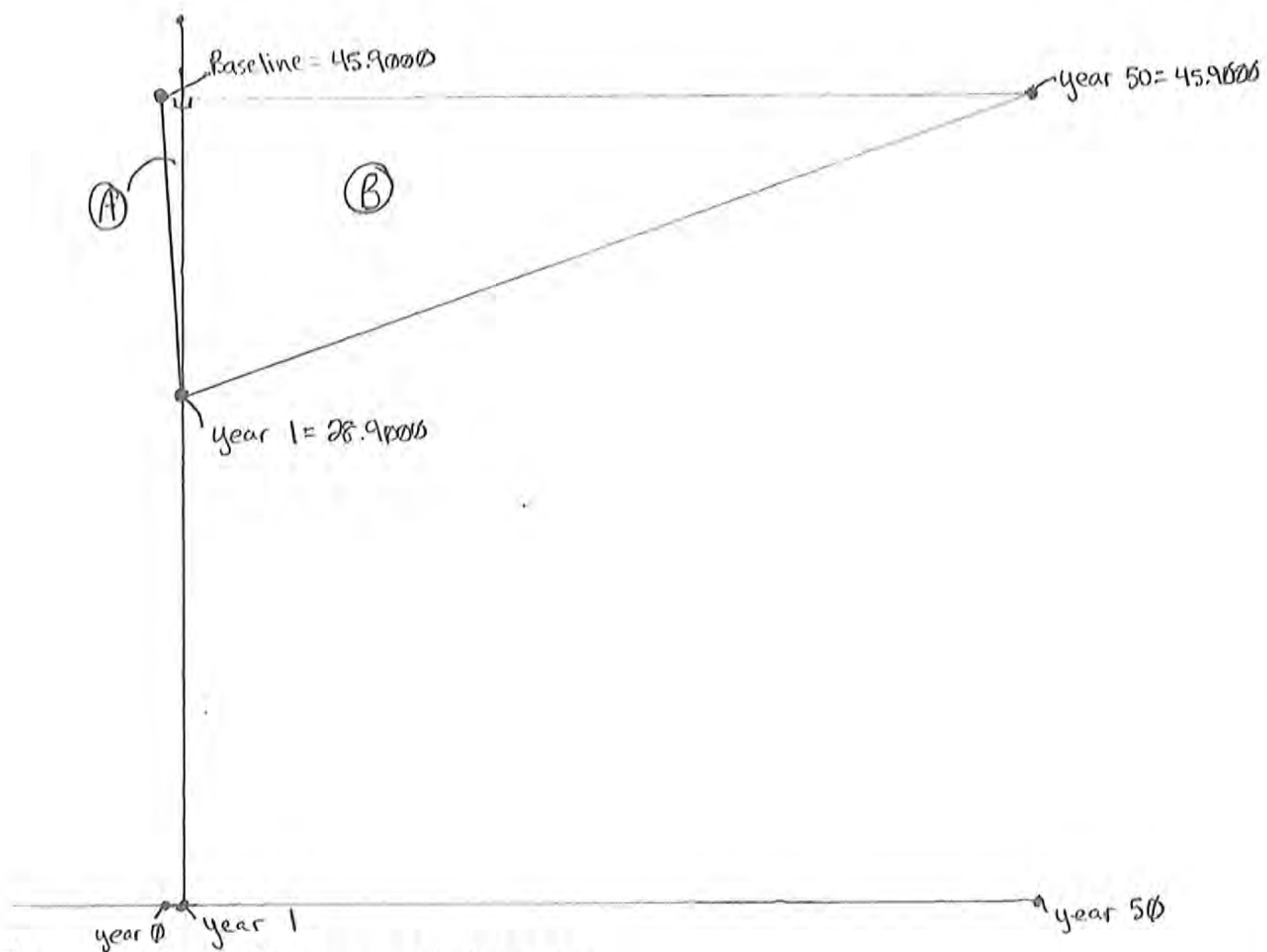
Estimated fix lift associated with preservation from timbering

Attachment A
SWG-2012-0016

West Harris County
Regional Water Authority

03/04/2014
Page 21
FEB 11 2014

* RSEC = 8.5 FCUs
* see work below



Triangle (A) and (B) are right triangles

Area = (1/2) B x H

Area of (A) = (1/2) 1 x 17.0000

Area of (B) = (1/2) 49 x 17.0000

Area of (A) = 8.50000


Area of (B) = 416.50000

Preservation FCUs = ((A) + (B)) / # of years

Preservation of RSEC FCUs = (8.50000 + 416.50000) / 50 years = 8.5000 FCUs/year

Appendix C


iHGM Evaluation of the Project Site

Wetland Assessment Area Name: WAA 1, 2, 3, & 5				
		WAA Acres:	4.77	
Baseline Score:		 SWG Riverine - Forested Interim HGM - Worksheet	Post Project:	
Variable	Subindex		Variable	Subindex
Vdur	0.25		Vdur	0.25
Vfreq	0.00		Vfreq	0.00
Vtopo	0.10		Vtopo	0.10
Vcwd	0.30		Vcwd	0.10
Vwood	0.75		Vwood	0.10
Vtree	0.30		Vtree	0.10
Vrich	0.60		Vrich	0.10
Vbasal	0.80		Vbasal	0.10
Vdensity	1.00		Vdensity	0.10
Vmid	1.00		Vmid	0.10
Vherb	1.00		Vherb	0.30
Vdetritus	1.00		Vdetritus	0.10
Vredox	0.10		Vredox	0.10
Vsorp	1.00		Vsorp	1.00
Vconnect	1.00		Vconnect	1.00

FCIs; (see formulas):	Baseline	Post Project
Temporary Storage & Dentention of Storage Water (Physical):	0.000	0.000
Maintain Plant & Animal Communities (Biological):	0.683	0.267
Removal & Sequestrian of Elements & Compounds (Chemical):	0.417	0.170

FCUs; (FCI x acres per WAA):	Baseline	Post Project
Physical:	0.00	0.00
Biological:	3.26	1.27
Chemical:	1.99	0.81


LIFT in FCUs = (Sampled - Basline):	
Physical	0.00
Biological	-1.99
Chemical	-1.18

Wetland Assessment Area Name: WAA 7			
		WAA Acres:	4.05
Baseline Score:		 SWG Riverine - Forested Interim HGM - Worksheet	
Variable	Subindex		
Vdur	0.10		
Vfreq	0.00		
Vtopo	0.10		
Vcwd	0.50		
Vwood	0.75		
Vtree	0.50		
Vrich	1.00		
Vbasal	0.80		
Vdensity	0.60		
Vmid	0.50		
Vherb	1.00		
Vdetritus	1.00		
Vredox	0.10		
Vsorp	1.00		
Vconnect	0.50		
Post Project:			
Variable	Subindex		
Vdur	0.10		
Vfreq	0.00		
Vtopo	0.10		
Vcwd	0.10		
Vwood	0.10		
Vtree	0.10		
Vrich	0.10		
Vbasal	0.10		
Vdensity	0.10		
Vmid	0.10		
Vherb	0.10		
Vdetritus	0.10		
Vredox	0.10		
Vsorp	1.00		
Vconnect	0.50		

FCIs; (see formulas):	Baseline	Post Project
Temporary Storage & Detention of Storage Water (Physical):	0.000	0.000
Maintain Plant & Animal Communities (Biological):	0.658	0.167
Removal & Sequestration of Elements & Compounds (Chemical):	0.400	0.140

FCUs; (FCI x acres per WAA):	Baseline	Post Project
Physical:	0.00	0.00
Biological:	2.67	0.68
Chemical:	1.62	0.57


LIFT in FCUs = (Sampled - Baseline):	
Physical	0.00
Biological	-1.99
Chemical	-1.05

Wetland Assessment Area Name: WAA 9 & 10			
		WAA Acres:	10.68
Baseline Score:		 SWG Riverine - Forested Interim HGM - Worksheet	
Variable	Subindex		
Vdur	0.10		
Vfreq	0.25		
Vtopo	0.10		
Vcwd	0.30		
Vwood	1.00		
Vtree	0.50		
Vrich	0.80		
Vbasal	0.60		
Vdensity	0.60		
Vmid	0.50		
Vherb	1.00		
Vdetritus	1.00		
Vredox	0.10		
Vsorpt	0.50		
Vconnect	1.00		
Post Project:			
Variable	Subindex		
Vdur	0.10		
Vfreq	0.25		
Vtopo	0.10		
Vcwd	0.10		
Vwood	0.10		
Vtree	0.10		
Vrich	0.10		
Vbasal	0.10		
Vdensity	0.10		
Vmid	0.10		
Vherb	0.10		
Vdetritus	0.10		
Vredox	0.10		
Vsorpt	0.50		
Vconnect	1.00		

FCIs; (see formulas):	Baseline	Post Project
Temporary Storage & Detention of Storage Water (Physical):	0.272	0.126
Maintain Plant & Animal Communities (Biological):	0.658	0.250
Removal & Sequestration of Elements & Compounds (Chemical):	0.470	0.157

FCUs; (FCI x acres per WAA):	Baseline	Post Project
Physical:	2.90	1.34
Biological:	7.03	2.67
Chemical:	5.02	1.67


LIFT in FCUs = (Sampled - Baseline):	
Physical	-1.56
Biological	-4.36
Chemical	-3.35

Wetland Assessment Area Name: WAA 11			
		WAA Acres:	0.45
Baseline Score:		 SWG Riverine - Forested Interim HGM - Worksheet	
Variable	Subindex		
Vdur	0.10		
Vfreq	0.50		
Vtopo	0.10		
Vcwd	0.50		
Vwood	0.75		
Vtree	0.50		
Vrich	1.00		
Vbasal	1.00		
Vdensity	1.00		
Vmid	0.75		
Vherb	1.00		
Vdetritus	1.00		
Vredox	0.10		
Vsorpt	0.50		
Vconnect	0.25		
		Post Project:	
Variable	Subindex		
Vdur	0.10		
Vfreq	0.50		
Vtopo	0.10		
Vcwd	0.10		
Vwood	0.10		
Vtree	0.10		
Vrich	0.10		
Vbasal	0.10		
Vdensity	0.10		
Vmid	0.10		
Vherb	0.10		
Vdetritus	0.10		
Vredox	0.10		
Vsorpt	0.50		
Vconnect	0.25		

FCIs; (see formulas):	Baseline	Post Project
Temporary Storage & Dentention of Storage Water (Physical):	0.317	0.150
Maintain Plant & Animal Communities (Biological):	0.688	0.125
Removal & Sequestrian of Elements & Compounds (Chemical):	0.467	0.207

FCUs; (FCI x acres per WAA):	Baseline	Post Project
Physical:	0.14	0.07
Biological:	0.31	0.06
Chemical:	0.21	0.09

LIFT in FCUs = (Sampled - Basline):	
Physical	-0.08
Biological	-0.26
Chemical	-0.12

Wetland Assessment Area Name: WAA 13, 14, 16			
		WAA Acres:	8.37
Baseline Score:		 SWG Riverine - Forested Interim HGM - Worksheet	
Variable	Subindex		
Vdur	0.10		
Vfreq	0.25		
Vtopo	0.10		
Vcwd	0.50		
Vwood	0.75		
Vtree	0.30		
Vrich	1.00		
Vbasal	1.00		
Vdensity	1.00		
Vmid	1.00		
Vherb	1.00		
Vdetritus	1.00		
Vredox	1.00		
Vsorp	1.00		
Vconnect	0.50		
Post Project:		Variable	Subindex
Vdur	0.10	Vdur	0.10
Vfreq	0.25	Vfreq	0.25
Vtopo	0.10	Vtopo	0.10
Vcwd	0.10	Vcwd	0.10
Vwood	0.10	Vwood	0.10
Vtree	0.10	Vtree	0.10
Vrich	0.10	Vrich	0.10
Vbasal	0.10	Vbasal	0.10
Vdensity	0.10	Vdensity	0.10
Vmid	0.10	Vmid	0.10
Vherb	0.10	Vherb	0.10
Vdetritus	0.10	Vdetritus	0.10
Vredox	0.10	Vredox	0.10
Vsorp	1.00	Vsorp	1.00
Vconnect	0.50	Vconnect	0.50

FCIs; (see formulas):	Baseline	Post Project
Temporary Storage & Detention of Storage Water (Physical):	0.267	0.126
Maintain Plant & Animal Communities (Biological):	0.717	0.167
Removal & Sequestration of Elements & Compounds (Chemical):	0.510	0.190

FCUs; (FCI x acres per WAA):	Baseline	Post Project
Physical:	2.23	1.05
Biological:	6.00	1.40
Chemical:	4.27	1.59

LIFT in FCUs = (Sampled - Baseline):	
Physical	-1.18
Biological	-4.60
Chemical	-2.68

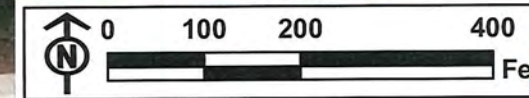
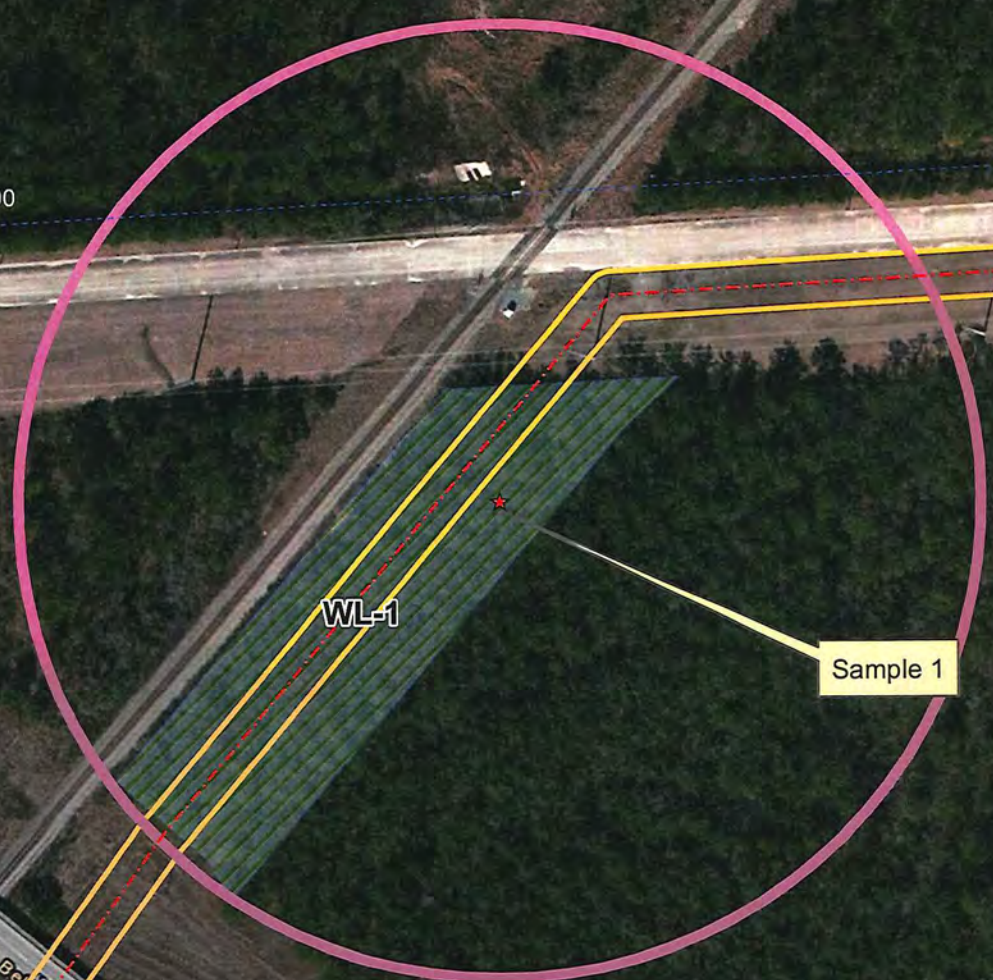
Appendix D

Project Site Figures

Legend

- ★ Sample Points
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- 500-foot Radius
- 50-ft Easement
- Delineated Wetlands**
- Forested
- Freshwater Emergent

HCFCU Unit No. G103-15-00



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SCALE	1 in: 200 ft
DATE	1/23/2014

Terracon
Consulting Engineers & Scientists

Terracon Project No. 92127208

Wetland Assessment Area Data Point with 500' Radius

WHCRWA
North-South Second Source Project
Harris County, Texas

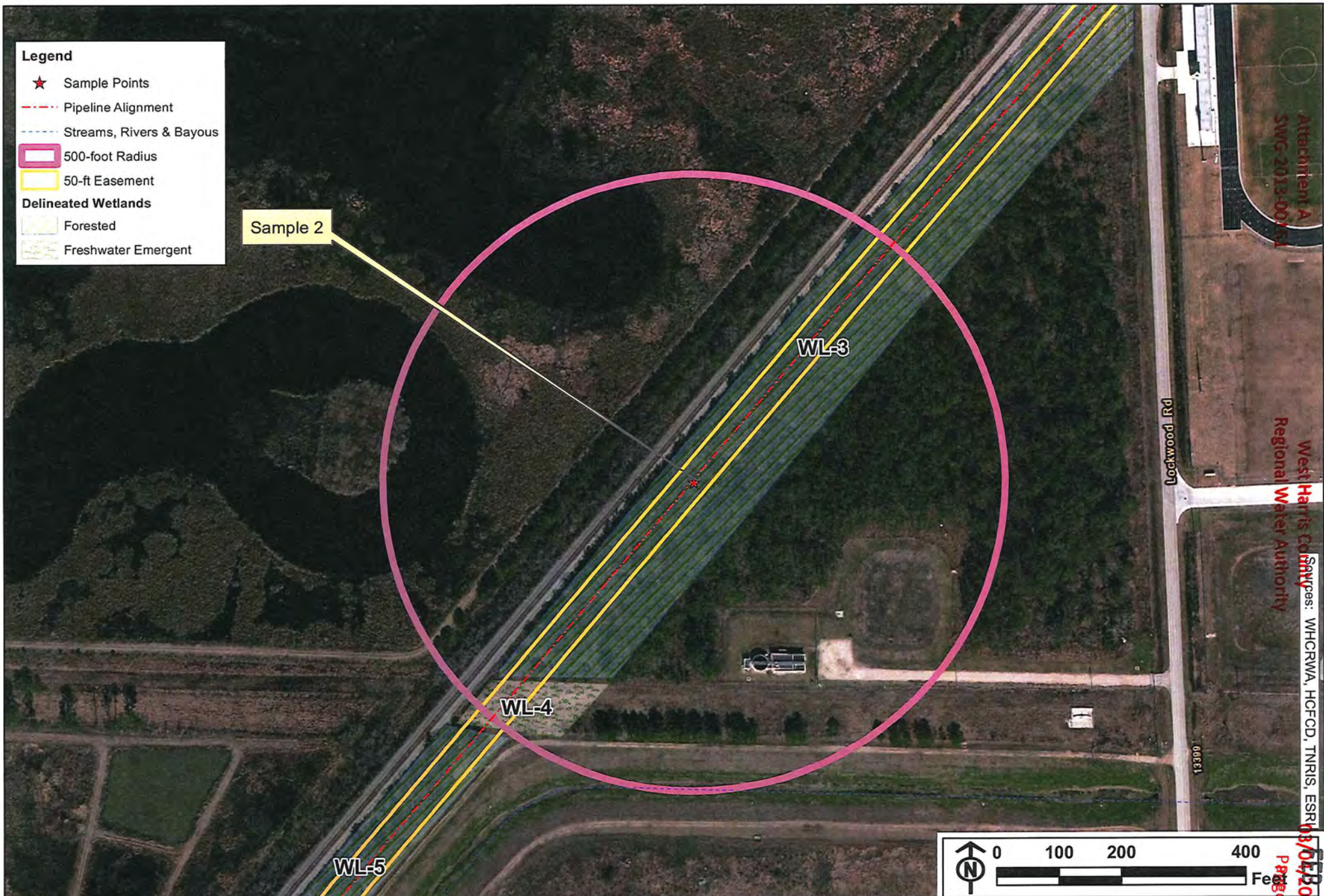
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Attachment 1
 West Harris County
 Regional Water Authority
 Sources: WHCRWA, HCFCU, TNIRIS, ESRI

Legend

- ★ Sample Points
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- 500-foot Radius
- 50-ft Easement
- Delineated Wetlands**
- Forested
- Freshwater Emergent

Sample 2

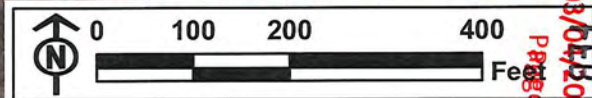


Attachment A
SWG-2013-0014

West Harris County
Regional Water Authority

Sources: WHCRWA, HCFCD, TNRRS, ESR

08/04/2014
Page 60



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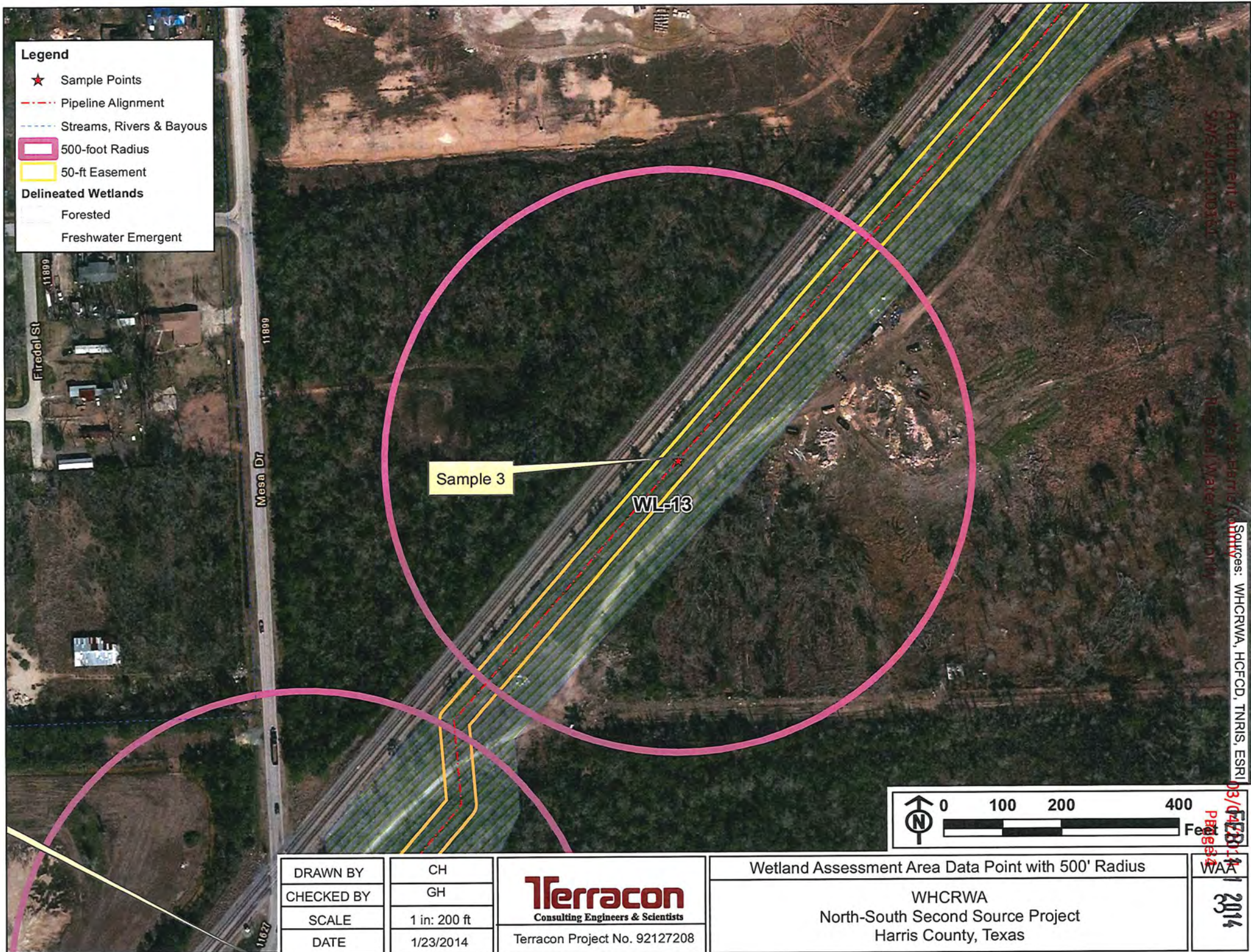
Terracon
Consulting Engineers & Scientists
Terracon Project No. 92127208

Wetland Assessment Area Data Point with 500' Radius
WHCRWA
North-South Second Source Project
Harris County, Texas

WAA
2
2014

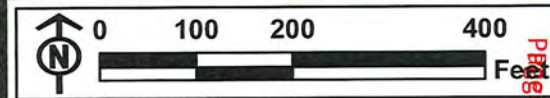
Legend

- ★ Sample Points
 - - - Pipeline Alignment
 - - - Streams, Rivers & Bayous
 - 500-foot Radius
 - 50-ft Easement
- Delineated Wetlands**
- Forested
 - Freshwater Emergent



Sample 3

WL-13



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1/23/2014

Terracon
Consulting Engineers & Scientists

Terracon Project No. 92127208

Wetland Assessment Area Data Point with 500' Radius

WHCRWA
North-South Second Source Project
Harris County, Texas

WAS
2014

Sources: WHCRWA, HCFCD, TNRS, ESRI
 03/07/2014
 Page 3 of 4

Legend

- ★ Sample Points
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- 500-foot Radius
- 50-ft Easement

Delineated Wetlands

- Forested
- Freshwater Emergent

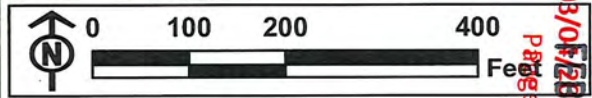
Sample 4

WL-13

Mesa Dr

11535

11027



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 Consulting Engineers & Scientists
 Terracon Project No. 92127208

Wetland Assessment Area Data Point with 500' Radius

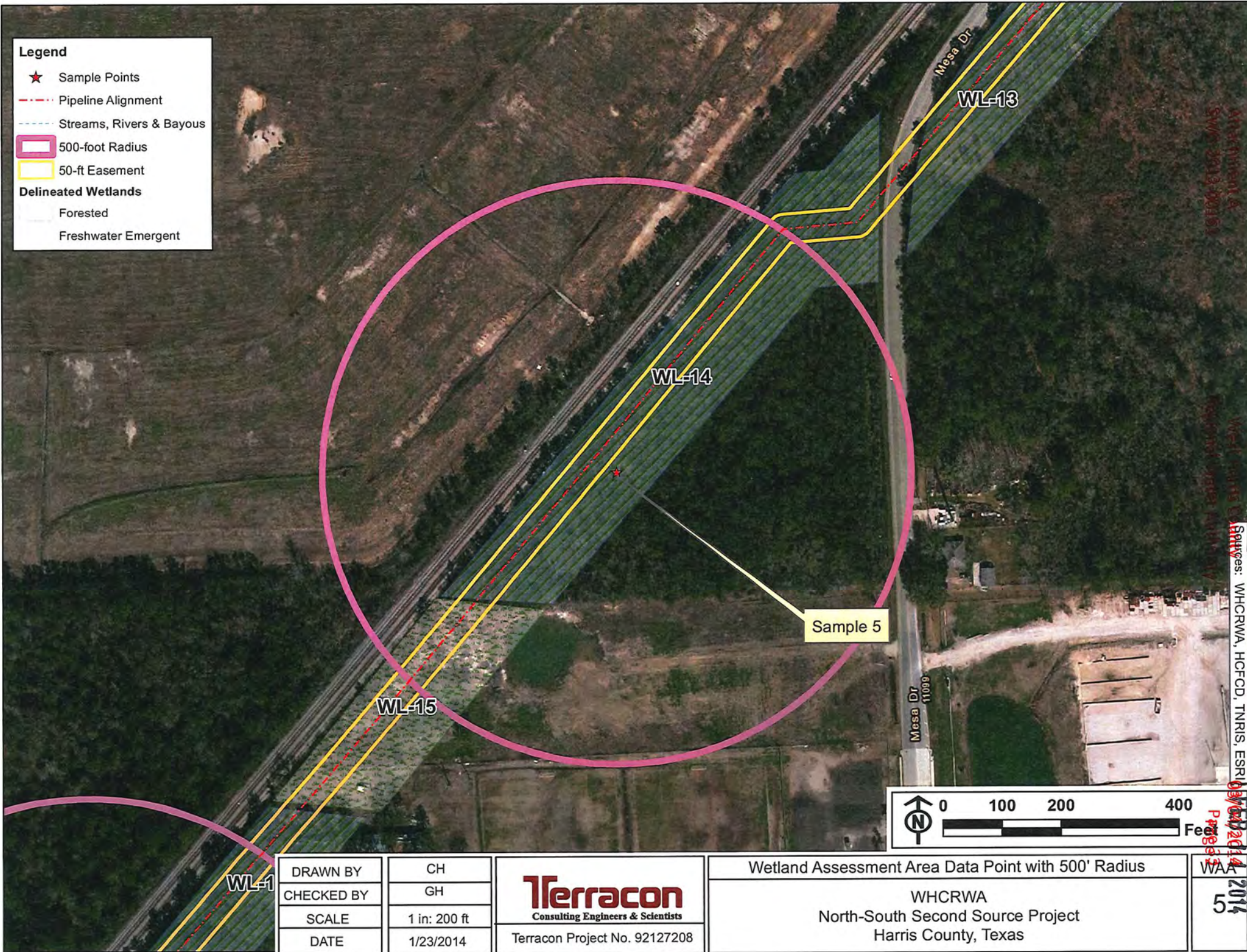
WHCRWA
 North-South Second Source Project
 Harris County, Texas

WAA
1 2014

Sources: WHCRWA, HCFCD, TNRS, ESRI
 Date: 03/05/2014
 Page 5 of 22

Legend

- ★ Sample Points
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- 500-foot Radius
- 50-ft Easement
- Delineated Wetlands**
- Forested
- Freshwater Emergent



Sources: WHCRWA, HCFCO, TNRS, ESRI
 Date: 1/23/2014
 Page: 5

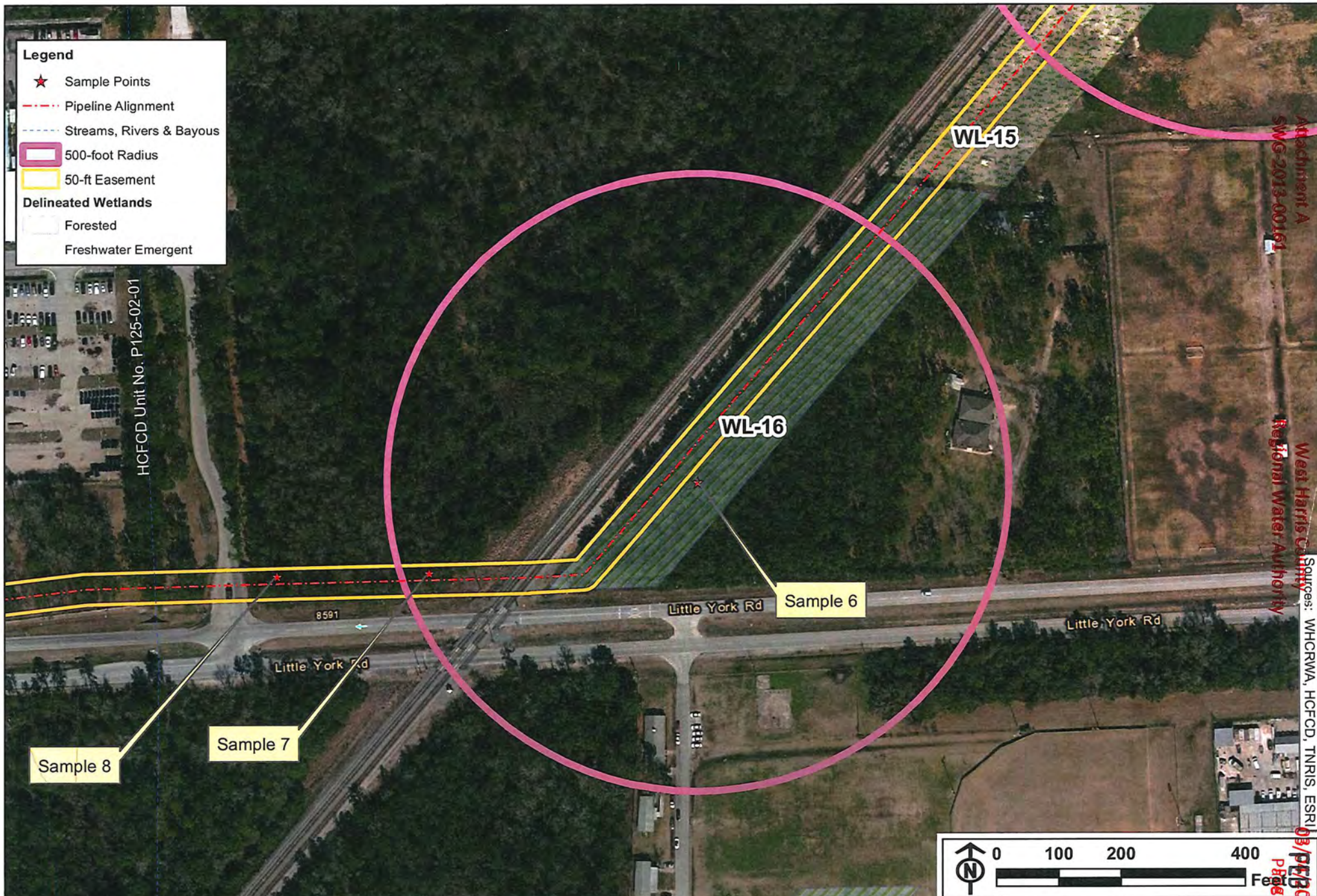
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DATE	1/23/2014


Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127208

Wetland Assessment Area Data Point with 500' Radius
 WHCRWA
 North-South Second Source Project
 Harris County, Texas

WA 5
 2014

- Legend**
- ★ Sample Points
 - - - Pipeline Alignment
 - - - Streams, Rivers & Bayous
 - 500-foot Radius
 - 50-ft Easement
- Delineated Wetlands**
- Forested
 - Freshwater Emergent



Attachment A
SWG-2013-00161

West Harris County
Regional Water Authority

Sources: WHCRWA, HCFCU, TNRS, ESRI
03/15/2014
Page 3 of 4

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DATE	1/23/2014

Terracon
Consulting Engineers & Scientists
Terracon Project No. 92127208

Wetland Assessment Area Data Point with 500' Radius
WHCRWA
North-South Second Source Project
Harris County, Texas

WAA
2014



Compensatory Mitigation Plan

**SWG-2013-00161
Off-Site Mitigation Area**



Prepared For

**West Harris County Regional
Water Authority**

Prepared By

**Advanced Ecology
Revised February 2014**

Corporate Office

2557 State Hwy. 7 East

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www.advancedecology.com

Table of Contents

Part I: Project Information.....	1
Part II: Compensatory Mitigation Plan	1
1. Objectives	1
2. Site Selection.....	2
3. Site Protection Instrument	3
4. Baseline Information	3
5. Determination of Credits.....	3
6. Mitigation Work Plan	4
7. Maintenance Plan.....	4
8. Performance Standards	4
9. Monitoring Requirements.....	4
10. Long-term Management Plan	5
11. Adaptive Management Plan.....	5
12. Financial Assurances.....	6
Part III: Supplemental Information	7

Mitigation Plan

Part I: Project Information

Project Name: West Harris County Regional Water Authority Off-Site Mitigation Area
SWG Permit No.: SWG-2013-00161
Applicant: West Harris County Regional Water Authority
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027
Project Location: Houston, TX
County: Harris

West Harris County Regional Water Authority (WHCRWA) is proposing the construction of approximately nine miles of 96-inch diameter waterline in Harris County, Texas (the Project). Terracon Consultants, Inc. (Terracon) prepared a *Preliminary Waters of the U.S. Delineation* on behalf of WHCRWA for use in the preliminary determination of the jurisdictional status of wetlands and other non-wetland waters of the U.S. for the project. During this review, Terracon found that the construction of the project would result in the permanent conversion of approximately 28.3 acres of potentially jurisdictional forested wetland habitat to emergent wetland habitat (impact areas).

Terracon conducted a functional analysis of the wetlands using the U.S. Army Corps of Engineers (USACE) Galveston District (SWG) approved Riverine Forested Hydrogeomorphic Interim Method (iHGM) (Appendices C and D). The total estimated functional loss (reported in Functional Capacity Units (FCUs)) associated with construction of the project is as follows:

Functional Category	Total
Physical: Temporary Storage & Detention of Surface Water (TSSW)	2.82
Biological: Maintenance of Plant & Animal Communities (MPAC)	13.20
Chemical: Removal & Sequestration of Elements and Compounds (RSEC)	8.38

Advanced Ecology, Ltd. (AEL) has prepared this Compensatory Mitigation Plan (MP) on behalf of WHCRWA to provide compensatory mitigation for the proposed impacts to jurisdictional waters of the U.S., including wetlands resulting from construction of the Project. This MP has been developed to meet the standards outlined in 33 CFR 332.4(c).

Part II: Compensatory Mitigation Plan

1. Objectives

The goal of the WHCRWA Off-Site Mitigation Area (MA) is to provide a source of off-site compensatory mitigation for adverse impacts to waters of the U.S., including wetlands, resulting from implementation of the Project. The ecological objective of the MA is to preserve 51 acres of a high quality, forested wetland community adjacent to Green's Bayou (Appendices A, B, and C).

2. Site Selection

Both the Project and MA are located within the Buffalo-San Jacinto (HUC-12040104). The MA is located approximately 1.3 miles away from the central portion of the proposed impact area (Appendix A). Currently, no approved mitigation banks or in-lieu fee projects have credits available to service the impacts associated with the project. Therefore, WHCRWA proposes to develop a suitable permittee responsible off-site mitigation area.

Efforts undertaken by WHCRWA to locate an ecologically suitable permittee responsible off-site mitigation area have resulted in the proposed MA. Multiple restoration, enhancement, and preservation sites were evaluated by habitat type, availability, potential aquatic uplift, and proximity to the project; and it was determined that the proposed MA was the most appropriate (based on availability, aquatic resource, proximity, and timing of the Project). The MA represents an ecologically suitable compensatory mitigation site, determined using a watershed approach, for a number of reasons:

1. The MA consists of high functioning wetlands, as determined using the SWG Riverine Forested iHGM, that provide important aquatic function to the watershed encompassing the Project.
2. Hydrologic connectivity: Both the MA and the Project are located in Buffalo-San Jacinto (HUC-12040104).
3. The MA is within close proximity to the Project.
4. Both the MA and the Project include the same aquatic resource type (Riverine HGM Class)
5. The acreage which composes the MA is adjacent to Green's Bayou and under significant threat of timber harvesting.
6. The MA is contiguous with another proposed mitigation site and is directly across Green's Bayou from Green's Bayou Mitigation Bank (Appendix A, Figure 4).
7. The appropriateness of utilizing preservation as a management option for compensatory purposes for the area which composes the MA has been approved and verified by the USACE-SWG.

In general, the MA is conducive to fulfilling local watershed needs, achieving long-term sustainability and site integrity, providing potential for aquatic habitat diversity, habitat connectivity, and consolidation of wetland conservation projects (compatibility with adjacent land uses). Due to the location and similarity of wetland classification of the MA to the impact site, the ecologically suitability of the MA is justifiable as compensatory mitigation for unavoidable losses of aquatic resources resulting from implementation of the WHCRWA project.

3. Site Protection Instrument

WHCRWA shall dedicate the MA upon issuance of the permit as an aquatic ecosystem preserve in perpetuity with a conservation easement held by a third party approved by the USACE. The conservation easement holder will be an accredited land conservancy, preferably a non-governmental, non-profit organization dedicated to the protection of land. The Texas Land Conservancy's Lands Committee agreed to hold the conservation easement for the MA. The MA shall not be disturbed, except by those USACE-approved activities that would not adversely affect the intended extent, condition, and function of the MA, or those activities specifically provided for in this MP. WHCRWA shall record the USACE-approved conservation easement with the Harris County Clerk and provide a copy of the recorded conservation easement to the Regulatory Branch, USACE, Galveston District within 180 days of impact to a jurisdictional area at the Project site. The conservation easement shall not be removed or modified without written approval of the USACE. The conservation easement will contain a clause requiring 60 days' notice to the USACE before any change in the recorded document can be allowed. Conveyance of any interest in the property shall be subject to the recorded conservation easement.

4. Baseline Information

Presently, the MA acreage is comprised of approximately 51 acres of high quality, forested wetlands adjacent to Green's Bayou (Appendix B). The MA is characterized by woody tree species 20 feet in height or taller. The species composition of these areas is dominated by hardwood tree species including willow oak, water oak, sweetgum, sugarberry, red maple, American elm, and notably, a substantial portion of the PFO1A habitat supports large, bald cypress trees. The sapling/shrub component and understory supports a robust population of dwarf palmetto as well as young oaks, red maple, and other shade tolerant species. The herbaceous/vine component includes plants such as red vine, Cherokee sedge, and several species of *Chasmanthium*. Habitat found immediately adjacent to the MA includes forested wetlands, forested uplands, and Green's Bayou. Scattered Chinese tallowtrees were observed in the uplands adjacent to the MA; however none were encountered within the MA while conducting the baseline evaluation. While there were subtle differences within the vegetative community descriptions collected on the wetland delineation sheets, these subtle differences did not necessitate a need to break out the MA into separate WAAs. The MA is represented by a single, highly functional, bottomland hardwood stand and was assessed as such.

5. Determination of Credits

FCUs are established for the MA using the iHGM, as required by the memorandum *SWG-Standard Operating Procedures (SOP); Using HGM to determine Potential Wetland Functions and the Appropriate Compensatory Mitigation for Unavoidable Wetland Impacts* (dated September 11, 2008). The MA is designated as a preservation area and meets the criteria regarding preservation standards as outlined in 33 CFR 332.3(h)(1). The preserved functional capacity of the MA was determined by evaluating and projecting the functional loss associated with timber harvest activities (Appendix B, Table 1). The loss of functional capacity, in FCUs, associated with the implementation of the Project was calculated by determining the baseline conditions of the Project site and subtracting the projected loss of functional capacity associated with the implementation of the Project. The table below shows a comparison of the

preserved functional capacity of the MA and lost functional capacity associated the implementation of the Project.

AOI	Functional Capacity Units		
	TSSW	MPAC	RSEC
Mitigation Site	8.12	17.64	8.50
Project Site*	2.82	13.20	8.38
Delta	5.30	4.44	0.12

*The iHGM evaluation of the Project was conducted by Terracon

6. Mitigation Work Plan

Due to the unique site characteristics in relation to the location of the MA which incorporate high quality wetlands possessing high variable subindex values, preservation is the prescribed management regime. No other restoration or enhancement activities are planned to occur. Site monitoring and exotic species control are discussed in the following Sections.

7. Maintenance Plan

Management practices such as mechanical vegetation control, selective herbicide treatments, prescribed burning, temporary plantings intended to suppress invasive or weed species, erosion control, selective tree removal, and water regime management can be valuable management tools available to WHCRWA in order to maintain a highly functioning system within the MA. These activities may be conducted within the MA provided the activity will enhance aquatic ecosystem functions and not interfere with the long-term ecological objectives of the MA. In the event that the MA is out of compliance with performance standard 3 (detailed below), selective herbicide treatments and/or selective tree falling will be the primary tools utilized in order to minimize unintended tree mortality and to ensure that the performance standard is met.

8. Performance Standards

1. Endowing and Filing of the CE
2. Establishment of financial assurances
3. Exotic species control to ensure that no more than 5% of the MA is comprised of exotic undesirable species, i.e. Chinese tallowtree

9. Monitoring Requirements

Monitoring and reporting requirements are to be in accordance with USACE Regulatory Guidance Letter 08-03 Minimum Monitoring Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources (RGL 08-03). Within six months of approval of this MP, WHCRWA will conduct a baseline assessment to document the baseline conditions have not changed. Annual reports presenting documentation of monitoring findings will be submitted to the USACE by January 31st of each year, for the first 7 years following implementation of this MP. WHCRWA

will conduct annual pedestrian surveys of the MA to evaluate the performance of the MP in accomplishing the goals and objectives of the MA and to ensure that exotic invasive species (i.e. Chinese tallowtree) do not exceed 5% coverage in each strata.

10. Long-term Management Plan

The MA will be managed in perpetuity as a wetland preserve. Any mitigation area is vulnerable to acts of nature such as wildfires, climatic instability, and disease that are beyond the control of WHCRWA. The occurrence of such events may necessitate changes to the MA, including revision of the MP, or activation of adaptive management activities or other pertinent management plans, to allow for actions that would offset and counteract the negative environmental impacts of the events. Depending upon the circumstances, however, allowing nature to take its course may be appropriate, particularly when acceptable environmental conditions are expected to reestablish without intervention. Any change to the MA necessitated by an act of nature beyond the control of WHCRWA shall be specified in a revised MP or other appropriate document and require the approval of both WHCRWA and the USACE. The third party CE holder will be responsible for monitoring the encumbered area to ensure that the conservation values discussed in the CE are maintained in perpetuity.

Valuable mineral resources may exist under the land in this MA. Other parties may own subsurface rights to such mineral resources in whole or in part. Recognizing that surface landowners in the State of Texas cannot wholly control a mineral owner's access to those minerals the landowner, 366 Properties, LLC, shall take all reasonable steps to develop a Mineral Management Plan (MMP) with the mineral owner(s) prior to the initiation of any mineral exploration, production, or transportation activities. The MMP shall include a list of known surface and subsurface ownership interests, a description of anticipated activities and resulting short and long-term impacts on aquatic ecosystem functions and values, and a set of guidelines and best management practices to minimize the adverse impacts. It is important to note that exploration and development of mineral resources within the MA may require a USACE permit. The landowner shall, whenever practicable, work with the subsurface mineral owner(s) to develop leases, easements, and other surface use agreements that are consistent with the MMP. The landowner has agreed to set aside 20-acres, with road access, outside of the MA for exploration and development of minerals (Appendix A, Figure 3).

The exploration for, and production and transportation of, subsurface mineral resources beneath this MA is acceptable provided that the ground-disturbing activities and surface alterations are minimized to the maximum extent practicable; activities are conducted in a manner that minimizes adverse environmental impacts; impacted areas are restored to pre-existing conditions as soon as practicable; reasonable and appropriate compensatory mitigation is achieved, and the entity conducting these activities complies with all applicable regulatory requirements, including those under Section 404 of the Clean Water Act. The permittee will be responsible for replacing any wetland functions impacted by mineral resource projects.

11. Adaptive Management Plan

The adaptive management framework for the MA is based upon the performance standards that serve to indicate the success of the management activities (Section 8), and regular monitoring (Section 9).

Implementation of any adaptive management plan(s) will be based upon the following analysis adapted from the article *Conceptualizing Mitigation Performance Standards* (Martin et al. 2005):

1. Compare the analysis of the monitoring data to the performance standards
2. Evaluate whether the site is progressing toward the desired outcome(s)
3. Determine whether any corrective measures are necessary, and , if so, what type
4. Implement any prescribed corrective measures
5. Continue monitoring site progression toward the desired outcome(s)

In the event that monitoring or other information indicates that the MA is not meeting the performance standards as anticipated, WHCRWA shall notify the USACE as soon as possible. WHCRWA will submit to the USACE an adaptive management plan identifying the adaptive management considerations, proposed measures, and an appropriate schedule for implementation of any measures (Items 1-3, above). The permittee will recommend any changes needed and submit them to the USACE. An additional three year monitoring period will be required in order to evaluate the success of any adaptive management activity.

12. Financial Assurances

Long term financial assurances (LTFA) will be provided via the endowment paid to the third party CE holder. The endowment provides funding for long-term monitoring activities, legal defense, and minerals damage restoration. An additional \$25,000.00 LTFA will be established in order to fund long term maintenance activities (i.e. boundary line maintenance and Chinese tallowtree control) and adaptive management.

Short term financial assurances (STFA) can be in the form of a letter of credit (LOC), performance bond (PB), or other appropriate vehicle. A \$25,000.00 STFA LOC will be established to ensure that short term monitoring requirements and Chinese tallowtree control are performed in accordance with this MP. Once the seven year monitoring period is complete, any monies tied to the STFA requirement will be released. The financial assurances, both long and short term, will be fully funded within 180 days of impact to a jurisdictional area at the Project site.

Part III: Supplemental Information

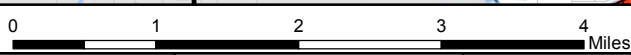
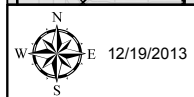
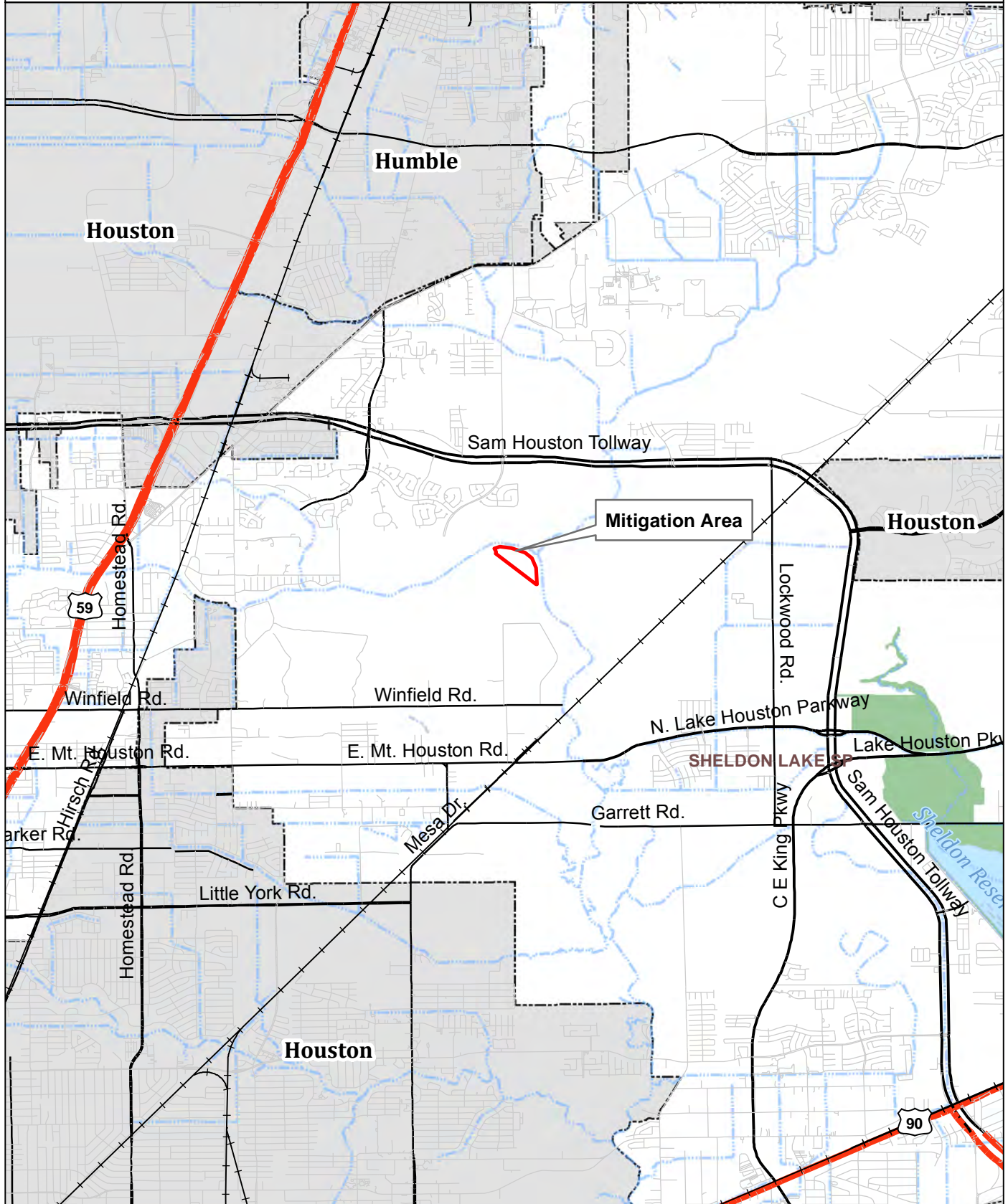
Appendices

- A. MA Project Figures
- B. MA Functional Value
- C. iHGM Evaluation of the Project Site
- D. Project Site Figures
- E. MA WDD

Appendix A

MA Project Figures

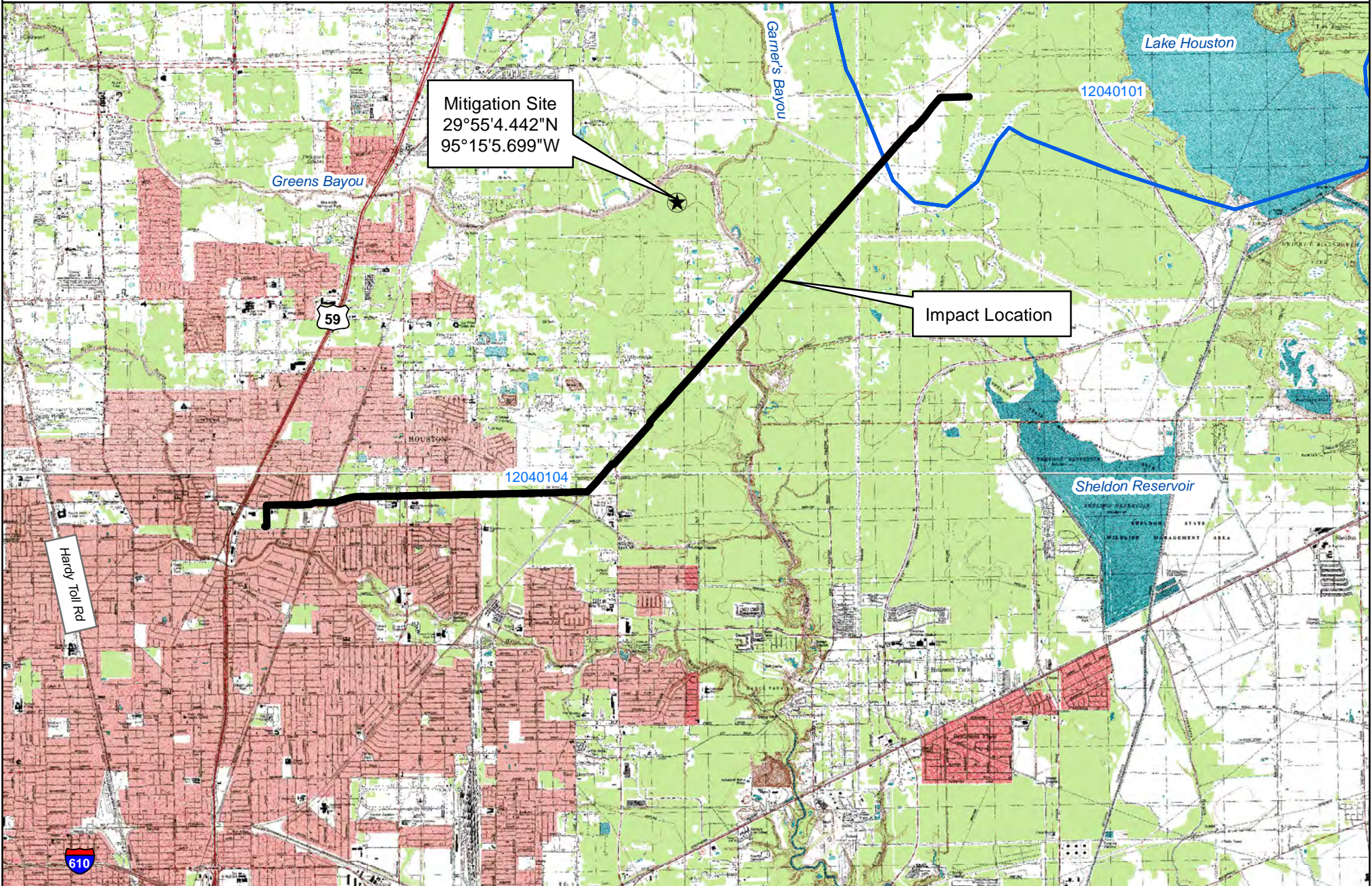
Figure 1
 Location Map
 SWG-2013-00161 Off-Site Mitigation Area



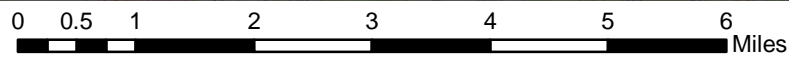
This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



Figure 2
Impact and Mitigation Proximity
SWG-2013-00161



Created By:
Hayley Steele
Date: 2/3/2014

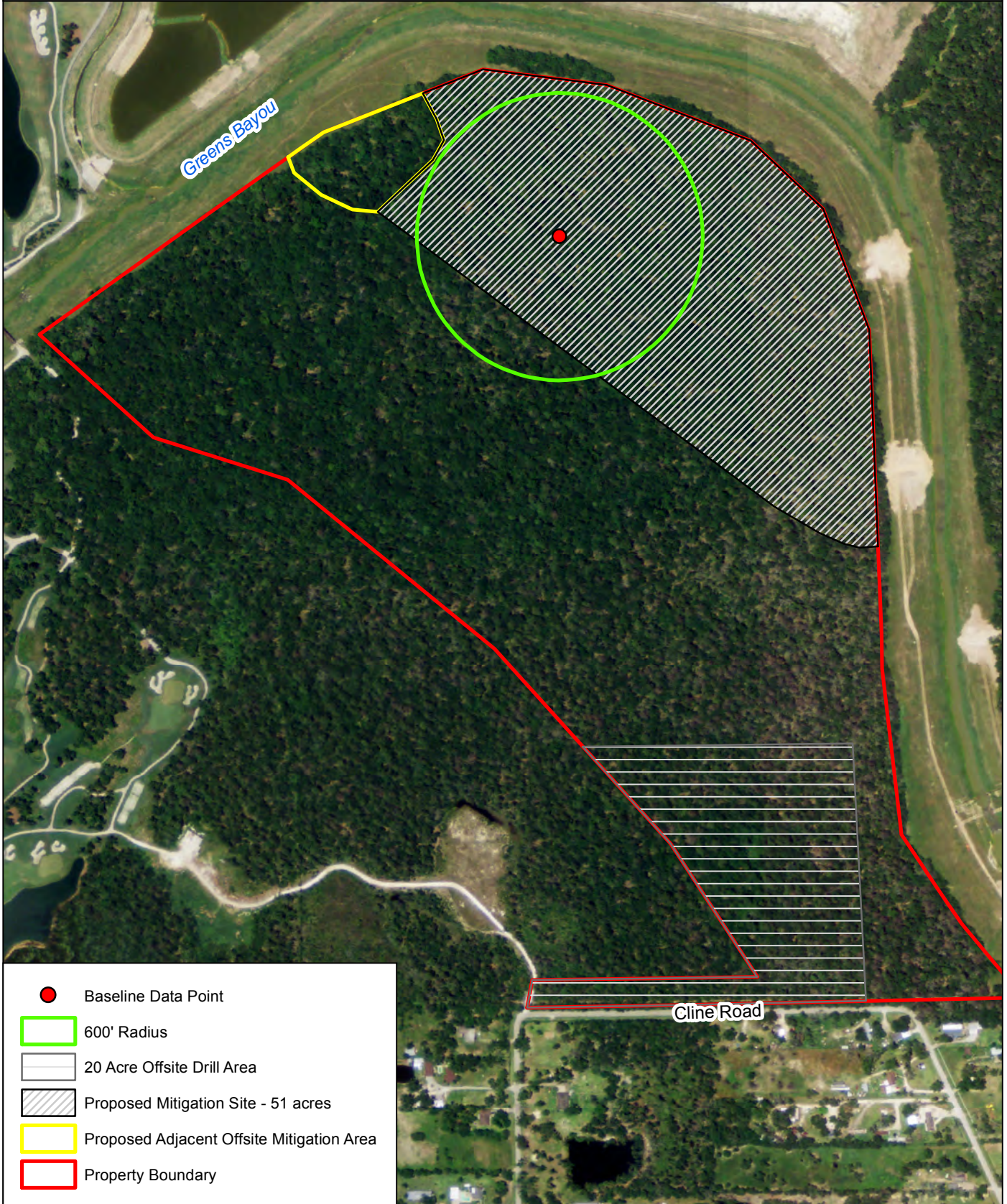


Humble and Aldine Quadrangles

Vector data are for representation only and
should not be used for legal description



Figure 3
 2012 Aerial Photography
 SWG-2013-00161 Off-Site Mitigation Area



	Baseline Data Point
	600' Radius
	20 Acre Offsite Drill Area
	Proposed Mitigation Site - 51 acres
	Proposed Adjacent Offsite Mitigation Area
	Property Boundary

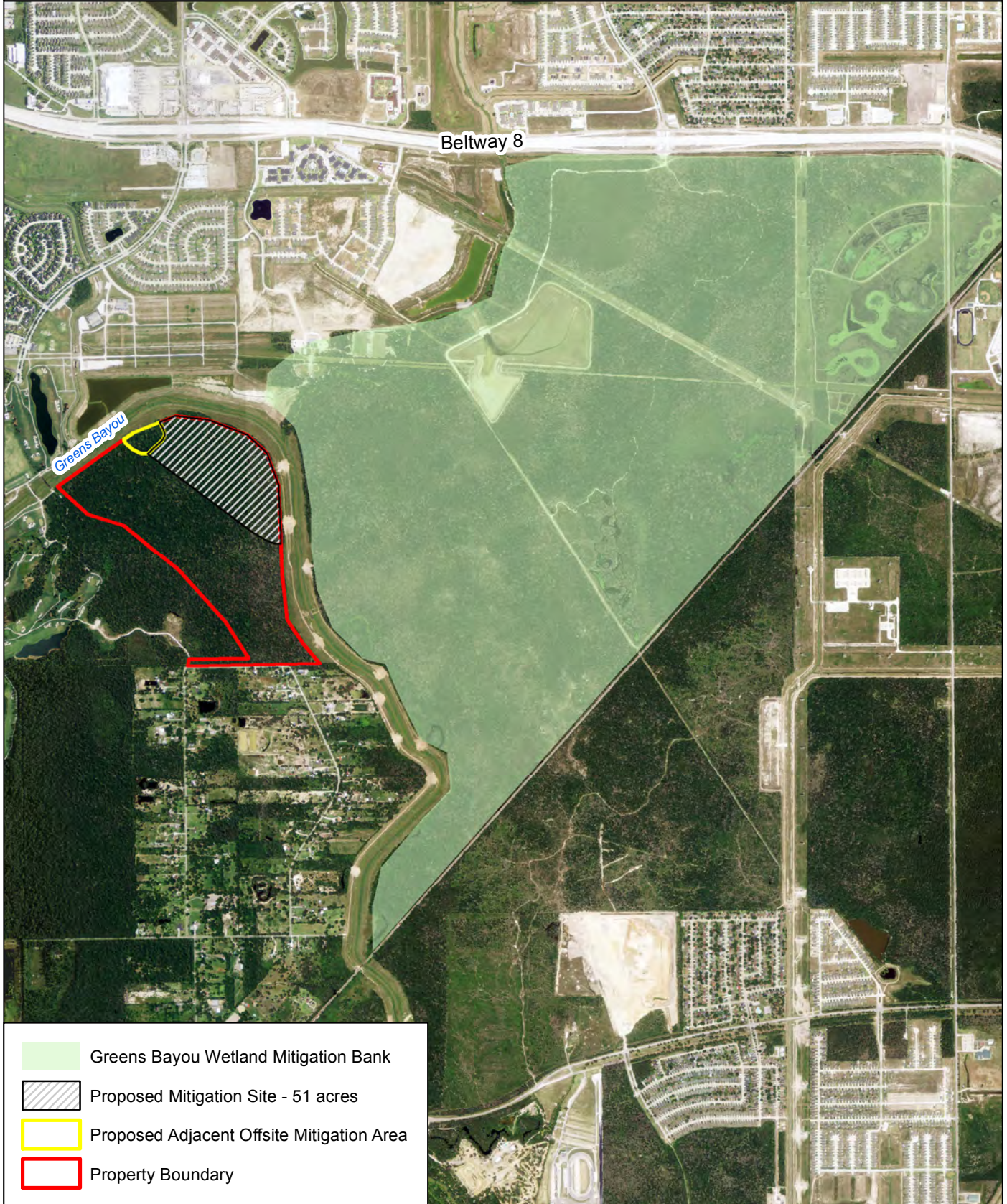
2/4/2014

0 520 1,040 1,560 2,080
 Feet

ADVANCED
 ECOLOGY

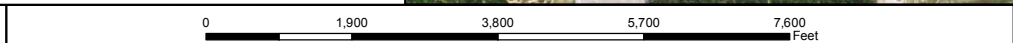
This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".

Figure 4
 2012 Aerial Photography
 SWG-2013-00161 Off-Site Mitigation Area



	Greens Bayou Wetland Mitigation Bank
	Proposed Mitigation Site - 51 acres
	Proposed Adjacent Offsite Mitigation Area
	Property Boundary


 2/4/2014



This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



Appendix B

MA Functional Value

Figure 1. Baseline Data collected on a 1/10th acre plot representative of the MA.

Tree Species	DBH	Basal Area
<i>Quercus nigra</i>	40	87.27
<i>Quercus nigra</i>	10	5.45
<i>Quercus nigra</i>	8	3.49
<i>Taxodium distichum</i>	15	12.27
<i>Taxodium distichum</i>	18	17.67
<i>Acer rubrum</i>	7	2.67
<i>Quercus phellos</i>	20	21.82
<i>Quercus phellos</i>	12	7.85
<i>Quercus phellos</i>	5	1.36
<i>Liquidambar styraciflua</i>	22	26.40

Analysis of Baseline Tree Data:

Total Basal Area/Acre (BAPA): 186.25

Total Trees/Acre (TPA): 100

Number of Tree Species Present (represent greater than 5% TPA): 5

% TPA of Desirable Mast Producers: 90

% TPA of Un-Desirable Species: 0

Additional Plot Level Information:

% Herbaceous Component: 20

Coarse Woody Debris: >7

% Midstory Cover: 30

% Woody Cover of the MA: 100

Figure 2. Baseline Riverine Forested iHGM variable subindex scores and resulting Functional Capacity Index (FCI) and subsequent Functional Capacity Unit (FCU) values for each functional class within the MA.

Variable	Baseline Subindex Score
Vdur	0.75
Vfrq	0.75
Vtopo	1.00
Vcwd	1.00
Vwood	1.00
Vtree	1.00
Vrich	1.00
Vbasal	1.00
Vdensity	1.00
Vmid	0.50
Vherb	1.00
Vedtritus	1.00
Vredox	1.00
Vsorp	1.00
Vconnect	1.00

Baseline TSSW FCI 0.8660
 Baseline MPAC FCI 0.9583
 Baseline RSEC FCI 0.9000

Table 1. WHCRWA Off-Site MA						Acres:	51.0
Variables	Baseline	Projected YR1	Projected YR10	Projected YR20	Projected YR30	Projected YR50	
Vdur	0.75	0.75	0.75	0.75	0.75	0.75	
Vfrq	0.75	0.75	0.75	0.75	0.75	0.75	
Vtopo	1.00	1.00	1.00	1.00	1.00	1.00	
Vcwd	1.00	0.10	0.30	0.30	0.30	1.00	
Vwood	1.00	0.10	1.00	1.00	1.00	1.00	
Vtree	1.00	0.10	0.30	0.30	0.50	1.00	
Vrich	1.00	0.10	0.40	0.60	0.80	1.00	
Vbasal	1.00	0.10	0.40	0.60	0.60	1.00	
Vdensity	1.00	0.10	0.40	0.60	0.80	1.00	
Vmid	0.50	0.10	0.25	0.25	0.25	0.50	
Vherb	1.00	0.30	0.30	0.30	0.50	1.00	
Vdetritus	1.00	0.50	0.50	0.50	1.00	1.00	
Vredox	1.00	1.00	1.00	1.00	1.00	1.00	
Vsorp	1.00	1.00	1.00	1.00	1.00	1.00	
Vconnect	1.00	1.00	1.00	1.00	1.00	1.00	
TSSW FCI	0.8660	0.5477	0.7583	0.7583	0.7583	0.8660	
MPAC FCI	0.9583	0.2667	0.4458	0.5125	0.6125	0.9583	
RSEC FCI	0.9000	0.5667	0.8200	0.8200	0.8533	0.9000	
TSSW FCU CALC	44.1673	27.9339	38.6727	38.6727	38.6727	44.1673	
MPAC FCU CALC	48.8750	13.6000	22.7375	26.1375	31.2375	48.8750	
RSEC FCU CALC	45.9000	28.9000	41.8200	41.8200	43.5200	45.9000	
Preservation Summary	Baseline (FCUs)	Projected YR1 FCUs	*Projected YR 1 Loss (FCUs)	**Projected YR 50 (FCUs)			
TSSW	44.1673	27.9339	16.2334	44.1673			
MPAC	48.8750	13.6000	35.2750	48.8750			
RSEC	45.9000	28.9000	17.0000	45.9000			

Estimated f(x) Lift associated with preservation from timbering			*Estimated f(x) loss associated with implementation of the impact	
TSSW	8.12		TSSW	2.82
MPAC	17.64		MPAC	13.20
RSEC	8.50		RSEC	8.38

*Projected YR1 loss was calculated by subtracting the projected YR1 FCUs from the Baseline FCUs

**AEL estimates an approximately 50 year recovery period (recovery of Baseline f(x) capacity)

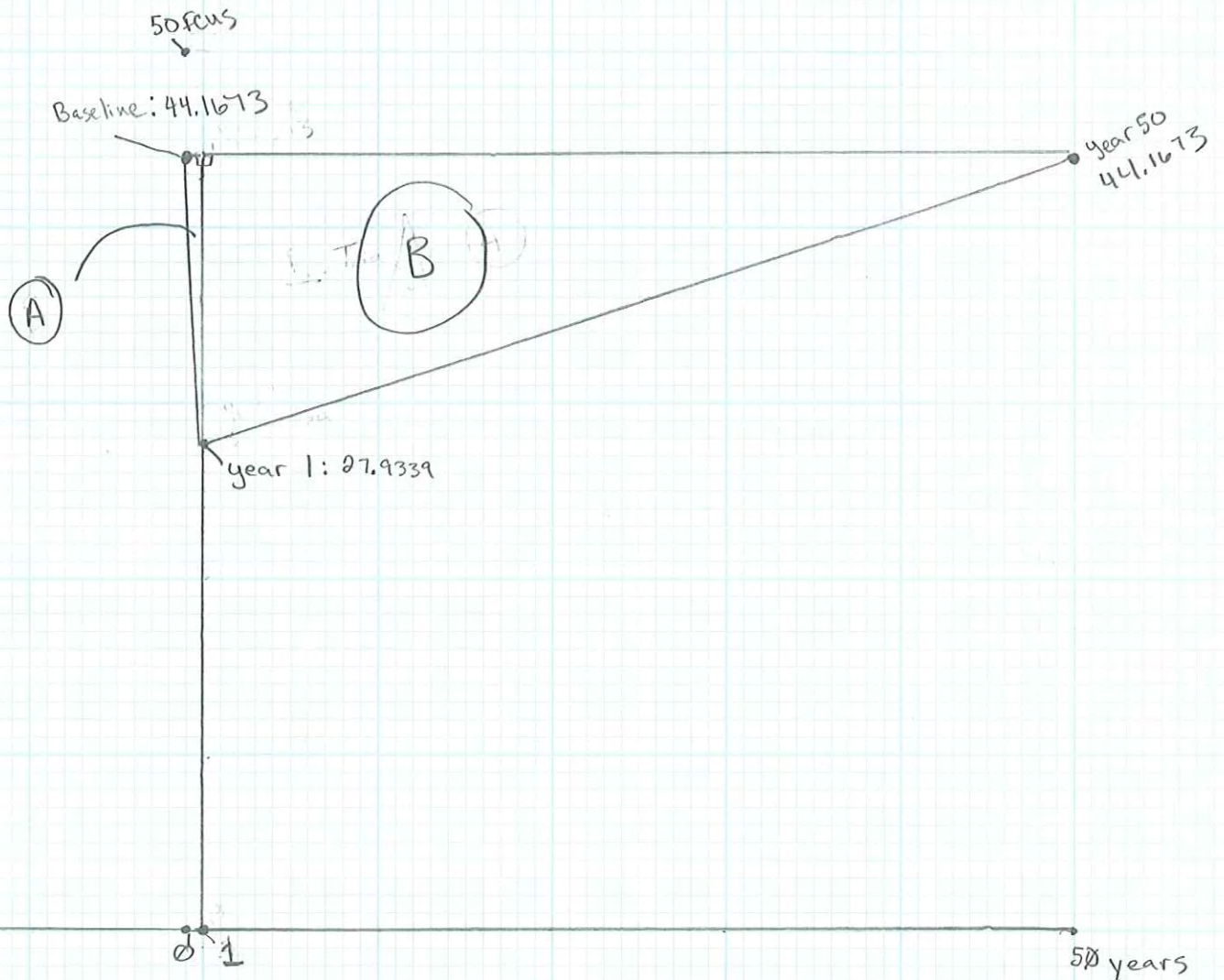
*** See calculation on following pages

**** Provided by Terracon

Estimated $F(x)$ lift associated with preservation from timbering:

* TSSW = 8.1 FCUs

* see work below



Right triangles $A+B=$

$$\text{area} = \left(\frac{1}{2}\right) BH$$

$$\text{area of A} = \left(\frac{1}{2}\right) 1 \times 16.2334$$

$$\text{area of A} = \underline{8.1167}$$

$$\text{area of B} = \left(\frac{1}{2}\right) 49 \times 16.2334$$

$$\text{area of B} = \underline{397.7183}$$

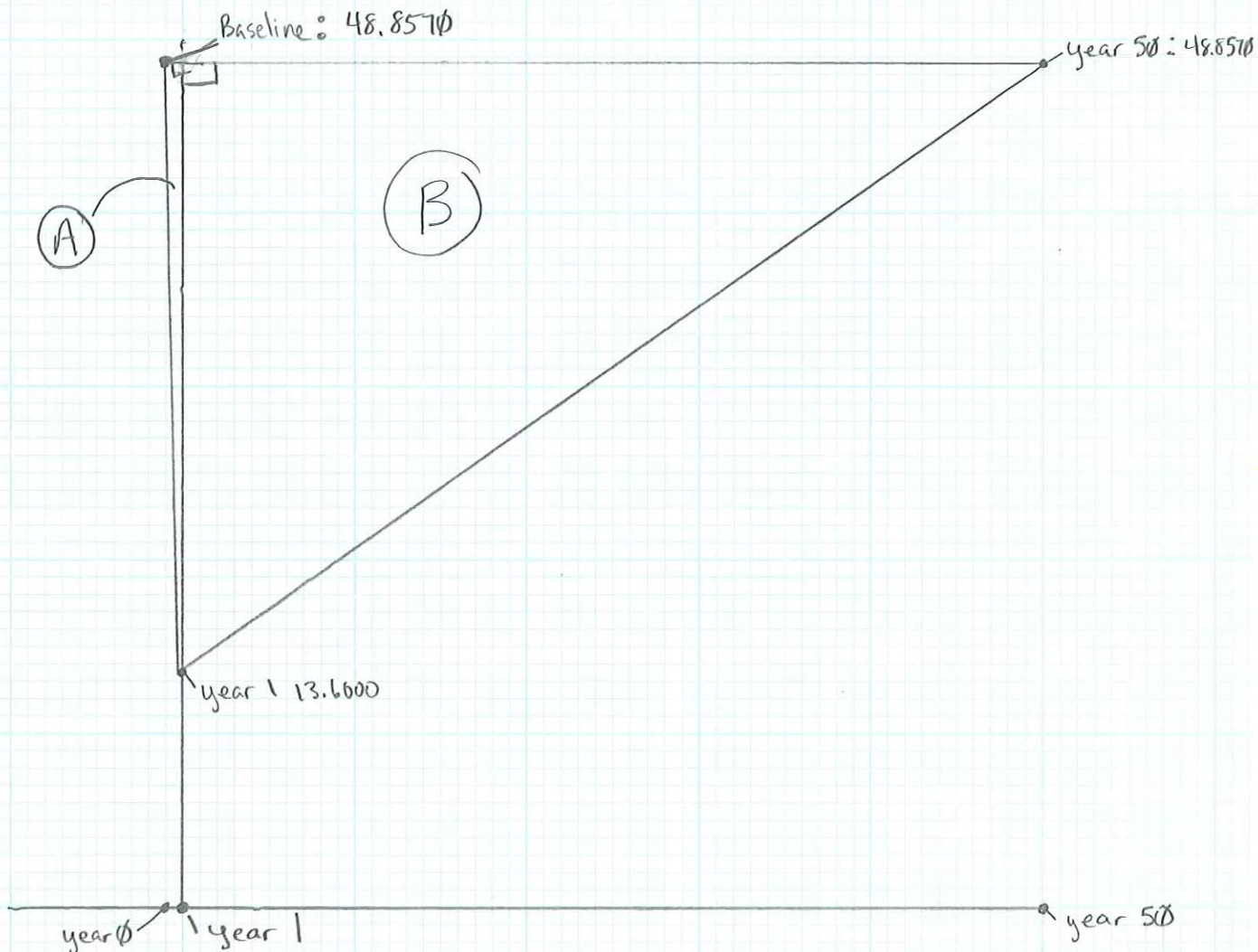
$$\text{Preservation TSSW FCUs} = (A + B) / \# \text{ of years}$$

$$\text{Preservation TSSW FCUs} = (8.1167 + 397.7183) \div 50 = \underline{\underline{8.1177}} \text{ FCUs/year}$$

Estimated f(x) lift associated with preservation from timbering:

* MPAC = 17.6 FCUs

* See work below



Triangles (A) and (B) are right triangles

$$\text{Area} = \left(\frac{1}{2}\right) BH$$

$$\text{Area of (A)} = \left(\frac{1}{2}\right) 1 \times 35.2750$$

$$\text{Area of (B)} = \left(\frac{1}{2}\right) 49 \times 35.2750$$

$$\text{Area of (A)} = \underline{17.6375}$$

$$\text{Area of (B)} = \underline{864.2375}$$

$$\text{Preservation FCUs} = \frac{(\text{A} + \text{B})}{\# \text{ of years}}$$

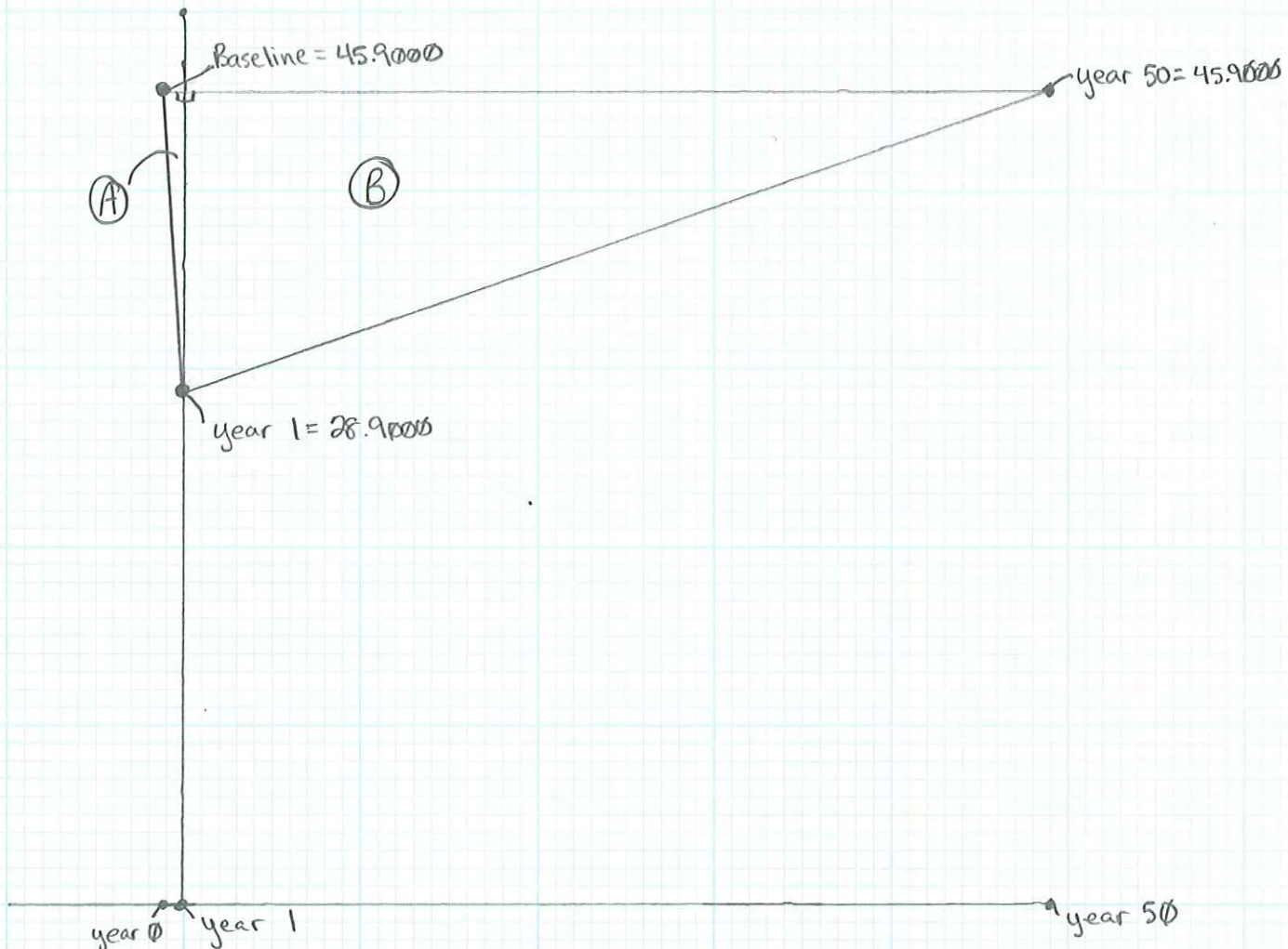
$$\text{Preservation of MPAC FCUs} = \frac{(17.6375 + 864.2375)}{50 \text{ years}} =$$

$$\boxed{17.6375 \text{ FCUs/year}}$$

Estimated fox lift associated with preservation from timbering:

* RSEC = 8.5 FCUs

* see work below



Triangle (A) and (B) are right triangles

Area = $(\frac{1}{2}) B \cdot H$

Area of (A) = $(\frac{1}{2}) 1 \times 17.0000$

Area of (A) = 8.5000

Area of (B) = $(\frac{1}{2}) 49 \cdot 17.0000$

Area of (B) = 416.5000


Preservation FCUs = $(A) + (B) / \# \text{ of years}$

Preservation of RSEC FCUs = $(8.5000 + 416.5000) / 50 \text{ years} = \underline{8.5000 \text{ FCUs/year}}$

Appendix C

iHGM Evaluation of the Project Site

Wetland Assessment Area Name: WAA 1, 2, 3, & 5


Baseline Score:		WAA Acres:	4.77	Post Project:	
Variable	Subindex			Variable	Subindex
Vdur	0.25	 SWG Riverine - Forested Interim HGM - Worksheet		Vdur	0.25
Vfreq	0.00			Vfreq	0.00
Vtopo	0.10			Vtopo	0.10
Vcwd	0.30			Vcwd	0.10
Vwood	0.75			Vwood	0.10
Vtree	0.30			Vtree	0.10
Vrich	0.60			Vrich	0.10
Vbasal	0.80			Vbasal	0.10
Vdensity	1.00			Vdensity	0.10
Vmid	1.00			Vmid	0.10
Vherb	1.00			Vherb	0.30
Vdetritus	1.00			Vdetritus	0.10
Vredox	0.10			Vredox	0.10
Vsorpt	1.00			Vsorpt	1.00
Vconnect	1.00			Vconnect	1.00

FCIs; (see formulas):	Baseline	Post Project
Temporary Storage & Detention of Storage Water (Physical):	0.000	0.000
Maintain Plant & Animal Communities (Biological):	0.683	0.267
Removal & Sequestrian of Elements & Compounds (Chemical):	0.417	0.170

FCUs; (FCI x acres per WAA):	Baseline	Post Project
Physical:	0.00	0.00
Biological:	3.26	1.27
Chemical:	1.99	0.81

LIFT in FCUs = (Sampled - Baseline):	
Physical	0.00
Biological	-1.99
Chemical	-1.18

Wetland Assessment Area Name: WAA 7


Baseline Score:		WAA Acres:	4.05	Post Project:	
Variable	Subindex			Variable	Subindex
Vdur	0.10	 <p align="center">SWG Riverine - Forested Interim HGM - Worksheet</p>		Vdur	0.10
Vfreq	0.00			Vfreq	0.00
Vtopo	0.10			Vtopo	0.10
Vcwd	0.50			Vcwd	0.10
Vwood	0.75			Vwood	0.10
Vtree	0.50			Vtree	0.10
Vrich	1.00			Vrich	0.10
Vbasal	0.80			Vbasal	0.10
Vdensity	0.60			Vdensity	0.10
Vmid	0.50			Vmid	0.10
Vherb	1.00			Vherb	0.10
Vdetritus	1.00			Vdetritus	0.10
Vredox	0.10			Vredox	0.10
Vsorpt	1.00			Vsorpt	1.00
Vconnect	0.50			Vconnect	0.50

FCIs; (see formulas):	Baseline	Post Project
Temporary Storage & Detention of Storage Water (Physical):	0.000	0.000
Maintain Plant & Animal Communities (Biological):	0.658	0.167
Removal & Sequestrian of Elements & Compounds (Chemical):	0.400	0.140

FCUs; (FCI x acres per WAA):	Baseline	Post Project
Physical:	0.00	0.00
Biological:	2.67	0.68
Chemical:	1.62	0.57

LIFT in FCUs = (Sampled - Basline):	
Physical	0.00
Biological	-1.99
Chemical	-1.05

Wetland Assessment Area Name: WAA 9 & 10


Baseline Score:		WAA Acres:	10.68	Post Project:	
Variable	Subindex			Variable	Subindex
Vdur	0.10	 SWG Riverine - Forested Interim HGM - Worksheet		Vdur	0.10
Vfreq	0.25			Vfreq	0.25
Vtopo	0.10			Vtopo	0.10
Vcwd	0.30			Vcwd	0.10
Vwood	1.00			Vwood	0.10
Vtree	0.50			Vtree	0.10
Vrich	0.80			Vrich	0.10
Vbasal	0.60			Vbasal	0.10
Vdensity	0.60			Vdensity	0.10
Vmid	0.50			Vmid	0.10
Vherb	1.00			Vherb	0.10
Vdetritus	1.00			Vdetritus	0.10
Vredox	0.10			Vredox	0.10
Vsorpt	0.50			Vsorpt	0.50
Vconnect	1.00			Vconnect	1.00

FCIs; (see formulas):	Baseline	Post Project
Temporary Storage & Detention of Storage Water (Physical):	0.272	0.126
Maintain Plant & Animal Communities (Biological):	0.658	0.250
Removal & Sequestrian of Elements & Compounds (Chemical):	0.470	0.157

FCUs; (FCI x acres per WAA):	Baseline	Post Project
Physical:	2.90	1.34
Biological:	7.03	2.67
Chemical:	5.02	1.67

LIFT in FCUs = (Sampled - Baseline):	
Physical	-1.56
Biological	-4.36
Chemical	-3.35

Wetland Assessment Area Name: WAA 11


Baseline Score:		WAA Acres:	0.45	Post Project:	
Variable	Subindex			Variable	Subindex
Vdur	0.10	 <p align="center">SWG Riverine - Forested Interim HGM - Worksheet</p>		Vdur	0.10
Vfreq	0.50			Vfreq	0.50
Vtopo	0.10			Vtopo	0.10
Vcwd	0.50			Vcwd	0.10
Vwood	0.75			Vwood	0.10
Vtree	0.50			Vtree	0.10
Vrich	1.00			Vrich	0.10
Vbasal	1.00			Vbasal	0.10
Vdensity	1.00			Vdensity	0.10
Vmid	0.75			Vmid	0.10
Vherb	1.00			Vherb	0.10
Vdetritus	1.00			Vdetritus	0.10
Vredox	0.10			Vredox	0.10
Vsorpt	0.50			Vsorpt	0.50
Vconnect	0.25			Vconnect	0.25

FCIs; (see formulas):	Baseline	Post Project
Temporary Storage & Detention of Storage Water (Physical):	0.317	0.150
Maintain Plant & Animal Communities (Biological):	0.688	0.125
Removal & Sequestrian of Elements & Compounds (Chemical):	0.467	0.207

FCUs; (FCI x acres per WAA):	Baseline	Post Project
Physical:	0.14	0.07
Biological:	0.31	0.06
Chemical:	0.21	0.09

LIFT in FCUs = (Sampled - Basline):	
Physical	-0.08
Biological	-0.26
Chemical	-0.12

Wetland Assessment Area Name: WAA 13, 14, 16

Baseline Score:		WAA Acres:	8.37	Post Project:	
Variable	Subindex			Variable	Subindex
Vdur	0.10	 <p align="center">SWG Riverine - Forested Interim HGM - Worksheet</p>		Vdur	0.10
Vfreq	0.25			Vfreq	0.25
Vtopo	0.10			Vtopo	0.10
Vcwd	0.50			Vcwd	0.10
Vwood	0.75			Vwood	0.10
Vtree	0.30			Vtree	0.10
Vrich	1.00			Vrich	0.10
Vbasal	1.00			Vbasal	0.10
Vdensity	1.00			Vdensity	0.10
Vmid	1.00			Vmid	0.10
Vherb	1.00			Vherb	0.10
Vdetritus	1.00			Vdetritus	0.10
Vredox	1.00			Vredox	0.10
Vsorpt	1.00			Vsorpt	1.00
Vconnect	0.50			Vconnect	0.50

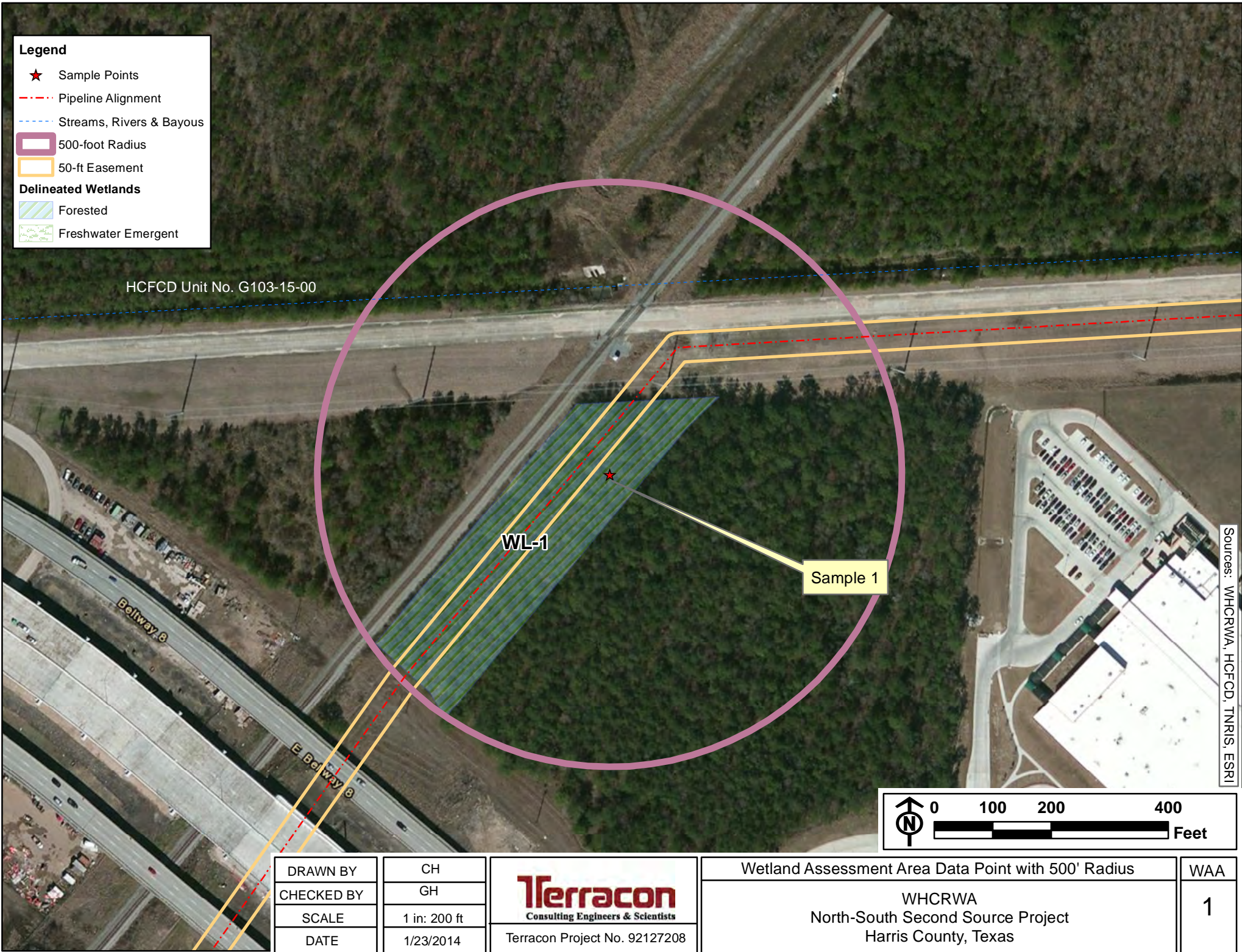
FCIs; (see formulas):	Baseline	Post Project
Temporary Storage & Detention of Storage Water (Physical):	0.267	0.126
Maintain Plant & Animal Communities (Biological):	0.717	0.167
Removal & Sequestrian of Elements & Compounds (Chemical):	0.510	0.190

FCUs; (FCI x acres per WAA):	Baseline	Post Project
Physical:	2.23	1.05
Biological:	6.00	1.40
Chemical:	4.27	1.59

LIFT in FCUs = (Sampled - Baseline):	
Physical	-1.18
Biological	-4.60
Chemical	-2.68

Appendix D

Project Site Figures



Legend

- ★ Sample Points
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- 500-foot Radius
- 50-ft Easement

Delineated Wetlands

- Forested
- Freshwater Emergent

HCFCU Unit No. G103-15-00

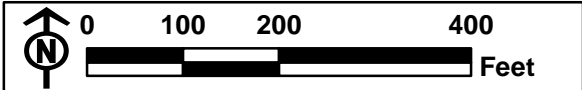
WL-1

Sample 1

Beltway 8

E Beltway 8

Sources: WHCRWA, HCFCU, TNRS, ESRI



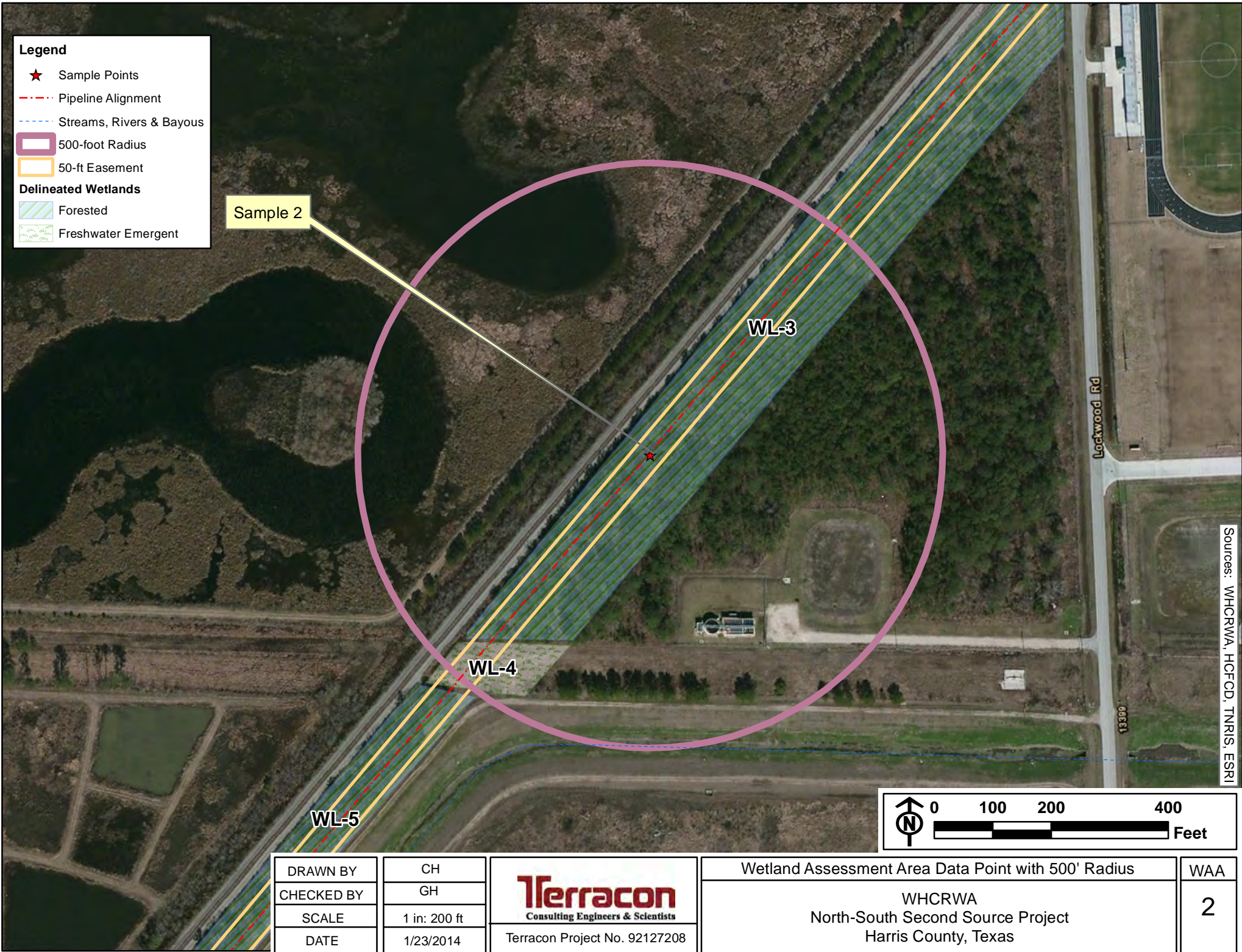
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CHECKED BY	GH
SCALE	1 in: 200 ft
DATE	1/23/2014

CH
GH
1 in: 200 ft
1/23/2014

Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127208

Wetland Assessment Area Data Point with 500' Radius
WHCRWA North-South Second Source Project Harris County, Texas

WAA
1



Legend

- ★ Sample Points
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- 500-foot Radius
- 50-ft Easement

Delineated Wetlands

- Forested
- Freshwater Emergent

Sample 2

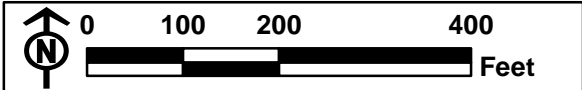
WL-3

WL-4

WL-5

Lockwood Rd

13390



Sources: WHCRWA, HCFCD, TNRS, ESRI

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DATE	1/23/2014

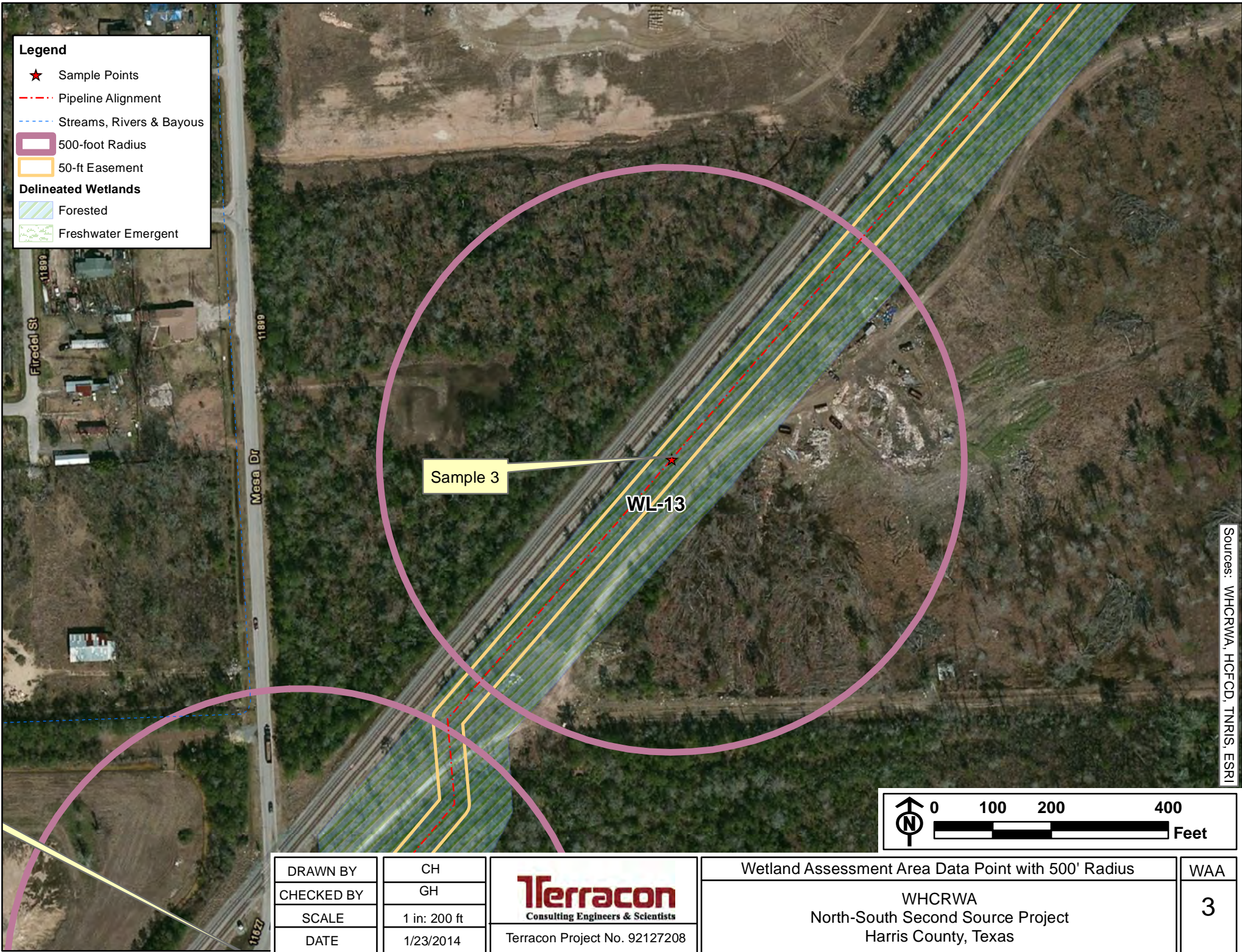
CH
GH
1 in: 200 ft
1/23/2014

Terracon
Consulting Engineers & Scientists

Terracon Project No. 92127208

Wetland Assessment Area Data Point with 500' Radius	
WHCRWA North-South Second Source Project Harris County, Texas	

WAA	2
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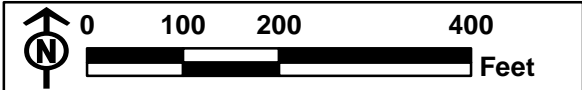
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- ★ Sample Points
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- 500-foot Radius
- 50-ft Easement

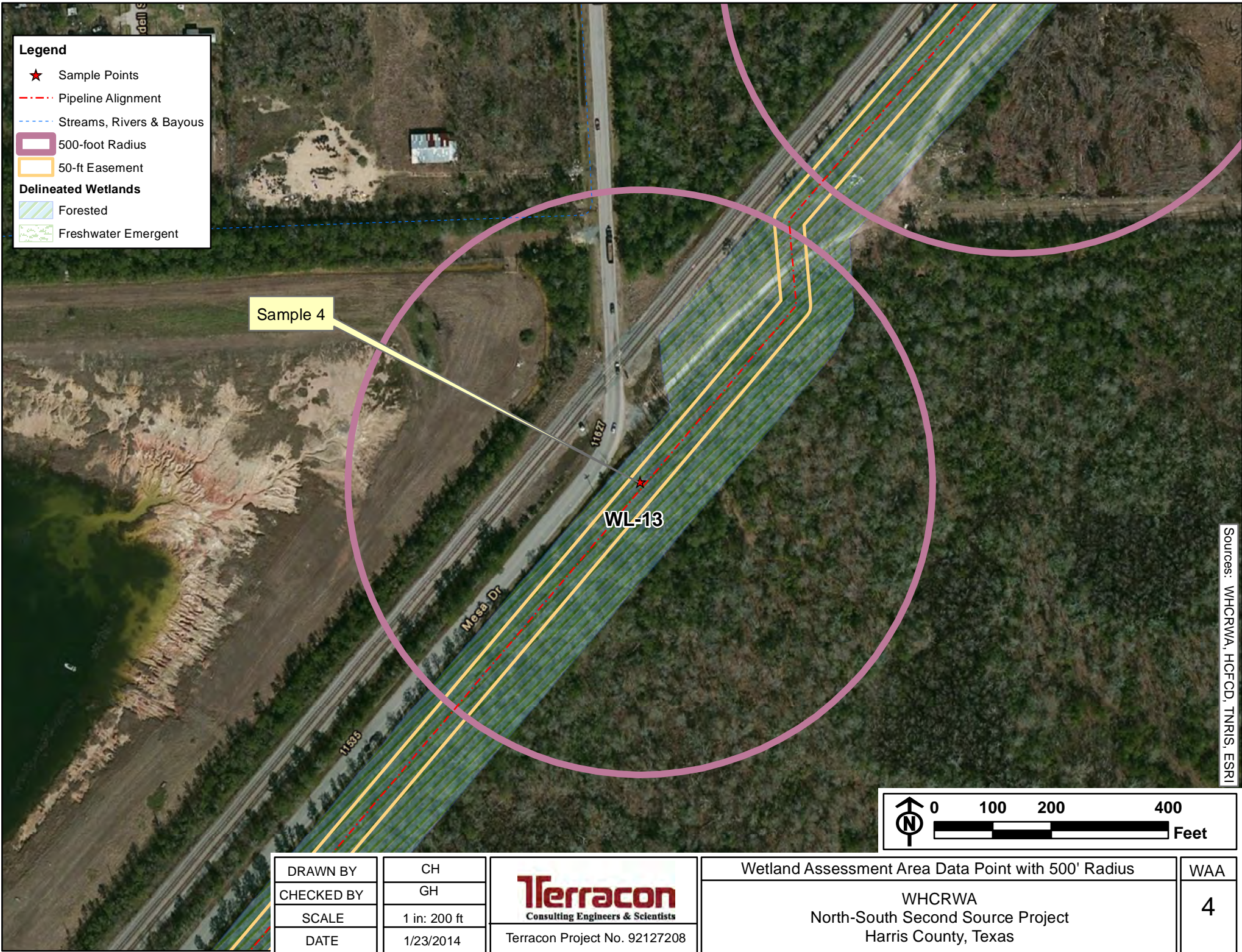
Delineated Wetlands

- ▨ Forested
- ▨ Freshwater Emergent

Sources: WHCRWA, HCFCD, TNRS, ESRI



DRAWN BY	CH		Wetland Assessment Area Data Point with 500' Radius	WAA
CHECKED BY	GH		WHCRWA	3
SCALE	1 in: 200 ft	Terracon Project No. 92127208	North-South Second Source Project	
DATE	1/23/2014		Harris County, Texas	



Legend

- ★ Sample Points
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- 500-foot Radius
- 50-ft Easement

Delineated Wetlands

- Forested
- Freshwater Emergent

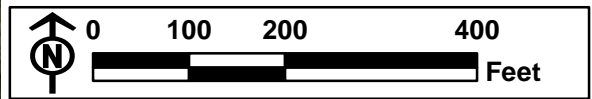
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WL-13

Mesa Dr

11535

11627



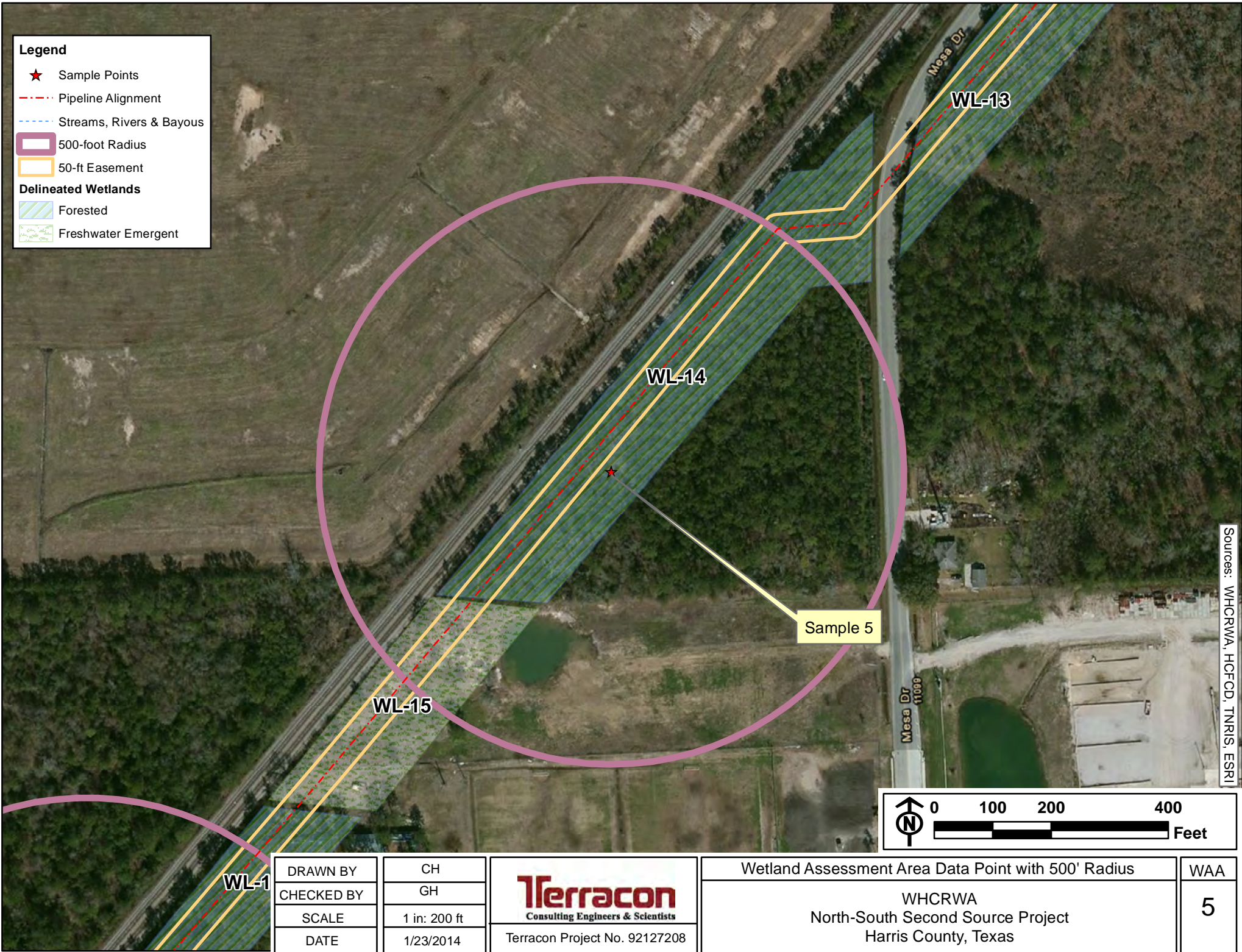
Sources: WHCRWA, HCFCD, TNRS, ESRI

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SCALE	1 in: 200 ft
DATE	1/23/2014

CH
GH
1 in: 200 ft
1/23/2014

Terracon
 Consulting Engineers & Scientists
 Terracon Project No. 92127208

Wetland Assessment Area Data Point with 500' Radius	WAA
WHCRWA North-South Second Source Project Harris County, Texas	4



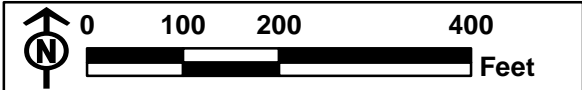
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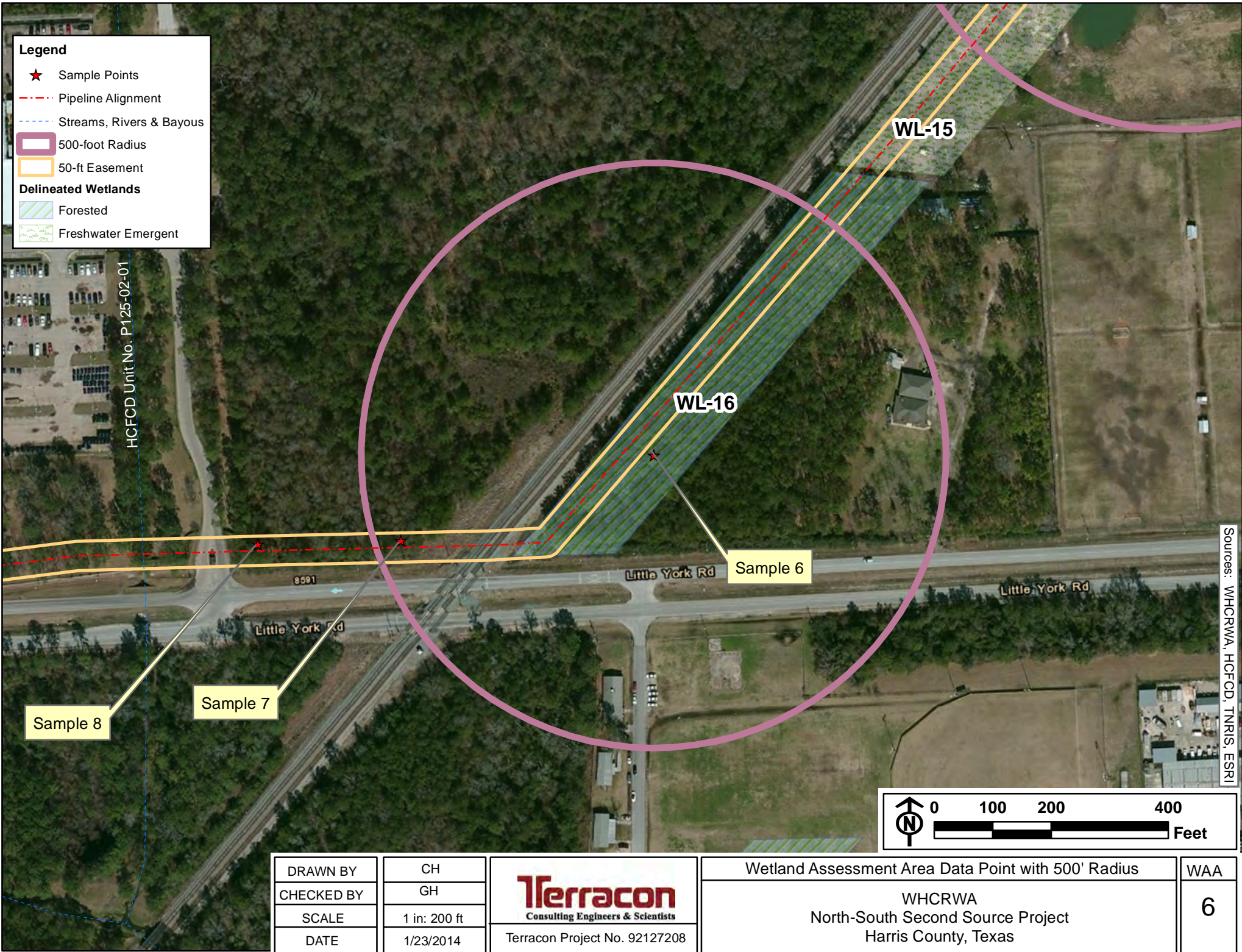
Delineated Wetlands

- Forested
- Freshwater Emergent

Sources: WHCRWA, HCFCD, TNRS, ESRI



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CHECKED BY	GH		WHCRWA North-South Second Source Project Harris County, Texas	5
SCALE	1 in: 200 ft	Terracon Project No. 92127208		
DATE	1/23/2014			



Legend

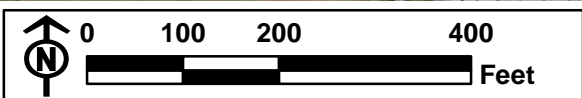
- ★ Sample Points
- - - Pipeline Alignment
- - - Streams, Rivers & Bayous
- 500-foot Radius
- 50-ft Easement

Delineated Wetlands

- ▨ Forested
- ▨ Freshwater Emergent

HCFCD Unit No. P125-02-01

Sources: WHCRWA, HCFCD, TNRS, ESRI



DRAWN BY	CH	Terracon Consulting Engineers & Scientists	Wetland Assessment Area Data Point with 500' Radius	WAA
CHECKED BY	GH		WHCRWA	6
SCALE	1 in: 200 ft	Terracon Project No. 92127208	North-South Second Source Project	
DATE	1/23/2014		Harris County, Texas	

Appendix E

Wetland Delineation/Determination Report



Delineation of Waters of the U.S., Including Wetlands

**366 Properties, LLC.
Harris County, Texas**



**ADVANCED
ECOLOGY**
enhancing natural resource value



Prepared For

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Prepared By

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February 2014**

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Table of Contents

PART I: INTRODUCTION	1
PART II: SITE DESCRIPTION	1
PART III: METHODS	2
1. RESOURCE REVIEW	2
2. SITE INVESTIGATION	3
PART IV: RESULTS AND DISCUSSION	4
1. HABITAT CHARACTERIZATION	4
<i>Potentially Jurisdictional Habitat</i>	4
Temporarily Flooded, Broad-Leaved Deciduous Palustrine Forested Habitat (PFO1A) (51 acres)	4
<i>Non-Jurisdictional Habitat</i>	4
2. HYDRIC SOILS	4
<i>Verland silty clay loam (Md)</i>	4
3. HYDROLOGY	5
4. JURISDICTIONAL DETERMINATION	5
PART V: CONCLUSION	6
PART IV: LITERATURE CITED	7

Delineation of Waters of the U.S., Including Wetlands

Part I: Introduction

Advanced Ecology, Ltd. (AEL) conducted a jurisdictional investigation on property owned by 366 Properties, LLC. (Client) located near Houston, Harris County, Texas (Appendix A, Figure 1). The purpose of the investigation was to determine if suitable mitigation acreage was available (Project Site) on the property. AEL staff members Dan Johnson, Chance Kimbrough, and Courtney Greer identified and delineated potential jurisdictional waters of the U.S. (including wetlands) on the Project Site as identified in Appendix A, Figure 2.

According to the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (Manual) (Environmental Laboratory 1987), wetlands are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” The USACE has final authority over establishing all wetland/non-wetland boundaries; thus, this report is being generated in order to aid in this jurisdictional determination.

Part II: Site Description

The delineated Project Site is 51 acres in size, located approximately 3 miles southeast of the intersection of U.S. Highway 59 and the Sam Houston Tollway in Houston, Harris County, Texas (Appendix A, Figure 1). The coordinates for the project site are: 29° 55' 9.357" N; 95° 15' 1.158" W; NAD 83 Zone 15 North. The Redstone Golf Club borders the property to the north and the west and a residential neighborhood is located to the south and east. Greens Bayou is found north and east of the tract. Ecologically, the tract is located within the Western Gulf Coastal Plains Ecoregion and the San Jacinto River basin (HUC 120401).

The Project Site is dominated by forested habitat. Representative site photographs can be found in Appendix B, the locations of which are documented in Appendix A, Figure 2.

Part III: Methods

1. Resource Review

AEL reviewed available information sources to develop local wetland community characteristics for the Project Site. This information was assembled and summarized prior to the field investigation. Objectives were to identify and generally map expected wetland communities and specific habitat subtypes prior to the site visit. This pre-investigation review is designed to increase the speed and accuracy of the field investigation. Information sources include:

- **Light Detection and Ranging (LiDAR) Elevation Dataset**

The LiDAR Elevation Dataset – Bare Earth DEM – 2 meter published by the U.S. Department of Agriculture (USDA)/National Resource Conservation Service (NRCS) National Geospatial Management Center was reviewed for purpose of locating and evaluation areas possessing wetland characteristics within the delineated Project Site (Appendix A, Figure 3)

- **Natural Resources Conservation Service (NRCS) Soil Survey**

The *Soil Survey of Harris County, Texas* (USDA 1976) and NRCS Web Soil Survey data was reviewed for purpose of locating and evaluating potential hydric soil types within the Project Site (Appendix A, Figure 4). The USDA-NRCS Soil Survey Division Soil Series Name Search Query Facility website was used to determine a range in characteristics for mapped soil types within the Project Site boundary.

- **National Wetlands Inventory (NWI) Data**

The U.S. Fish and Wildlife Service conducted a wetlands inventory of the Humble and Harmaston, Texas 7.5 minute topographic quadrangles in Harris County, Texas. This data was reviewed prior to the site visit for initial evaluation of wetland conditions (Appendix A, Figure 5). NWI data depicted the presence of several areas classified as PFO1A within the bounds of the Project Site. PFO1A is interpreted as a Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded (Cowardin et al. 1979). Therefore, AEL designated these areas as having a high potential for displaying wetland characteristics and were prioritized for identification during field reconnaissance.

- **U.S. Geological Survey (USGS) Topographic Map**

Two 7.5-minute series USGS Topographic Quadrangle Maps (Humble and Harmaston, Texas) were evaluated prior to the site visit (Appendix A, Figure 6).

- **Aerial Photographs**

Aerial photographs of the property were reviewed for purposes of evaluating plant communities and identifying potential wetland habitats. Current and historical aerial photographs were obtained from the USDA, the USGS, and other sources (Appendix C).

- **National Food Securities Act Manual WETS Analysis**

A National Food Securities Act Manual (NFSAM) WETS analysis was conducted for the three month period of May, June, and July 2013 for determination of hydrologic and climatic conditions for the site at the time of the delineation (Appendix D). The HOUSTON INTERCONT AP, 414300 station (29.98 N, -95.36 W) was used for the purpose of this analysis.

2. Site Investigation

Following the resource review, the Project Site was inspected by AEL biologists, Courtney Greer, Chance Kimbrough, and Dan Johnson on July 24-25, 2013. A pedestrian survey was conducted within the Project Site boundary. The wetland delineation involved locating each potential wetland habitat within the footprint of the Project Site and documenting dominant plant species, soil properties, and hydrological characteristics within each habitat type.

Criteria used in the identification of potential wetlands were those prescribed in the *U.S. Army Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (Regional Supplement) (USACE 2008). Methods for characterizing vegetation, recording soil data, and determining hydrology were done in accordance with these USACE manuals. Wetland delineation data points were collected along transects in accordance to the USACE guidelines for delineations greater than five acres in size; the corresponding data sheets are provided in Appendix E. Positions of transects and the associated data points are located in Appendix A, Figure 2.

Preliminary determination of hydric soils was based on information provided in the *National List; all states (April 2012)* (Hydric Soils List) (NRCS 2012) and the *Soil Survey of Harris County, Texas* (1976). Final determination of the presence of hydric or non-hydric soils was through in-field sampling of soil profiles. Soil value and chroma needed for the determination of the presence of hydric or non-hydric soils were determined using *Munsell Soil Color Charts* (2000 Revised Edition) as recommended in the USACE wetland delineation manual.

Based on the NFSAM WETS analysis, the months of May and July were determined to display drier than normal climatic and hydrologic conditions, whereas the month of June displayed normal conditions. Overall, the site was determined to exhibit drier than normal conditions during the time of the delineation field work. Hydrologic conditions for wetland determination were based on field observations of indicators as presented in the Regional Supplement. These included indicators such as sediment deposits and drift lines, as well as secondary indicators such as vegetative FAC neutral results and drainage patterns.

Visual samples of dominant plant species and estimates of their respective total percent composition within each vegetative stratum were taken within each community type. The scientific plant names and wetland indicator statuses used in the data sheets are consistent with The National Wetland Plant List: 2013 wetland ratings (NWPL) (Lichvar 2013). The USDA Plants Database was used to determine scientific names when specific species were not present in the NWPL. Confirmation of plant identification was made using several sources of information, including the USDA Plants Database.

The locations of all potential jurisdictional wetland communities were identified using a Trimble GPS unit and mapped using ArcGIS 10.1.

Part IV: Results and Discussion

1. Habitat Characterization

The current vegetative covertype of the Project Site consists of forested habitat. Historic aerials (Appendix C) depict an established forested community constituting the primary habitat type of the Project Site since at least 1953. This is validated by the variable age distribution and species composition expressed through the complete stratification of the forest canopy across the majority of the Project Site acreage.

For the purposes of this document, these forested areas are addressed in two categories recognized as potentially jurisdictional and non-jurisdictional and further described using Cowardin classifications modified for use by the national wetlands inventory (Cowardin et al. 1979). In this regard, a more detailed description of the two general categories is given in the following sections.

Potentially Jurisdictional Habitat

Potentially jurisdictional wetlands occur on the 51 acre Project Site and consist of PFO1A habitat. This habitat is found to occur throughout the Project Site. The following information provides a more detailed description of the potentially jurisdictional wetland area.

Temporarily Flooded, Broad-Leaved Deciduous Palustrine Forested Habitat (PFO1A) (51 acres)

Vegetation of forested wetland areas within the Project Site is characterized by woody tree species 20 feet in height or taller. The species composition of these areas is dominated by hardwood tree species including willow oak, water oak, sweetgum, sugarberry, red maple, American elm, and notably, a substantial portion of the PFO1A habitat supports large, bald cypress trees. The sapling/shrub component and understory supports a robust population of dwarf palmetto as well as young oaks, red maple, and other shade tolerant species. The herbaceous/vine component includes plants such as red vine, Cherokee sedge, and several species of *Chasmanthium*.

Non-Jurisdictional Habitat

Non-jurisdictional forested habitat was found to the south of the Project Site acreage. Non-jurisdictional habitat does not possess all three wetland criteria (hydrologic regime, hydrophytic vegetation, and hydric soils) set forth by the USACE 1987 wetland delineation manual and the Regional Supplement. The majority of this forested habitat meets the criteria established for hydrophytic vegetation, but lacks either the soils or hydrologic indicators needed for wetland designation.

2. Hydric Soils

The Project Site is located within the Midland-Beaumont association soil unit on the General Soil Map for Harris County, Texas. Detailed soils map sheets breaks this soil unit into more specific soil groups. Soils listed as non-hydric mapped to be included in the Project Site consist of Verland-Urban land complex.

The Verland silty clay loam hydric soil unit is mapped within the bounds of the Project Site. The following description of this soil unit was derived from the Harris County, Texas Soil Survey (USDA 1976), NRCS Web Soil Survey, and the USDA-NRCS Soil Survey Division Soil Series Name Search Query Facility website.

Verland silty clay loam (Md)

Verland silty clay loam (hyperthermic Chromic Vertic Epiaqualfs) is a very deep soil on nearly level to gently sloping lands. The soil is somewhat poorly drained with very slow permeability and high to very high surface runoff. These soils are primarily cultivated for rice and soybeans. Previously in the Midland series, the classification was changed in 2000 based on typifying pedon description. The 1976 Harris County Soil Survey classifies the Midland series as poorly drained, very slow surface runoff and internal draining, very slow permeability, and high available water capacity. Primary use is described in the 1976 Soil Survey as native and improved pasture, rice, and some urban use.

3. Hydrology

Greens Bayou, a perennial stream, runs along the northern and eastern extent of the property and serves as the primary adjacent water source. Although Greens Bayou has been confined by a levee system in attempts to reduce flooding, several breeches in this system allow water to access the Project Site during high flow events. Evidence of these high flow events and frequent inundation is readily available within these areas in the form of drift deposits, rack lines, and evidence of drainage patterns. The adjacent levees found between the property and Greens Bayou also acts to retain floodwaters which may otherwise quickly recede into the channel (due to the alteration of the natural channel configuration). This facilitates the settling of sedimentation and dispersion of energy by the forested wetland areas within the Project Site, benefiting wetland hydrology and water quality of the area. Positive wetland hydrology indicators are found throughout the Project Site and vary depending on geographic location within the area. These indicators include water-stained leaves, wetland drainage patterns, sediment deposits, and drift deposits.

4. Jurisdictional Determination

The "Clean Water Act (CWA) Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States* and *Carabel v. United States*" (Grumbles and Woodley 2008) declares that the agencies (Environmental Protection Agency (EPA) and USACE) will assert jurisdiction over traditional navigable waters (TNW) and wetlands adjacent to TNWs, without the legal obligation to make a significant nexus finding. These "waters of the U.S." are considered jurisdictional under the CWA. The wetland habitats identified in Appendix A, Figure 2 are adjacent to Greens Bayou, a TNW. Therefore, in review of the *Rapanos* and *Carabell* Supreme Court cases, it appears that the wetland habitats identified in Appendix A, Figure 2 are jurisdictional waters under the CWA.

Part V: Conclusion

Areas that demonstrate characteristics of hydrophytic vegetation, hydric soils, and wetland hydrology qualify as potentially jurisdictional wetlands and may be regulated under Section 404 of the Clean Water Act. This report, accompanying maps (Appendix A), and supporting documentation (Appendices B, C, D, and E) are being provided in order to aid in this jurisdictional determination.

During this study of the Project Site, potentially jurisdictional habitat was measured as occurring on 51 acres, within the project site. This area is or may be jurisdictional under current USACE guidelines.

This investigation was based on generally accepted practices of professionals undertaking similar studies at similar times and in the same general geographical area. AEL observed the same degree of care and skill generally exercised by professionals under similar circumstances and conditions. The observations, findings, and opinions of AEL must not be considered as scientific certainties, but solely as opinions based upon our professional judgment concerning the significance of the data gathered during the course of the project. No other warranty is expressed or implied by copy of this report.

This report was prepared on behalf of, and for the exclusive use of the Client, solely for use in the preliminary wetland determination of portions of the subject property. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor shall it be used by any other party in whole or in part, without the prior written consent of the Client.

Part IV: Literature Cited

33 CFR 328.3 Definition of Waters of the United States. Title 33, Volume 3, Chapter II, Part 328.3. U.S. Government Printing Office, Washington, D.C.

Cowardin ET AL. 1979. Classification of Wetlands and Deepwater Habitats of the United States as modified for National Wetland Inventory Mapping Convention.

Grumbles, Benjamin H., John Paul Woodley, Jr. December 2, 2008. "Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States". [Available online at: http://www.epa.gov/owow/wetlands/pdf/CWA_Jurisdiction_Following_Rapanos120208.pdf]

Lichvar, R.W. 2013. The National Wetland Plant List: 2013 wetland ratings. Phytoneuron 2013-49: 1–241. Published 17 July 2013. ISSN 2153 733X

Munsell Soil Color Charts. 2000 Revised Edition. Munsell Color. New Windsor, United States: Gretagmacbeth.

"National List; all states (April 2012)" NRCS: Hydric Soils. April 2012. USDA Natural Resources Conservation Service. Accessed 18 September 2013. [Available online at: <http://soils.usda.gov/use/hydric/>]

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Accessed 18 September 2013. [Available online at: <http://websoilsurvey.nrcs.usda.gov/>]

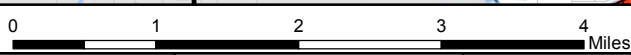
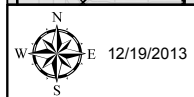
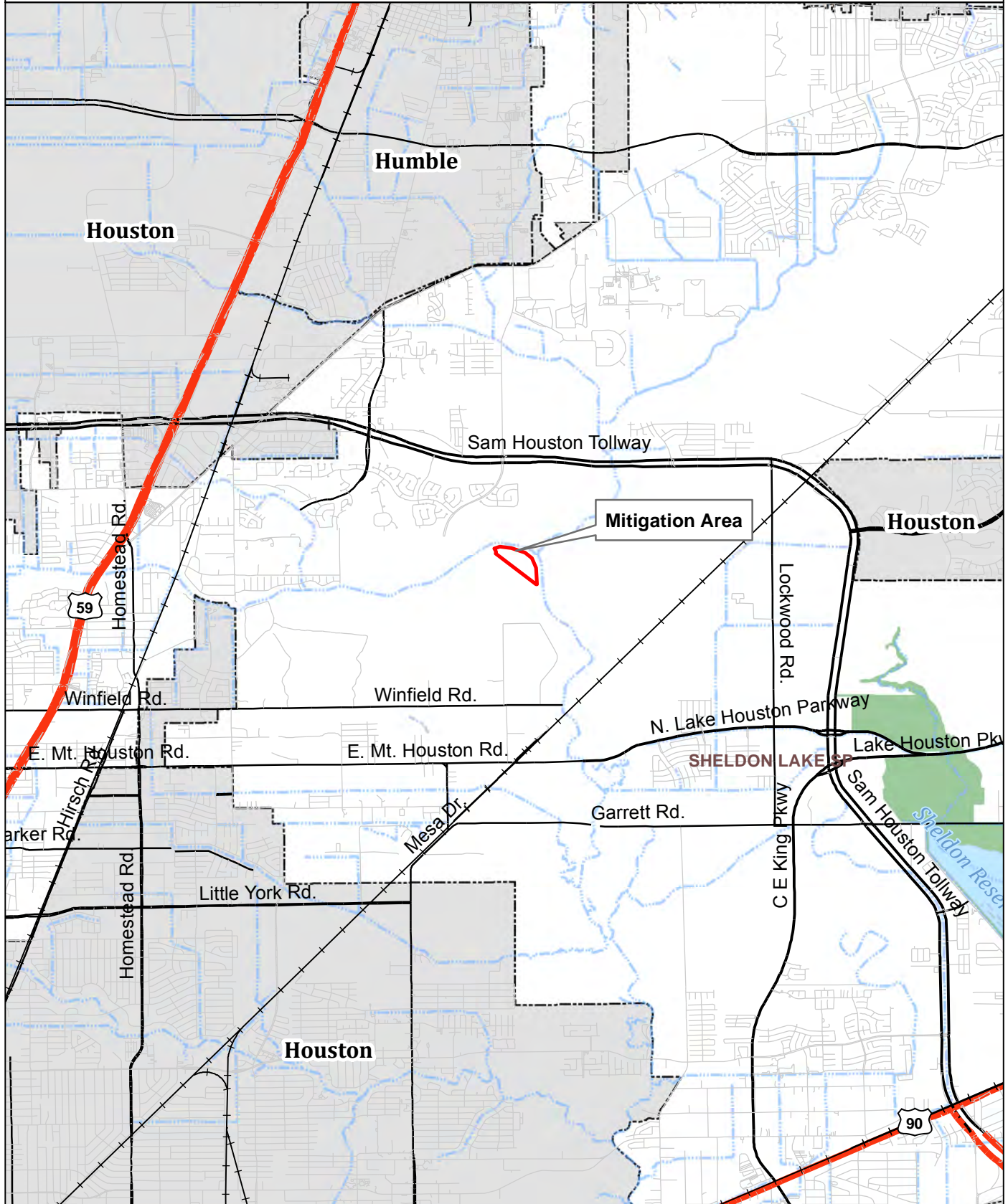
USACE 2008. Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region. Ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-30. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

USDA 1976. Soil Survey of Harris County, Texas. United States Department of Agriculture, Natural Resources Conservation Service.

Appendix A

Project Figures

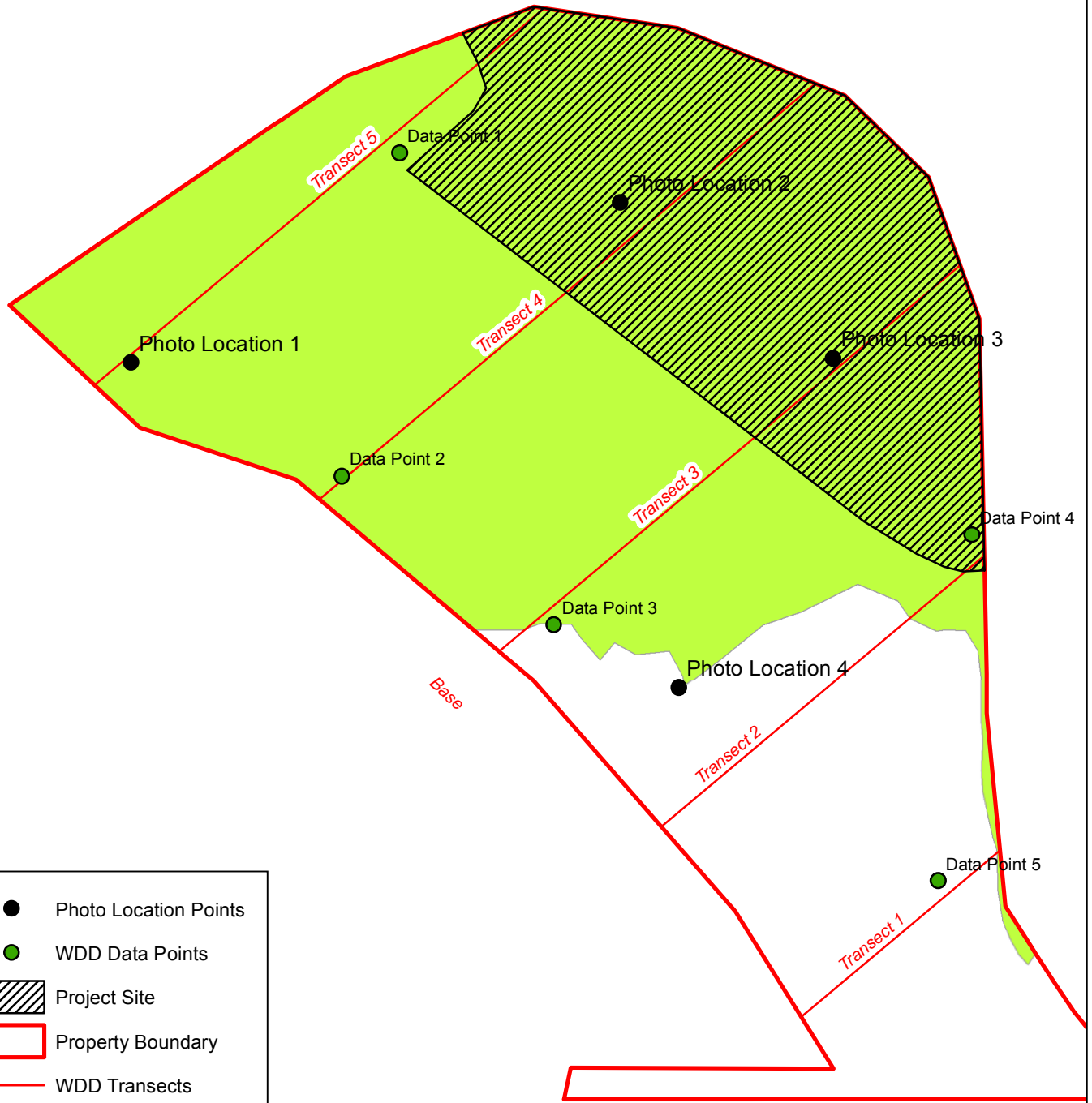
Figure 1
 Location Map
 SWG-2013-00161 Off-Site Mitigation Area



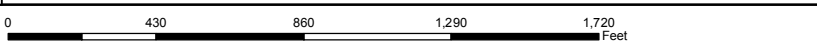
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Figure 2
Delineation Map
Harris County, Texas



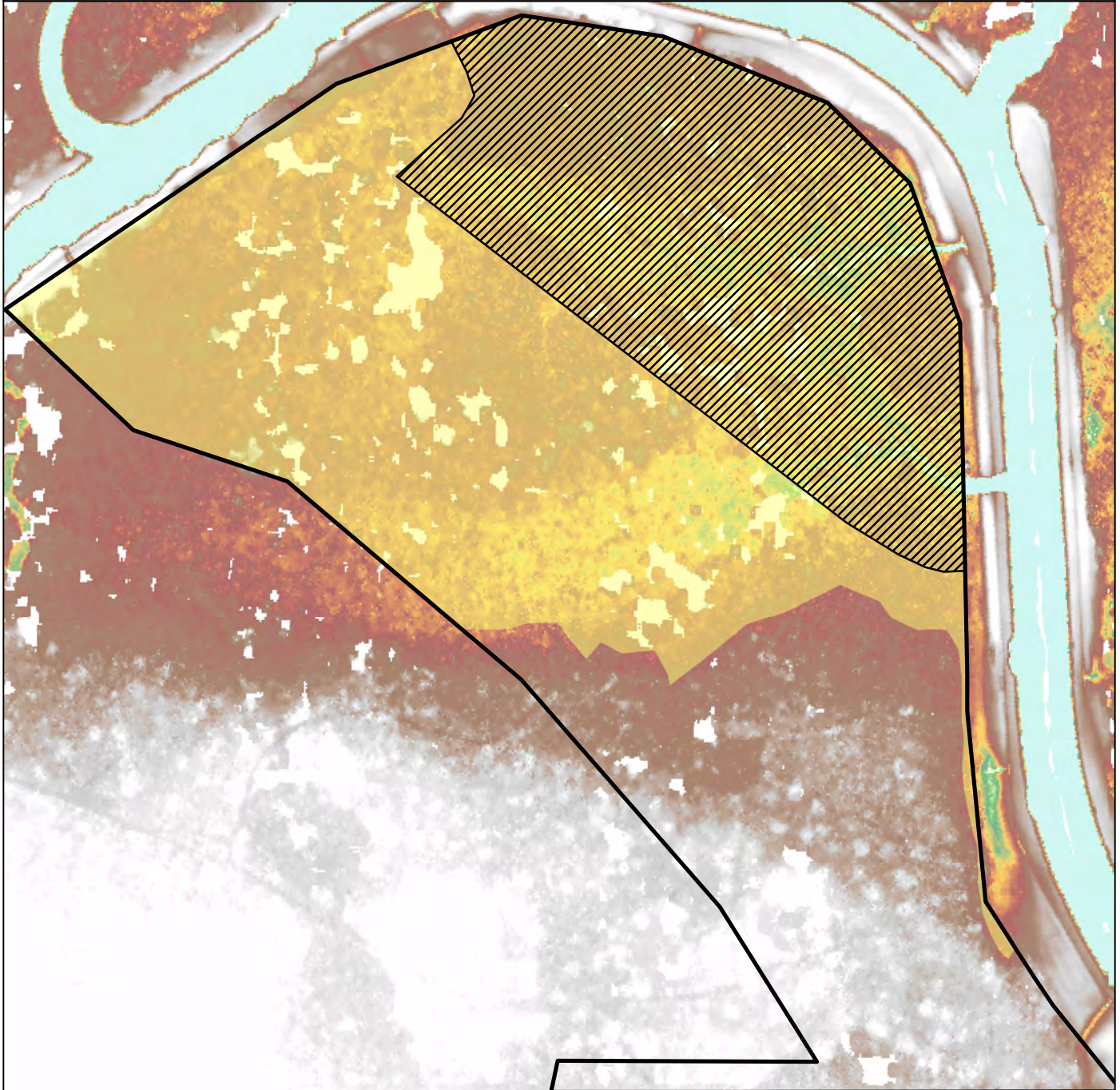
- Photo Location Points
- WDD Data Points
- ▨ Project Site
- ▭ Property Boundary
- WDD Transects
- Forested Wetland






This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



Figure 3
Lidar Data
Harris County, Texas



	Property Boundary
	Project Site
	Forested Wetland

2/4/2014



0 350 700 1,050 1,400 1,750 Feet

LIDAR Elevation Dataset Source:
USDA/NRCS
National Geospatial Management Center

This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



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Figure 4
Soils Map
Harris County, Texas

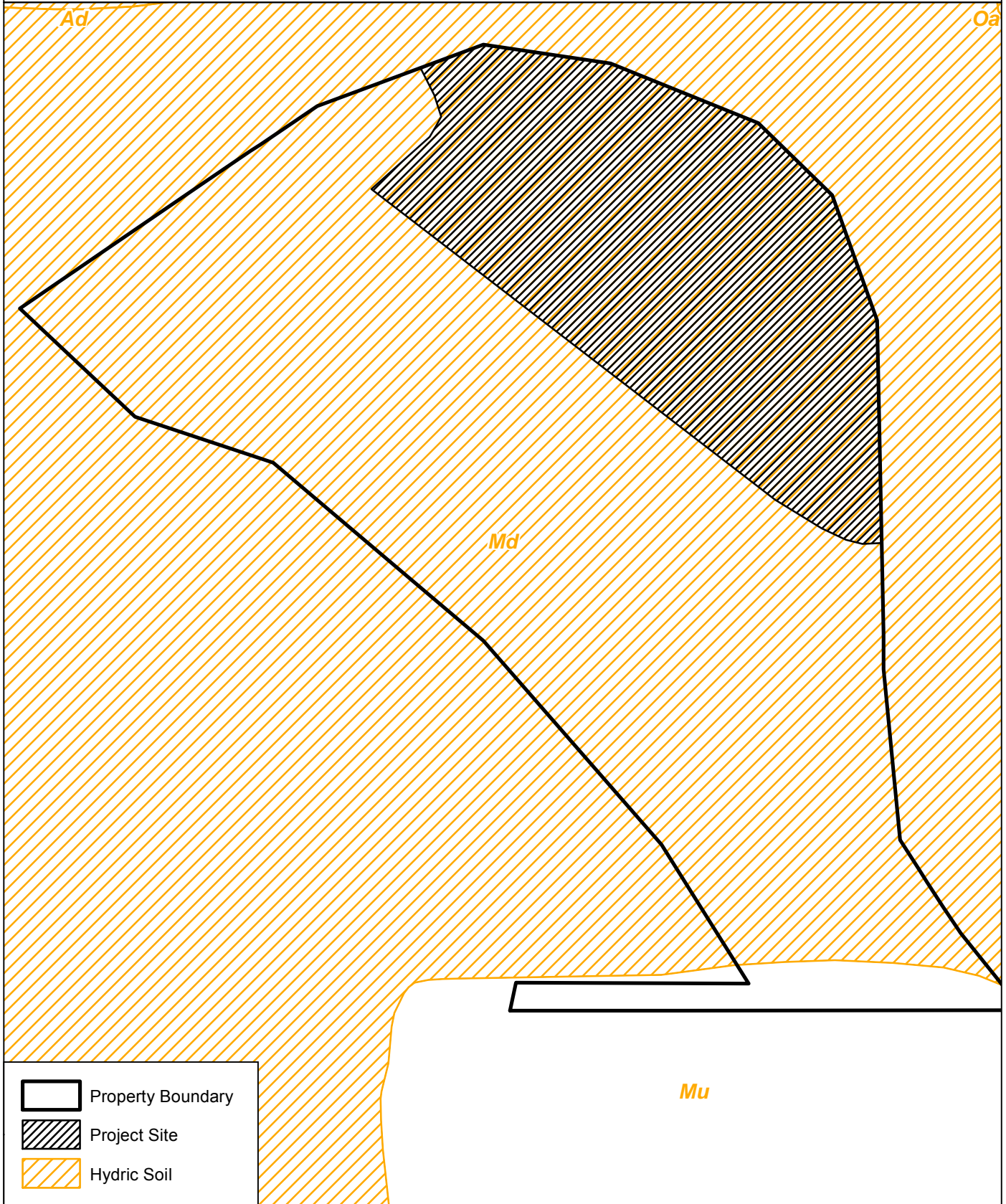


Figure 5
 NWI Map
 Harris County, Texas

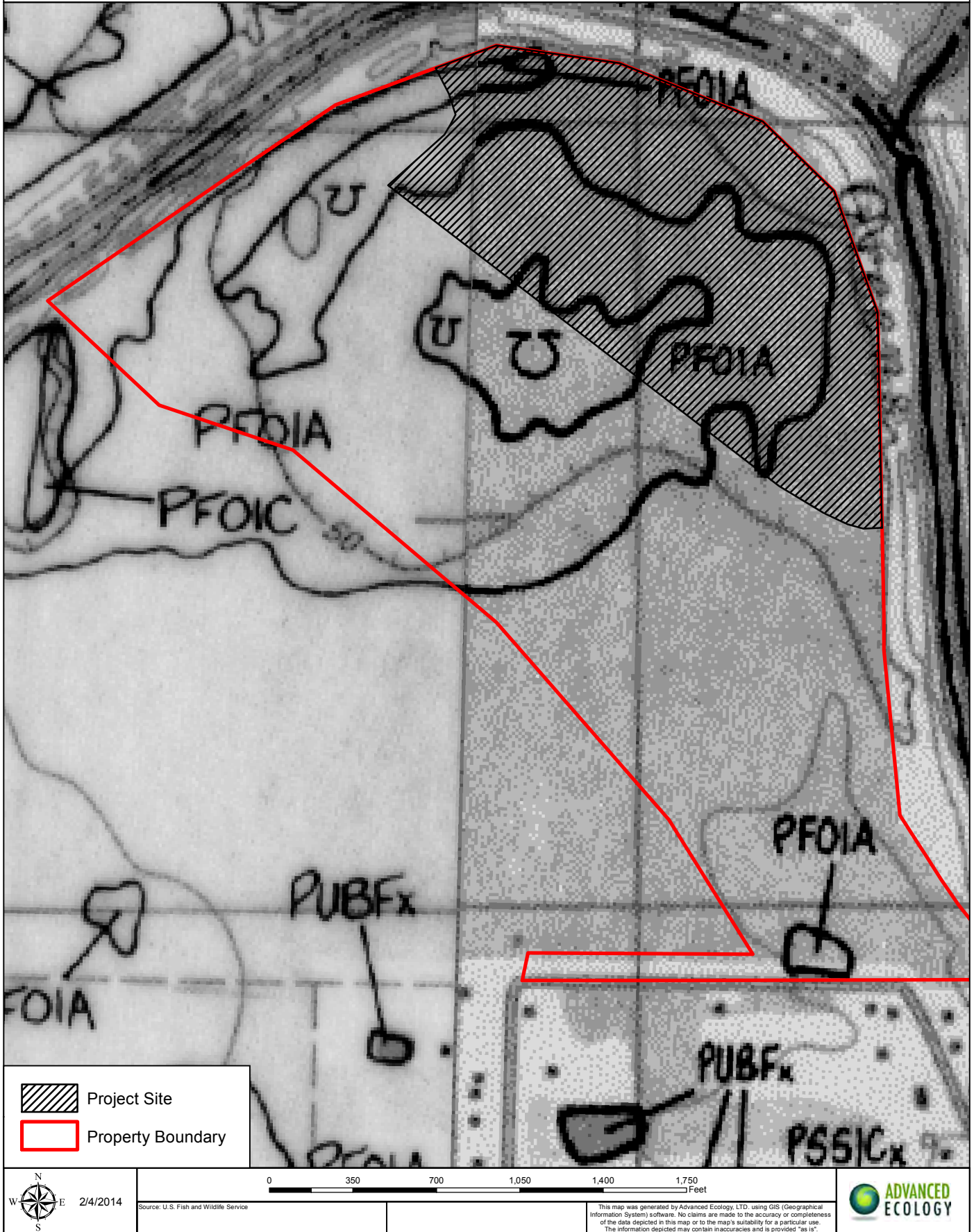
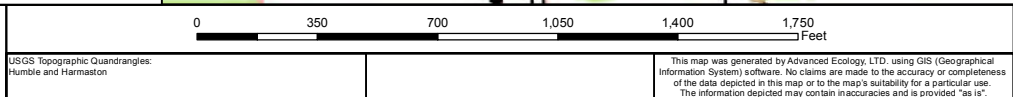
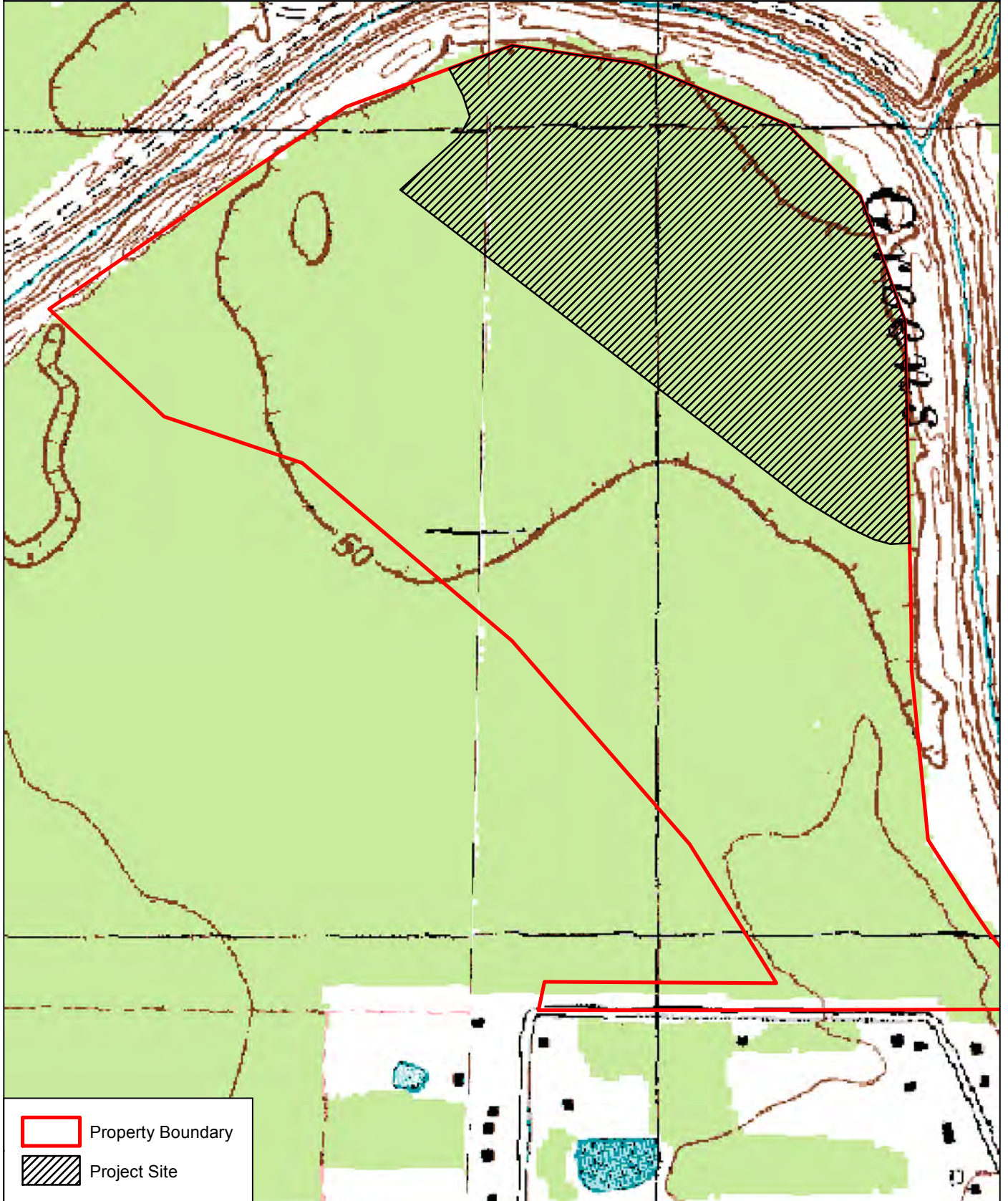


Figure 6
USGS 7.5' Topographic Quadrangle Map
Harris County, Texas



USGS Topographic Quadrangles:
Humble and Harmaston

This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



Appendix B

Site Photos

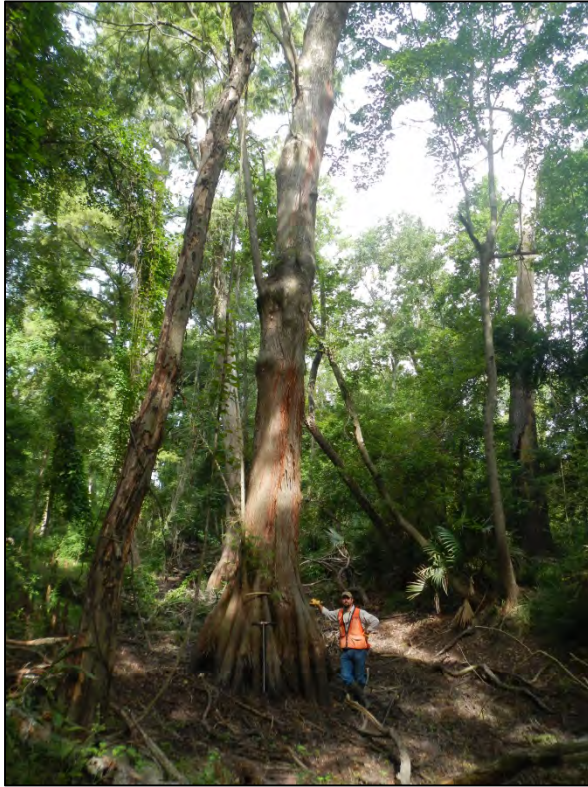


Photo Location 1 – 7-24-13



Photo Location 2 – 7-24-13



Photo Location 3 – 7-24-13

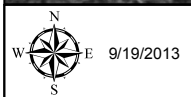
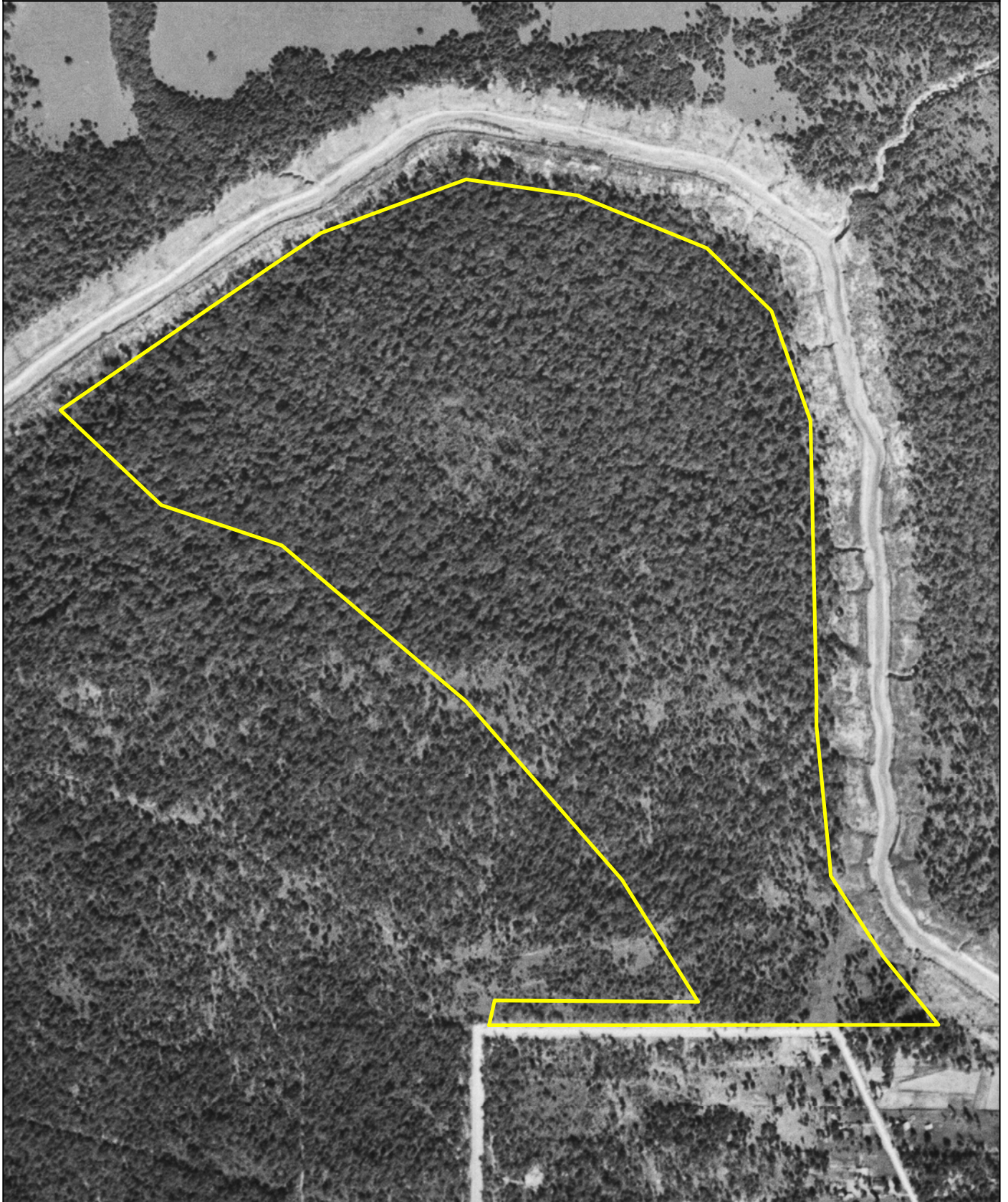


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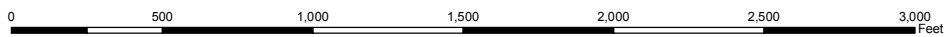
Appendix C

Historic Aerial Imagery

1953 Aerial



9/19/2013

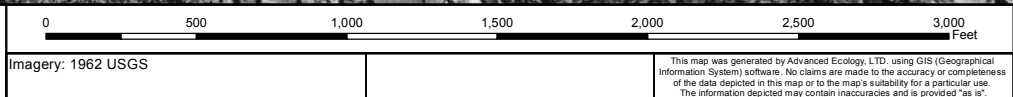
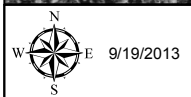
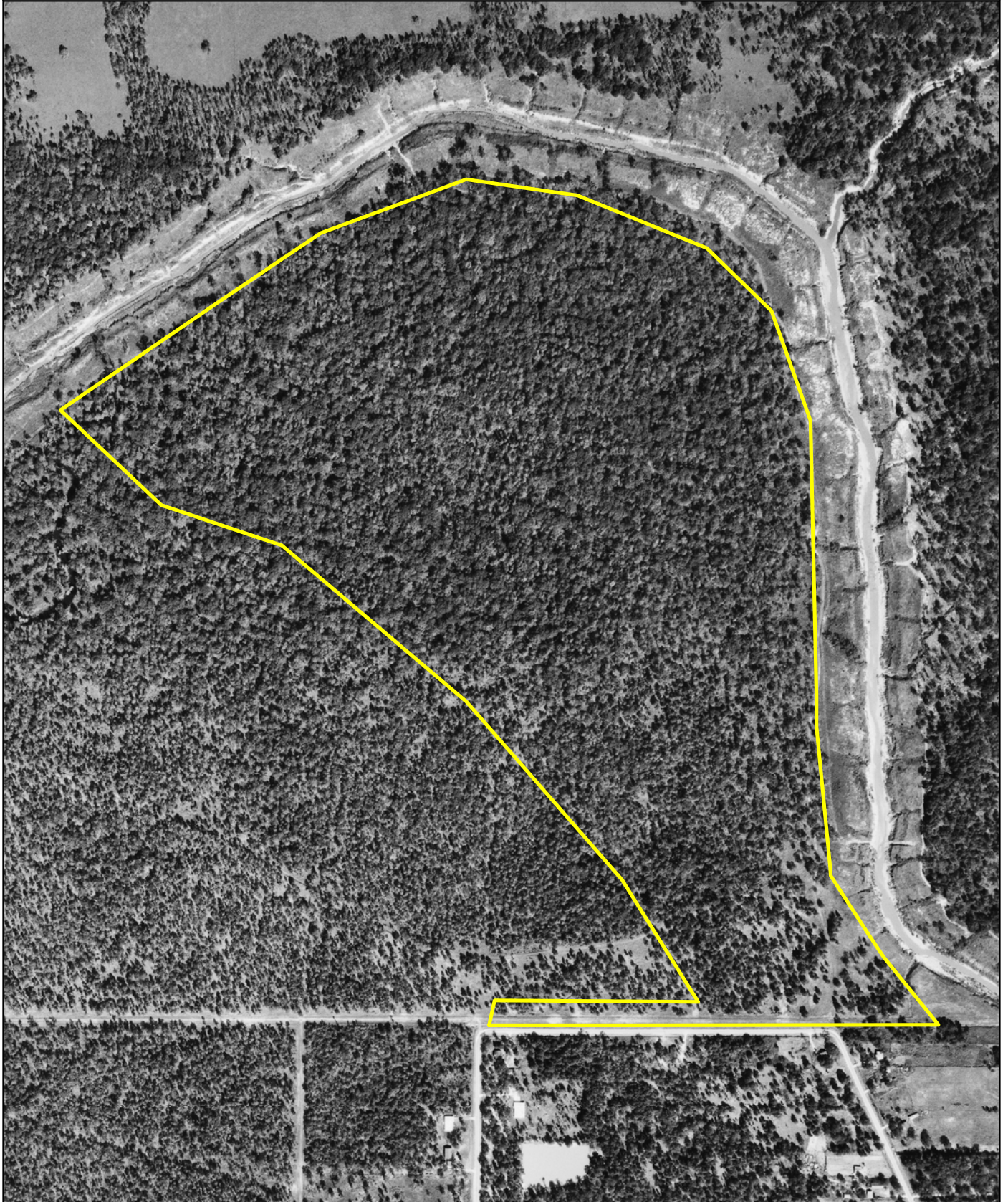


Imagery: 1953 USGS

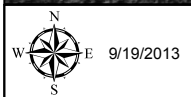
This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



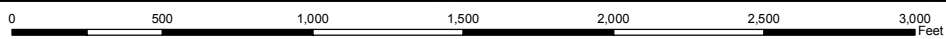
1962 Aerial



1966 Aerial



9/19/2013

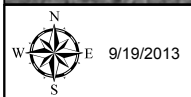


Imagery: 1966 USGS

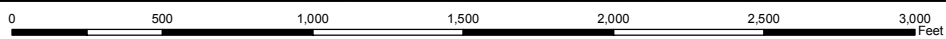
This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



1976 Aerial



9/19/2013

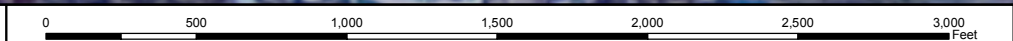
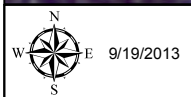


Imagery: 1976 USGS

This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



1989 Aerial

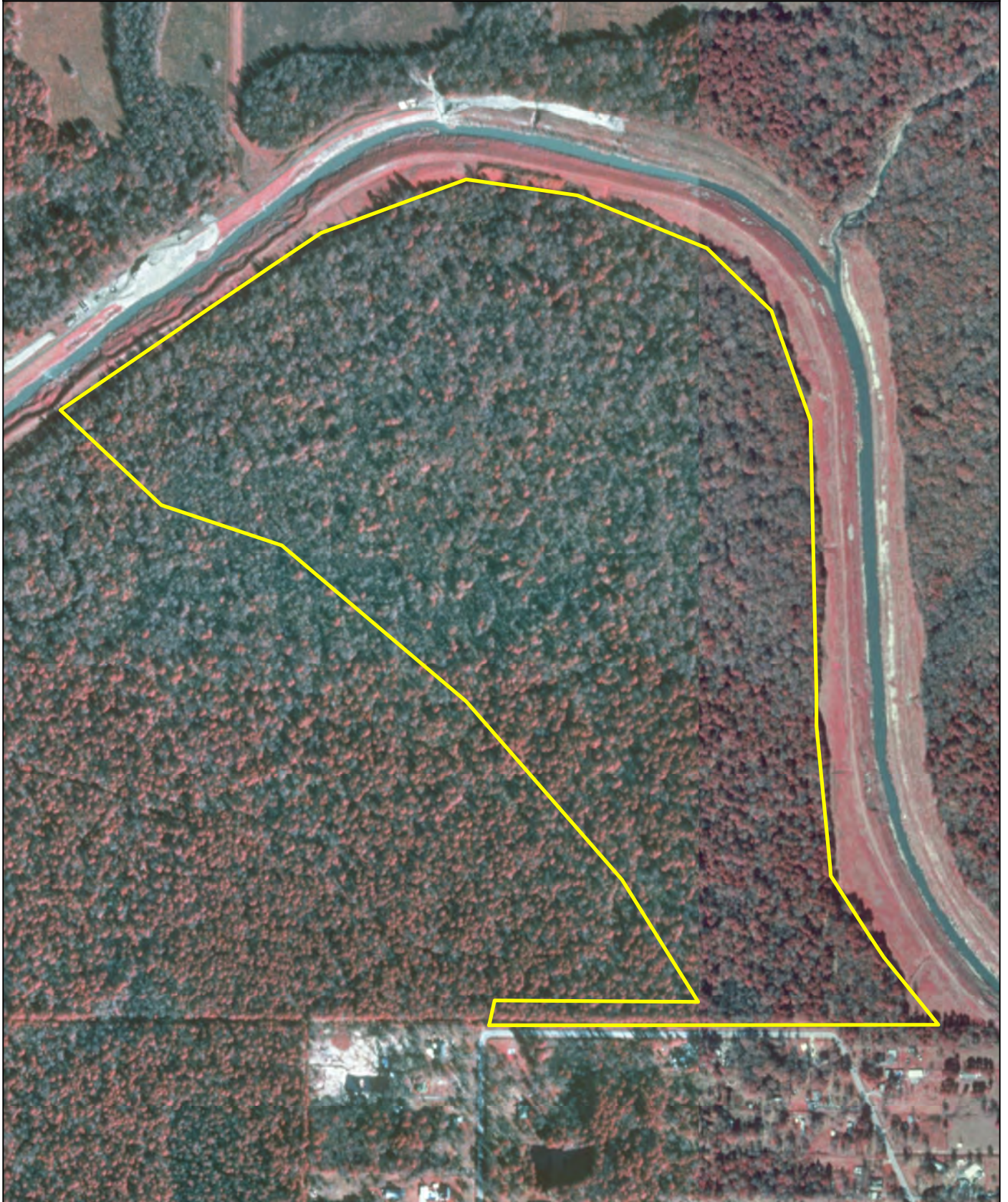


Imagery: 1989 NAPP

This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



1996 Aerial



9/19/2013

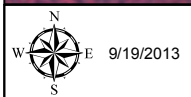
0 500 1,000 1,500 2,000 2,500 3,000 Feet

Imagery: 1996 TOP

This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".

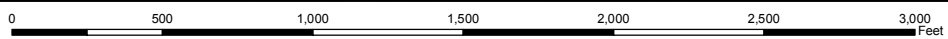


2004 Aerial



9/19/2013

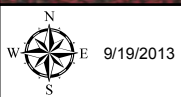
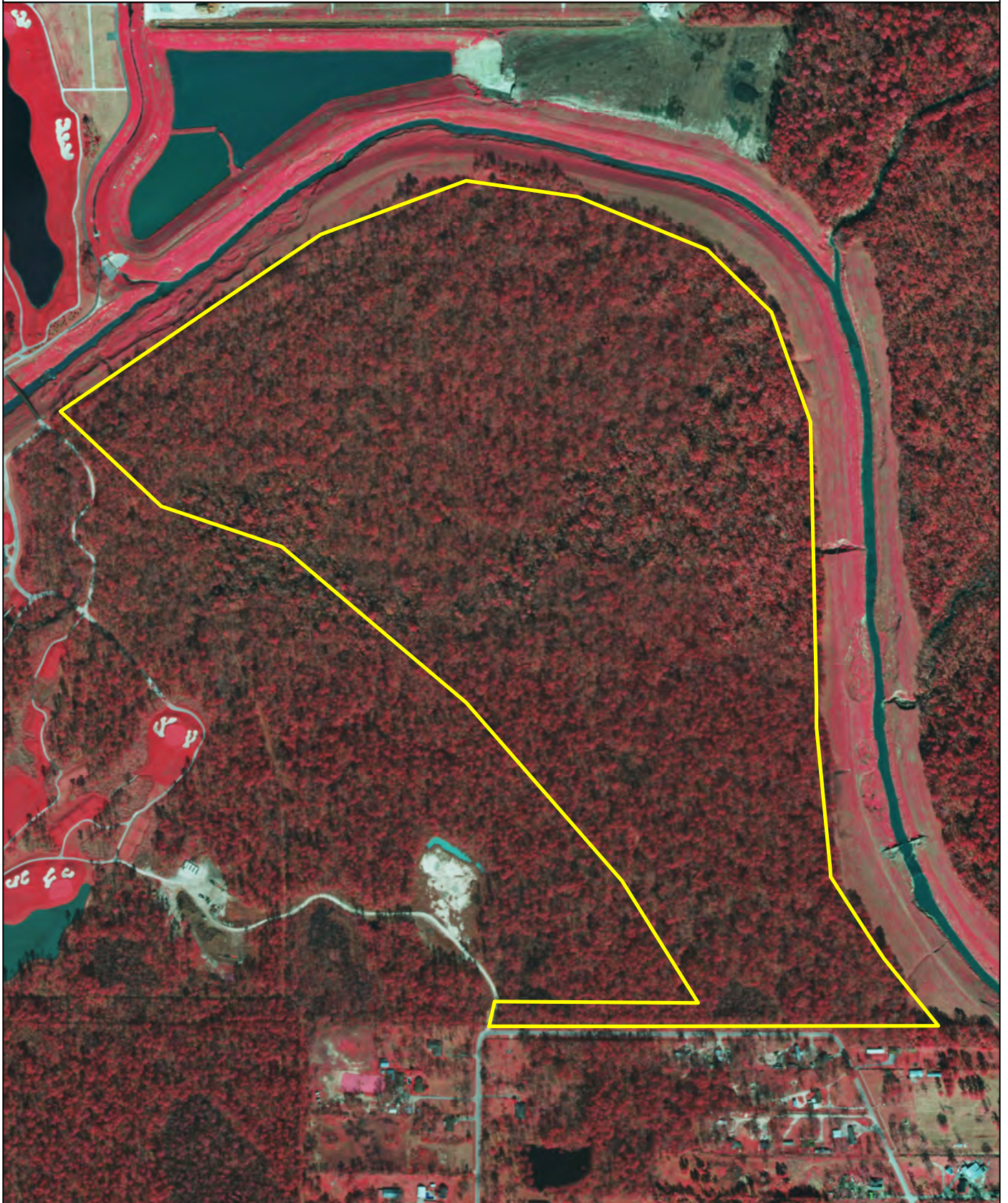
Imagery: 2004 NAIP



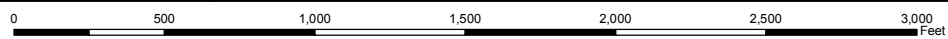
This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



2009 Aerial



9/19/2013

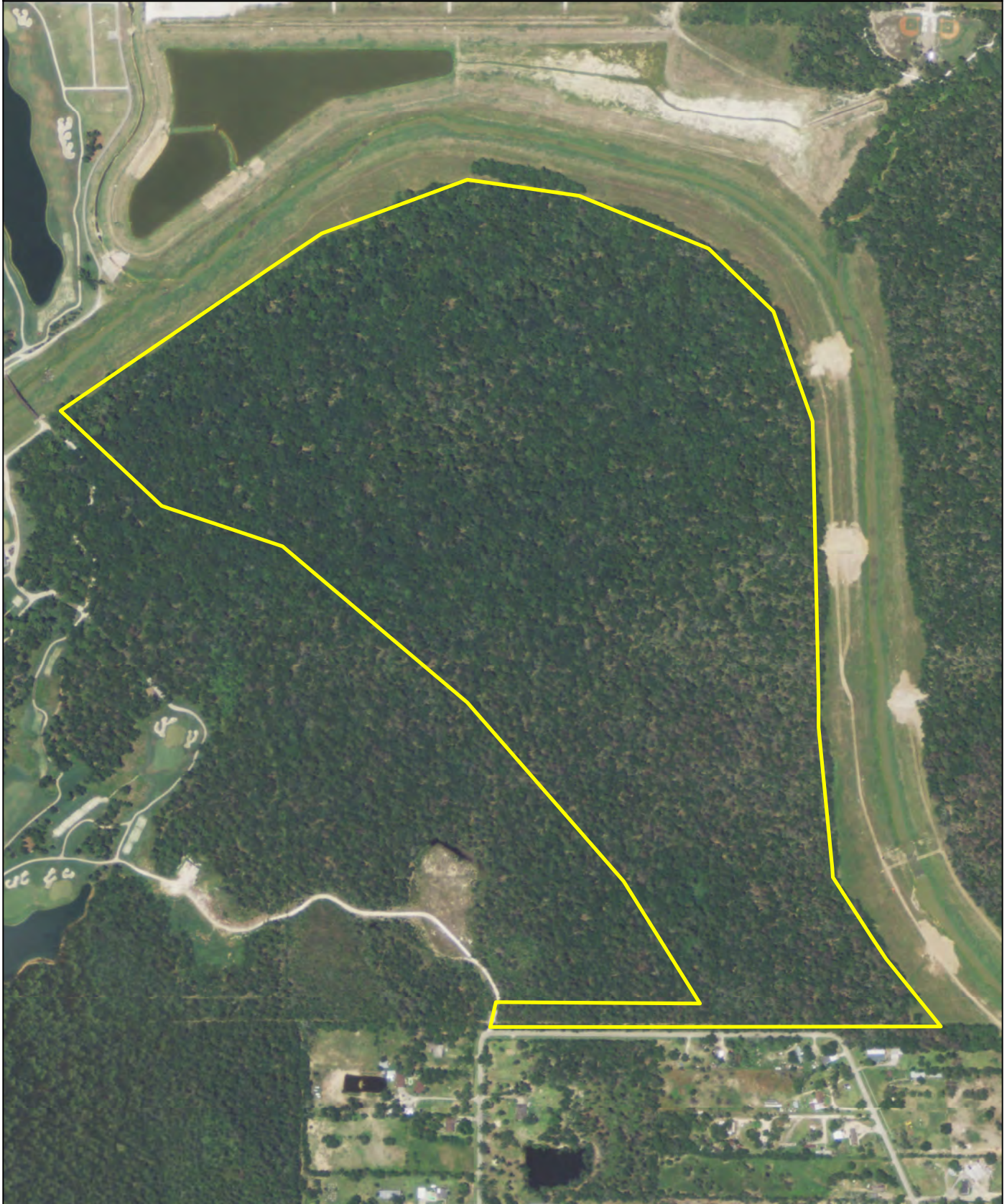


Imagery: 2009 NAIP

This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



2012 Aerial



Imagery: 2012 NAIP

This map was generated by Advanced Ecology, LTD. using GIS (Geographical Information System) software. No claims are made to the accuracy or completeness of the data depicted in this map or to the map's suitability for a particular use. The information depicted may contain inaccuracies and is provided "as is".



Appendix D

NFSAM WETS Analysis

Rainfall Documentation To
Determine Climatic/Hydrologic Conditions

Weather Station: Houston InterCont AP, 414300

Site Visit Date: July 24-25, 2013

Soil Types: Verland silty clay loam

Growing Season: 338

County, State: Harris, Texas

Tract: Justin Trails

Long Term Rainfall Records								
	Month	3 yrs in 10 less than	Average	3 yrs in 10 greater than	Rainfall	*Condition Value (a)	Weighted Value (b)	Product of (a x b)
1st Prior Month	Jul 13	1.89	3.18	3.85	1.02	1	3	3
2nd Prior Month	Jun 13	2.91	5.35	6.53	4.46	2	2	4
3rd Prior Month	May 13	2.59	5.15	6.29	3.84	1	1	1

SUM = 8

* Condition Value: Dry (1), Normal (2), Wet (3)

If sum of Products of a x b is 6 – 9 then period was drier than normal

If sum of Products of a x b is 10 – 14 then period was normal

If sum of Products of a x b is 15 – 18 then period was wetter than normal

CONCLUSION: Drier than Normal

Rainfall Data for May 2013

Station Name: HOUSTON INTERCONT AP

Station ID: 414300

State: TX

Latitude: 29.98

Longitude: -95.36

URL: <http://www.srcc.lsu.edu/>

<u>Date</u>	<u>tmax</u>	<u>tmin</u>	<u>tobs</u>	<u>prcp</u>
5/1/2013	85	65	75	0
5/2/2013	79	50	64.5	0
5/3/2013	69	47	58	0
5/4/2013	81	42	61.5	0
5/5/2013	73	51	62	0
5/6/2013	79	49	64	0
5/7/2013	87	54	70.5	0
5/8/2013	85	60	72.5	0
5/9/2013	79	70	74.5	0.04
5/10/2013	78	67	72.5	0.8
5/11/2013	86	66	76	0
5/12/2013	82	62	72	0
5/13/2013	81	55	68	0
5/14/2013	84	57	70.5	0
5/15/2013	80	66	73	0.07
5/16/2013	85	69	77	0.03
5/17/2013	89	73	81	0
5/18/2013	91	75	83	0
5/19/2013	90	75	82.5	0
5/20/2013	90	77	83.5	0
5/21/2013	89	77	83	0
5/22/2013	89	71	80	0.08
5/23/2013	89	71	80	0
5/24/2013	90	73	81.5	0
5/25/2013	85	71	78	0
5/26/2013	91	75	83	0
5/27/2013	90	70	80	0
5/28/2013	90	75	82.5	T
5/29/2013	86	76	81	0
5/30/2013	90	77	83.5	T
5/31/2013	93	79	86	0

1.02

Rainfall Data for June 2013

Station Name: HOUSTON INTERCONT AP

Station ID: 414300

State: TX

Latitude: 29.98

Longitude: -95.36

URL: <http://www.srcc.lsu.edu/>

<u>Date</u>	<u>tmax</u>	<u>tmin</u>	<u>tobs</u>	<u>prcp</u>
6/1/2013	95	79	87	0
6/2/2013	86	69	77.5	1.32
6/3/2013	92	68	80	0
6/4/2013	92	69	80.5	0
6/5/2013	94	71	82.5	0
6/6/2013	95	72	83.5	0.31
6/7/2013	88	69	78.5	0
6/8/2013	92	68	80	0
6/9/2013	90	71	80.5	1.85
6/10/2013	93	70	81.5	0
6/11/2013	91	74	82.5	T
6/12/2013	93	74	83.5	0
6/13/2013	96	74	85	0
6/14/2013	95	78	86.5	0
6/15/2013	94	77	85.5	0
6/16/2013	96	75	85.5	0
6/17/2013	96	78	87	0
6/18/2013	96	75	85.5	0
6/19/2013	96	73	84.5	0.98
6/20/2013	93	74	83.5	0
6/21/2013	94	74	84	0
6/22/2013	94	74	84	0
6/23/2013	95	74	84.5	0
6/24/2013	96	75	85.5	0
6/25/2013	97	80	88.5	0
6/26/2013	98	79	88.5	0
6/27/2013	98	75	86.5	0
6/28/2013	100	78	89	0
6/29/2013	107	80	93.5	0
6/30/2013	98	74	86	0

Rainfall Data for July 2013

Station Name: HOUSTON INTERCONT AP

Station ID: 414300

State: TX

Latitude: 29.98

Longitude: -95.36

URL: <http://www.srcc.lsu.edu/>

<u>Date</u>	<u>tmax</u>	<u>tmin</u>	<u>tobs</u>	<u>prcp</u>
7/1/2013	93	69	81	0
7/2/2013	95	70	82.5	0
7/3/2013	94	70	82	0
7/4/2013	96	71	83.5	T
7/5/2013	97	71	84	0
7/6/2013	96	75	85.5	0
7/7/2013	91	75	83	0.01
7/8/2013	89	74	81.5	0.52
7/9/2013	96	74	85	0
7/10/2013	97	75	86	0
7/11/2013	98	78	88	0
7/12/2013	98	79	88.5	0
7/13/2013	99	77	88	T
7/14/2013	91	68	79.5	1.73
7/15/2013	89	72	80.5	0.35
7/16/2013	90	74	82	0.2
7/17/2013	85	71	78	0.82
7/18/2013	93	73	83	0
7/19/2013	89	73	81	0.18
7/20/2013	88	74	81	0.03
7/21/2013	88	74	81	T
7/22/2013	95	77	86	0
7/23/2013	95	79	87	0
7/24/2013	96	77	86.5	0
7/25/2013	96	78	87	0

WETS Station : HOUSTON WSCMO AP, TX4300 Creation Date: 09/10/2002
 Latitude: 2958 Longitude: 09521 Elevation: 100
 State FIPS/County(FIPS): 48201 County Name: Harris
 Start yr. - 1971 End yr. - 2000

Month	Temperature (Degrees F.)			Precipitation (Inches)				
	avg daily max	avg daily min	avg	avg	30% chance will have		avg # of days w/.1 or more	avg total snow fall
					less than	more than		
January	62.2	41.6	51.9	3.68	2.07	4.49	6	0.1
February	66.3	44.5	55.4	2.98	1.80	3.61	4	0.2
March	73.0	51.3	62.1	3.36	1.92	4.09	4	0.0
April	79.0	57.6	68.3	3.60	1.78	4.40	4	0.0
May	85.5	65.7	75.6	5.15	2.59	6.29	5	0.0
June	90.9	71.5	81.2	5.35	2.91	6.53	6	0.0
July	93.9	73.2	83.5	3.18	1.89	3.85	5	0.0
August	93.6	72.8	83.2	3.83	2.19	4.66	6	0.0
September	89.1	68.3	78.7	4.33	2.42	5.28	5	0.0
October	81.5	58.8	70.2	4.50	1.92	5.48	5	0.0
November	71.6	49.9	60.7	4.18	2.57	5.06	5	0.0
December	64.3	43.1	53.7	3.69	2.55	4.39	5	0.1
Annual	-----	-----	-----	-----	41.89	52.70	--	----
Average	79.2	58.2	68.7	-----	-----	-----	--	----
Total	-----	-----	-----	47.84	-----	-----	60	0.3

GROWING SEASON DATES

Probability	Temperature		
	24 F or higher	28 F or higher	32 F or higher
	Beginning and Ending Dates Growing Season Length		
50 percent *	> 365 days > 365 days	1/31 to 12/17 321 days	3/ 1 to 11/28 273 days
70 percent *	> 365 days > 365 days	1/22 to 12/26 338 days	2/22 to 12/ 6 288 days

* Percent chance of the growing season occurring between the Beginning and Ending dates.

Station : TX4300, HOUSTON WSCMO AP

Unit = inches

yr	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	annl
69						1.51	3.89	2.67	6.08	3.30	2.13	4.38	23.96
70	1.93	2.52	5.08	2.21	14.39	0.26	2.28	2.03	6.22	9.09	1.54	0.64	48.19
71	0.36	2.11	1.21	2.14	3.41	2.42	1.42	6.95	5.17	3.49	1.82	7.33	37.83
72	3.30	1.20	8.52	2.85	6.99	3.02	2.76	3.90	6.23	3.34	6.49	2.20	50.80
73	5.00	3.40	3.68	7.15	4.22	13.46	6.77	3.73	9.38	9.31	1.59	2.47	70.16
74	7.68	0.55	4.20	1.68	5.61	0.59	1.75	6.94	4.51	4.53	7.90	3.35	49.29
75	1.97	2.63	3.19	4.80	7.57	7.50	5.48	5.72	0.80	5.62	2.08	3.61	50.97
76	1.39	0.38	1.53	10.92	5.80	2.63	3.93	1.59	11.35	5.83	3.05	6.22	54.62
77	2.67	1.70	1.95	4.34	0.79	3.55	2.69	4.45	3.92	0.82	5.17	2.89	34.94
78	7.15	3.07	1.70	0.57	4.15	9.37	2.35	3.66	4.27	0.05	5.99	2.60	44.93
79	6.30	5.23	2.88	7.79	3.78	1.88	8.10	4.57	9.83	2.80	1.78	4.03	58.97
80	6.09	2.54	5.39	2.05	5.63	0.92	1.57	1.40	6.00	4.03	2.12	1.25	38.99
81	2.32	2.21	1.74	2.69	8.75	9.65	4.43	7.01	2.91	6.96	5.26	2.05	55.98
82	1.82	1.59	1.55	2.28	6.87	1.10	4.32	1.90	0.98	6.64	8.91	4.91	42.87
83	2.00	3.97	3.85	0.43	7.29	5.37	5.23	9.42	7.23	1.56	3.17	3.69	53.21
84	3.99	4.37	2.41	0.56	3.13	1.99	3.43	3.52	3.87	16.05	2.28	2.59	48.19
85	2.10	5.38	4.52	4.31	1.57	5.29	4.93	1.14	4.67	6.54	4.84	3.85	49.14
86	0.71	2.74	1.44	2.63	4.29	6.34	0.61	3.27	3.70	6.83	6.66	5.71	44.93
87	2.42	4.26	0.88	0.47	5.39	9.31	4.79	1.48	3.46	0.17	3.41	4.56	40.60
88	1.27	1.29	4.88	1.26	1.32	2.00	3.23	3.52	1.20	1.29	0.41	1.26	22.93
89	4.80	0.90	3.96	1.48	13.56	16.28	1.92	2.74	2.69	1.76	1.84	0.80	52.73
90	3.96	4.54	5.11	6.21	2.23	2.98	4.85	0.31	1.57	3.79	3.01	1.81	40.37
91	9.78	5.79	1.77	8.06	4.02	7.69	1.31	2.97	2.76	2.57	5.03	9.34	61.09
92	7.70	5.99	6.28	3.74	7.05	3.38	3.85	2.78	1.08	1.03	5.99	3.46	52.33
93	5.79	2.67	6.41	7.88	8.50	12.08	0.47	1.82	1.10	5.32	3.27	2.68	57.99
94	2.08	2.79	2.39	2.11	5.02	3.40	1.60	5.45	1.12	10.62	1.67	4.90	43.15
95	5.95	2.55	4.11	2.59	3.83	4.11	2.68	4.90	2.52	2.77	3.63	4.99	44.63
96	0.88	1.29	0.12	2.05	0.56	8.37	1.11	10.58	6.96	2.60	4.55	3.74	42.81
97	3.26	5.35	7.96	7.17	6.69	4.46	2.30	2.26	4.86	7.11	3.38	5.42	60.22
98	4.35	5.85	2.32	1.21	0.04	2.87	1.65	4.38	10.16	7.79	10.21	4.01	54.84
99	2.12	0.80	3.44	1.06	4.10	5.26	5.11	0.50	1.36	0.56	1.53	2.20	28.04
0	1.25	2.32	1.35	5.52	12.35	3.29	0.64	2.11	4.34	3.27	8.50	2.69	47.63
1	4.25	0.82	7.97	2.00	3.53	19.21	2.05	4.83	8.82	8.95	2.58	6.18	71.19
2													

Appendix E

Atlantic and Gulf Coastal Plains Regional Supplement Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 366 Properties, LCC. Delineation City/County: Houston, Harris County Sampling Date: 7-24-13
 Applicant/Owner: 366 Properties, LCC. State: TX Sampling Point: 1-1 (1)
 Investigator(s): Dan Johnson, Chance Kimbrough, Courtney Greer Section, Township, Range: S Everett Survey, Abstract 250
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR T/MLRA 256 Lat: 29°55'15.209"N Long: 95°15'5.279"W Datum: NAD83
 Soil Map Unit Name: Md Verland silty clay loam, poorly drained NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Based on WETS analysis data, the site was determined to be drier than normal at the time of delineation field work.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width:50%; border: none;"><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> High Water Table (A2)</td> <td style="border: none;"><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Saturation (A3)</td> <td style="border: none;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water Marks (B1)</td> <td style="border: none;"><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/> Sediment Deposits (B2)</td> <td style="border: none;"><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/> Drift Deposits (B3)</td> <td style="border: none;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td style="border: none;"><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Iron Deposits (B5)</td> <td style="border: none;"><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <table style="width:100%; border: none;"> <tr><td style="border: none;"><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td style="border: none;"><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</td></tr> <tr><td style="border: none;"><input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)																															
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)																															
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																															
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)																															
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)																															
<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																															
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)																															
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)																															
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)																																
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)																																
<input type="checkbox"/> Surface Soil Cracks (B6)																																
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																																
<input type="checkbox"/> Drainage Patterns (B10)																																
<input type="checkbox"/> Moss Trim Lines (B16)																																
<input type="checkbox"/> Dry-Season Water Table (C2)																																
<input type="checkbox"/> Crayfish Burrows (C8)																																
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																																
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<input type="checkbox"/> Shallow Aquitard (D3)																																
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)																																
<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)																																
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 1-1

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>1/10th Acre</u>)					
1. <u>Liquidambar styraciflua</u>	15		FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83</u> (A/B)	
2. <u>Quercus nigra</u>	30	X	FAC		
3. <u>Celtis laevigata</u>	30	X	FACW		
4. <u>Acer rubrum</u>	5		FAC		
5. <u>Taxodium distichum</u>	5		OBL		
6. _____					
7. _____					
8. _____					
85 = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
50% of total cover: _____		20% of total cover: _____			
Sapling/Shrub Stratum (Plot size: <u>1/10th Acre</u>)					
1. <u>Acer rubrum</u>	5		FAC		
2. <u>Ilex vomitoria</u>	15	X	FAC		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
20 = Total Cover					
50% of total cover: _____		20% of total cover: _____			
Herb Stratum (Plot size: <u>1/10th Acre</u>)					
1. <u>Sabal minor</u>	5		FACW	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Chasmanthium latifolium</u>	20	X	FAC		
3. <u>Chasmanthium sessiliflorum</u>	20	X	FAC		
4. <u>Celtis laevigata</u>	1		FACW		
5. <u>Quercus nigra</u>	1		FAC		
6. <u>Ilex vomitoria</u>	1		FAC		
7. <u>Dichantherium oligosanthes</u>	10		FACU		
8. <u>Chionanthus virginicus</u>	1		FACU		
9. _____					
10. _____					
11. _____					
12. _____					
59 = Total Cover					
50% of total cover: _____		20% of total cover: _____			
Woody Vine Stratum (Plot size: <u>1/10th Acre</u>)					
1. <u>Rubus trivialis</u>	2	X	FACU	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.	
2. <u>Smilax rotundifolia</u>	1		FAC		
3. _____					
4. _____					
5. _____					
3 = Total Cover					
50% of total cover: _____		20% of total cover: _____			
Remarks: (If observed, list morphological adaptations below).				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	

SOIL

Sampling Point: 1-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR4/1	80	10YR5/2	20	RM	M	Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Sampling Point Label on Map: 1

Gulf Coastal Plain Region

Location: Harris Sampling Date: 7/24/13

State: TX Sampling Point: 1-1

Soil (type, none): _____ Slope (%): _____

Datum: _____

NWI classification: _____

(If no, explain in Remarks.)

Disturbance "present"? Yes _____ No _____



WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 366 Properties, LCC. Delineation City/County: Houston, Harris County Sampling Date: 7-24-13
 Applicant/Owner: 366 Properties, LLC. State: TX Sampling Point: 2-1 (2)
 Investigator(s): Dan Johnson, Chance Kimbrough, Courtney Greer Section, Township, Range: S Everett Survey, Abstract 250
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR T/MLRA 256 Lat: 29°55'3.594" N Long: 95°15'7.207"W Datum: NAD83
 Soil Map Unit Name: Md Verland silty clay loam, poorly drained NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Based on WETS analysis data, the site was determined to be drier than normal at the time of delineation field work.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input checked="" type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <table style="width:100%; border: none;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td><input checked="" type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</td></tr> <tr><td><input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)																															
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<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)																																
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes <u>X</u> No _____																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 2-1

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Liquidambar styraciflua</u>	10		FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>89</u> (A/B)
2. <u>Acer rubrum</u>	2.5		FAC	
3. <u>Platanus occidentalis</u>	10		FACW	
4. <u>Quercus phellos</u>	25	X	FACW	
5. <u>Ulmus americana</u>	30	X	FAC	
6. <u>Fraxinus pennsylvanica</u>	2.5		FACW	
7. <u>Celtis laevigata</u>	5		FACW	
8. _____				
85 = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Liquidambar styraciflua</u>	2	X	FAC	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. <u>Acer rubrum</u>	2	X	FAC	
3. <u>Ilex vomitoria</u>	5	X	FAC	
4. <u>Carpinus caroliniana</u>	2	X	FAC	
5. _____				
6. _____				
7. _____				
8. _____				
11 = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Chasmanthium sessiliflorum</u>	80	X	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Brunnichia ovata</u>	2		FACW	
3. <u>Pinus taeda</u>	2		FAC	
4. <u>Hypericum spp.</u>	2			
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
86 = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Woody Vine Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Rubus trivialis</u>	10	X	FACU	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
2. <u>Smilax rotundifolia</u>	2		FAC	
3. <u>Vitis rotundifolia</u>	15	X	FAC	
4. <u>Toxicodendron radicans</u>	2		FAC	
5. <u>Ampelopsis arborea</u>	2		FAC	
31 = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Hydrophytic Vegetation Present?				Yes <u>X</u> No _____
Remarks: (If observed, list morphological adaptations below).				

SOIL

Sampling Point: 2-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-1	10YR3/1		1					Organic layer
1-16	10YR4/1	85	10YR4/6	15	RM	M	VFSaCl	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Sampling Point Label on Map: 2

Coastal Plain Region

Survey: bxns Sampling Date: 7/24/13
State: TX Sampling Point: 2-1

Soil Name: _____ Slope (%): _____

_____ Datum: _____

_____ NMI classification: _____

(If no, explain in Remarks.)

"Circumstances" present? Yes _____ No _____

(Explain any answers in Remarks.)



WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 366 Properties, LCC. Delineation City/County: Houston, Harris County Sampling Date: 7-24-13
 Applicant/Owner: 366 Properties, LLC. State: TX Sampling Point: 3-1 (3)
 Investigator(s): Dan Johnson, Chance Kimbrough, Courtney Greer Section, Township, Range: S Everett Survey, Abstract 250
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR T/MLRA 256 Lat: 29°54'55.154" N Long: 95°14'58.639"W Datum: NAD83
 Soil Map Unit Name: Md Verland silty clay loam, poorly drained NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Based on WETS analysis data, the site was determined to be drier than normal at the time of delineation field work. This point occurs along the wetland boundary.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <table style="width:100%; border: none;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</td></tr> <tr><td><input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 3-1

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Pinus taeda</u>	<u>55</u>	<u>X</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80</u> (A/B)
2. <u>Quercus nigra</u>	<u>15</u>		<u>FAC</u>	
3. <u>Triadica sebifera</u>	<u>2</u>		<u>FAC</u>	
4. <u>Liquidambar styraciflua</u>	<u>15</u>		<u>FAC</u>	
5. <u>Celtis laevigata</u>	<u>4</u>		<u>FACW</u>	
6. _____				
7. _____				
8. _____				
	<u>91</u>			Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
50% of total cover: _____		20% of total cover: _____		
Sapling/Shrub Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Celtis laevigata</u>	<u>10</u>	<u>X</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Pinus taeda</u>	<u>5</u>		<u>FAC</u>	
3. <u>Ilex vomitoria</u>	<u>15</u>	<u>X</u>	<u>FAC</u>	
4. <u>Sabal minor</u>	<u>2</u>		<u>FACW</u>	
5. _____				
6. _____				
7. _____				
8. _____				
	<u>32</u>			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% of total cover: _____		20% of total cover: _____		
Herb Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Chasmanthium sessiliflorum</u>	<u>60</u>	<u>X</u>	<u>FAC</u>	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
2. <u>Callicarpa americana</u>	<u>8</u>		<u>FACU</u>	
3. <u>Quercus nigra</u>	<u>2</u>		<u>FAC</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	<u>70</u>			Hydrophytic Vegetation Present? Yes <u>X</u> No _____
50% of total cover: _____		20% of total cover: _____		
Woody Vine Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Rubus trivialis</u>	<u>2</u>	<u>X</u>	<u>FACU</u>	
2. _____				
3. _____				
4. _____				
5. _____				
	<u>2</u>			
50% of total cover: _____		20% of total cover: _____		
Remarks: (If observed, list morphological adaptations below).				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR3/2	90	10YR6/6	5	RM	M		
			10YR4/6	5	C	PL	VFSaCl	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Sampling Point Label on Map: 3

FORM - Atlantic and Gulf Coastal Plain Region

City/County: Houston/Harris Sampling Date: _____
State: TX Sampling Point: 3-1
Section, Township, Range: _____
Local relief (concave, convex, none): _____ Slope (%): _____
Long: _____ Datum: _____
NW1 classification: _____
Disturbed? Yes _____ No _____ (If no, explain in Remarks.)
Are "Normal Circumstances" present? Yes _____ No _____
(If needed, explain any circumstances.)



WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 366 Properties, LCC. Delineation City/County: Houston, Harris County Sampling Date: 7-24-13
 Applicant/Owner: 366 Properties, LCC. State: TX Sampling Point: 4-1 (4)
 Investigator(s): Dan Johnson, Chance Kimbrough, Courtney Greer Section, Township, Range: S Everett Survey, Abstract 250
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR T/MLRA 256 Lat: 29°55'1.721" N Long: 95°14'41.201"W Datum: NAD83
 Soil Map Unit Name: Md Verland silty clay loam, poorly drained NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Based on WETS analysis data, the site was determined to be drier than normal at the time of delineation field work.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width:50%; border: none;"><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> High Water Table (A2)</td> <td style="border: none;"><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Saturation (A3)</td> <td style="border: none;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water Marks (B1)</td> <td style="border: none;"><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/> Sediment Deposits (B2)</td> <td style="border: none;"><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/> Drift Deposits (B3)</td> <td style="border: none;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td style="border: none;"><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Iron Deposits (B5)</td> <td style="border: none;"><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <table style="width:100%; border: none;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td><input checked="" type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</td></tr> <tr><td><input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 4-1

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>1/10th Acre</u>)					
1. <u>Quercus phellos</u>	50	X	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2. <u>Celtis laevigata</u>	10		FACW		
3. <u>Ulmus crassifolia</u>	10		FAC		
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
<u>70</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____	
Sapling/Shrub Stratum (Plot size: <u>1/10th Acre</u>)					
1. <u>Sabal minor</u>	50	X	FACW		Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Ulmus crassifolia</u>	7.5		FAC		
3. <u>Celtis laevigata</u>	7.5		FACW		
4. <u>Ilex vomitoria</u>	5		FAC		
5. _____					
6. _____					
7. _____					
8. _____					
<u>70</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.	
Herb Stratum (Plot size: <u>1/10th Acre</u>)					
1. <u>Carex cherokeensis</u>	30	X	FACW		Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. <u>Chasmanthium sessiliflorum</u>	30	X	FAC		
3. <u>Sabal minor</u>	10		FACW		
4. <u>Ulmus crassifolia</u>	2		FAC		
5. _____					
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
11. _____					
12. _____					
<u>72</u> = Total Cover 50% of total cover: _____ 20% of total cover: _____					
Woody Vine Stratum (Plot size: _____)					
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____					
Remarks: (If observed, list morphological adaptations below).					

SOIL

Sampling Point: 4-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR3/1	90	10YR4/6	10	RM	M	VFSaCI	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No _____

Remarks:

Sampling Point Label on Map: 4

FORM – Atlantic and Gulf Coastal Plain Region

City/County: Houston/Harris Sampling Date: 7/24/13
State: TX Sampling Point: 4-1
Section, Township, Range: _____
Local relief (concave, convex, none): _____ Slope (%): _____
Long: _____ Datum: _____
NWI classification: _____
year? Yes _____ No _____ (If no, explain in Remarks.)
ly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
problematic? (If needed, explain any answers in Remarks.)



WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: 366 Properties, LCC. Delineation City/County: Houston, Harris County Sampling Date: 7-24-13
 Applicant/Owner: 366 Properties, LCC. State: TX Sampling Point: 5-1 (5)
 Investigator(s): Dan Johnson, Chance Kimbrough, Courtney Greer Section, Township, Range: S Everett Survey, Abstract 250
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR or MLRA): LRR T/MLRA 256 Lat: 29°54'50.123" N Long: 95°14'42.192"W Datum: NAD83
 Soil Map Unit Name: Md Verland silty clay loam, poorly drained NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Based on WETS analysis data, the site was determined to be drier than normal at the time of delineation field work.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Marl Deposits (B15) (LRR U)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1)</td> <td><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2)</td> <td><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3)</td> <td><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Iron Deposits (B5)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Water-Stained Leaves (B9)		Secondary Indicators (minimum of two required) <table style="width:100%; border: none;"> <tr><td><input type="checkbox"/> Surface Soil Cracks (B6)</td></tr> <tr><td><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Moss Trim Lines (B16)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Geomorphic Position (D2)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input checked="" type="checkbox"/> FAC-Neutral Test (D5)</td></tr> <tr><td><input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)</td></tr> </table>	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
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<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)																																
Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes _____ No <u>X</u> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <u>X</u>																															
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																																
Remarks:																																

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 5-1

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Quercus phellos</u>	40	X	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
2. <u>Ulmus crassifolia</u>	15		FAC	
3. <u>Pinus taeda</u>	10		FAC	
4. <u>Quercus nigra</u>	10		FAC	
5. _____				
6. _____				
7. _____				
8. _____				
70 = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Ilex vomitoria</u>	30	X	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Sabal minor</u>	10		FACW	
3. <u>Callicarpa americana</u>	5		FACU	
4. <u>Quercus phellos</u>	2		FACW	
5. <u>Triadica sebifera</u>	2		FAC	
6. <u>Ulmus crassifolia</u>	2		FAC	
7. _____				
8. _____				
51 = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Chasmanthium sessiliflorum</u>	35	X	FAC	Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
2. <u>Ilex vomitoria</u>	5		FAC	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
40 = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
50% of total cover: _____ 20% of total cover: _____				
Woody Vine Stratum (Plot size: <u>1/10th Acre</u>)				
1. <u>Ampelopsis arborea</u>	2	X	FAC	
2. _____				
3. _____				
4. _____				
5. _____				
2 = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (If observed, list morphological adaptations below).				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR7/3						FSaL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Organic Bodies (A6) (LRR P, T, U)
- 5 cm Mucky Mineral (A7) (LRR P, T, U)
- Muck Presence (A8) (LRR U)
- 1 cm Muck (A9) (LRR P, T)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Coast Prairie Redox (A16) (MLRA 150A)
- Sandy Mucky Mineral (S1) (LRR O, S)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR P, S, T, U)

- Polyvalue Below Surface (S8) (LRR S, T, U)
- Thin Dark Surface (S9) (LRR S, T, U)
- Loamy Mucky Mineral (F1) (LRR O)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Marl (F10) (LRR U)
- Depleted Ochric (F11) (MLRA 151)
- Iron-Manganese Masses (F12) (LRR O, P, T)
- Umbric Surface (F13) (LRR P, T, U)
- Delta Ochric (F17) (MLRA 151)
- Reduced Vertic (F18) (MLRA 150A, 150B)
- Piedmont Floodplain Soils (F19) (MLRA 149A)
- Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR O)
- 2 cm Muck (A10) (LRR S)
- Reduced Vertic (F18) (outside MLRA 150A,B)
- Piedmont Floodplain Soils (F19) (LRR P, S, T)
- Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

Sampling Point Label on Map: 5

Atlantic and Gulf Coastal Plain Region

Sampling Date: 7/24/13

State: _____ Sampling Point: 5-1

Map Range: _____

Soil (shape, convex, none): _____ Slope (%): _____

Long: _____ Datum: _____

NWI classification: _____

No _____ (If no, explain in Remarks.)

Are "Normal Circumstances" present? Yes _____ No _____

(If needed, explain any answers in Remarks.)

Point locations, transects, important features, etc.



ELEVENTH SUPPLEMENTAL INDENTURE OF TRUST

BETWEEN

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

and

REGIONS BANK, as Trustee

AUTHORIZING

**\$37,960,000 WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
WATER SYSTEM
JUNIOR LIEN REVENUE BONDS, SERIES 2016**

Dated as of October 1, 2016

TABLE OF CONTENTS

	<u>Page</u>
ARTICLE I DEFINITIONS AND STATUTORY AUTHORITY	2
<u>SECTION 101. Authority</u>	2
<u>SECTION 102. Definitions</u>	2
<u>SECTION 103. Interpretations</u>	4
ARTICLE II AUTHORIZATION AND TERMS OF SERIES 2016 BONDS	5
<u>SECTION 201. Authorization, Principal Amount, Designation and Series</u>	5
<u>SECTION 202. Purposes</u>	5
<u>SECTION 203. Initial Bond, Numbers, Date and Denomination of the Series 2016 Bonds</u>	5
<u>SECTION 204. Interest Payment Dates, Interest Rates and Maturity of the Series 2016 Bonds</u>	5
<u>SECTION 205. Manner of Payment of Series 2016 Bonds</u>	6
<u>SECTION 206. Form of Series 2016 Bonds, Comptroller’s Registration Certificate, and Trustee’s Authentication Certificate</u>	6
<u>SECTION 207. Provisions For Issuance of Series 2016 Bonds</u>	7
<u>SECTION 208. Optional Redemption Prior to Maturity</u>	7
<u>SECTION 209. Appointment of Trustee as Paying Agent/Registrar</u>	7
<u>SECTION 210. Book Entry Only System</u>	7
ARTICLE III SOURCE OF PAYMENT; SPECIAL ACCOUNTS AND OTHER MATTERS RELATING TO SERIES 2016 BONDS	10
<u>SECTION 301. Source of Payment for Series 2016 Bonds</u>	10
<u>SECTION 302. Confirmation of Funds and Establishment of Special Accounts</u>	10
<u>SECTION 303. Establishment of Junior Lien Reserve Fund Requirement</u>	11
<u>SECTION 304. Application of Net Proceeds</u>	11
<u>SECTION 305. Use of Proceeds, Indemnity and Quarterly Reporting</u>	12
ARTICLE IV PROVISIONS CONCERNING FEDERAL INCOME TAX EXCLUSION	13
<u>SECTION 401. General Tax Covenant</u>	13
<u>SECTION 402. No Private Use or Payment and No Private Loan Financing</u>	13
<u>SECTION 403. No Federal Guaranty</u>	13
<u>SECTION 404. The Series 2016 Bonds are not Hedge Bonds</u>	14
<u>SECTION 405. No-Arbitrage Covenant</u>	14
<u>SECTION 406. Arbitrage Rebate</u>	14
<u>SECTION 407. Information Reporting</u>	15
<u>SECTION 408. Continuing Obligation</u>	15
ARTICLE V CONTINUING DISCLOSURE UNDERTAKING	16
<u>SECTION 501. Annual Reports</u>	16
<u>SECTION 502. Event Notices</u>	17
<u>SECTION 503. Limitations, Disclaimers, and Amendments</u>	17

<u>SECTION 504. Definitions</u>	19
ARTICLE VI COVENANTS AND MISCELLANEOUS PROVISIONS	20
<u>SECTION 601. Notice</u>	20
<u>SECTION 602. Unclaimed Funds</u>	20
<u>SECTION 603. Execution in Several Counterparts</u>	20
<u>SECTION 604. TWDB Requirements</u>	20
Exhibits	
Exhibit A - Form of Series 2016 Bonds	

ELEVENTH SUPPLEMENTAL INDENTURE OF TRUST
AUTHORIZING
\$37,960,000
WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
WATER SYSTEM JUNIOR LIEN REVENUE BONDS, SERIES 2016

THIS ELEVENTH SUPPLEMENTAL INDENTURE OF TRUST, dated as of October 1, 2016 (the "*Eleventh Supplemental Indenture*"), is made by and between **WEST HARRIS COUNTY REGIONAL WATER AUTHORITY** (the "*Authority*"), a political subdivision of the State of Texas, and **REGIONS BANK**, in its capacity as trustee (together with any successor trustee hereunder, the "*Trustee*"), an Alabama state banking corporation with powers and authorized to do business in the State of Texas.

WITNESSETH:

WHEREAS, pursuant to Act of May 28, 2001, 77th Texas Legislature, Regular Session, Chapter 414, 2001 Tex. Gen. Laws, as amended, (the "*Act*"), the Authority was created as a political subdivision of the State of Texas; and

WHEREAS, pursuant to the Act, the Authority was created under and is essential to accomplish the purposes of Section 59, Article XVI, of the Texas Constitution, including the acquisition and provision of surface water and groundwater for residential, commercial, industrial, agricultural, and other uses, the reduction of groundwater withdrawals, the conservation, preservation, protection, recharge and prevention of waste of groundwater, and of groundwater reservoirs or their subdivisions, the control of subsidence caused by withdrawal of water from those groundwater reservoirs or their subdivision, and other public purposes stated in the Act; and

WHEREAS, in order to secure the Bonds, Notes and Obligations, the Authority has entered into an Indenture of Trust, dated as of August 1, 2003, with the Trustee for the purpose of assigning and pledging to the Trustee the Trust Estate, which includes the Pledged Revenues and Pledged Funds, and providing that the Trust Estate be held by the Trustee to secure the payment of principal of and interest on all Bonds, Notes and Obligations; and

WHEREAS, the Authority has determined to issue the Series 2016 Bonds (as defined herein) under said Indenture of Trust and this Eleventh Supplemental Indenture to: (i) fund costs of the Project (as defined herein), (ii) fund the Junior Lien Reserve Fund Requirement (as defined herein) attributable to the Series 2016 Bonds, and (iii) pay for the costs of issuance of the Series 2016 Bonds; and

WHEREAS, the Authority has requested financial assistance from the TWDB through the TWDB's State Water Implementation Revenue Fund for Texas in connection with certain costs related to the Project;

WHEREAS, the Authority desires to enter into this Eleventh Supplemental Indenture for such purposes; and

WHEREAS, the Authority also desires to define certain terms relating to the Series 2016 Bonds to be issued; and

NOW, THEREFORE, in consideration of the premises, the acceptance by the Trustee of the trusts hereby created, the purchase and acceptance of the Series 2016 Bonds by the owners thereof from time to time, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Authority and the Trustee do hereby mutually covenant and agree, for the equal and proportionate benefit of the respective owners from time to time of the Series 2016 Bonds, as follows:

ARTICLE I

DEFINITIONS AND STATUTORY AUTHORITY

SECTION 101. Authority. This Eleventh Supplemental Indenture is supplemental to, and is adopted in accordance with the Indenture, including Articles III and X of the Indenture.

SECTION 102. Definitions.

A. Except as provided in subsection B of this Section, all defined terms contained in the Indenture shall have the same meanings in this Eleventh Supplemental Indenture as such defined terms are given in Section 101 of the Indenture, as amended, unless the context shall otherwise require.

B. In addition to the terms defined elsewhere in this Eleventh Supplement Indenture, the following terms, as used in this Eleventh Supplemental Indenture, shall have the following respective meanings but only for the purposes of the Series 2016 Bonds and this Eleventh Supplemental Indenture.

"City" shall mean City of Houston, Texas.

"Date of Delivery" shall mean October 27, 2016.

"Dated Date" shall mean October 1, 2016.

"Escrow Agent" shall mean Compass Bank, an Alabama banking corporation, its successors and assigns.

"Escrow Agreement" shall mean that certain Escrow Agreement between the Authority and the Escrow Agent, dated as of October 1, 2016, pertaining to the deposit of the proceeds of the Bonds.

"Financing Agreement" means that certain Financing Agreement entered into between the Authority and the TWDB dated September 6, 2016.

"Indenture" shall mean the Indenture of Trust, dated as of August 1, 2003, between the Authority and the Trustee, as from time to time supplemented and amended, including by this Eleventh Supplemental Indenture.

"Initial Bond" means the initial bond issued by the Authority being a single bond representing the entire principal amount of the Series 2016 Bonds.

"Interest Payment Date" shall mean June 15 and December 15 of each year as applicable, commencing June 15, 2017.

"Issuance Date" shall mean the date of delivery of the Series 2016 Bonds to the initial purchaser or purchasers thereof against payment therefor.

"NEWPP" shall mean the City's water purification plant located at 12121 North Beltway 8 East (a.k.a. "North Sam Houston Parkway East"), Humble, Texas 77396.

"Ninth Supplemental Indenture" shall mean the Ninth Supplemental Indenture of Trust, dated as of November 1, 2015, authorizing the Series 2015 Bonds.

"Project" shall mean the realty interest acquisition, engineering, environmental work, and construction and acquisition for System improvements and capacity, including (a) storage, pumping and transmission facilities to transport and convey water along some or all of the distance from the NEWPP to areas near, in and through the Authority's boundaries, (b) storage, pumping and transmission facilities to transport and convey water to Authority water customers, and (c) payments due to the City for expansion of the NEWPP. The term "Project" shall also include the payment of \$943,152.63 of capitalized interest out of the proceeds of the Series 2016 Bonds to be deposited in the Series 2016 Capitalized Interest Account within the Junior Lien Debt Service Fund.

"Purchaser" or *"TWDB"* shall mean Texas Water Development Board, an agency of the State of Texas.

"Series 2015 Bonds" shall mean the Junior Lien Bonds issued pursuant to the Ninth Supplemental Indenture.

“Series 2015A Bonds” shall mean the Parity Bonds issued pursuant to the Tenth Supplemental Indenture, dated as of December 1, 2015.

“Series 2016 Bonds” shall mean the Bonds authorized by this Eleventh Supplemental Indenture in the aggregate principal amount of \$37,960,000 and designated West Harris County Regional Water Authority Water System Junior Lien Revenue Bonds, Series 2016.

C. Articles and sections referred to by number shall mean the articles and sections of this Eleventh Supplemental Indenture.

SECTION 103. Interpretations. All terms defined herein and all pronouns used in this Eleventh Supplemental Indenture shall be deemed to apply equally to the singular and plural and to all genders. The headings of the Sections in this Eleventh Supplemental Indenture have been inserted for convenience of reference only and are not to be considered a part hereof and shall not in any way modify or restrict any of the terms or provisions hereof. This Eleventh Supplemental Indenture and all the terms and provisions hereof shall be liberally construed to effectuate the purposes set forth herein and to sustain the validity of the Series 2016 Bonds and the validity of the pledge and assignment of the Trust Estate to the Trustee to secure the payment of the Series 2016 Bonds.

[END OF ARTICLE I]

ARTICLE II

AUTHORIZATION AND TERMS OF SERIES 2016 BONDS

SECTION 201. Authorization, Principal Amount, Designation and Series. There is hereby authorized to be issued and shall be issued under and secured by the Indenture a Series of Bonds to be designated "West Harris County Regional Water Authority Water System Junior Lien Revenue Bonds, Series 2016" in the aggregate principal amount of \$37,960,000. The Series 2016 Bonds are issued as Junior Lien Bonds under the Indenture.

SECTION 202. Purposes. The Series 2016 Bonds are being issued to be applied, together with other lawfully available funds, to: (i) fund costs of the Project; (ii) fund the Junior Lien Reserve Fund Requirement attributable to the Series 2016 Bonds, and (iii) pay for the costs of issuance of the Series 2016 Bonds.

SECTION 203. Initial Bond, Numbers, Date and Denomination of the Series 2016 Bonds. The Series 2016 Bonds shall initially be issued in the principal amounts, and bearing interest at the rates set forth below, as more fully described in Exhibit A attached hereto. The Series 2016 Bonds shall mature, subject to prior redemption in accordance with this Eleventh Supplemental Indenture, on December 15 in each of the years and in the amounts set out in the following schedule. The Initial Bond shall be numbered IB-1 and all other Bonds shall be numbered in sequence beginning with R-1. The Series 2016 Bonds shall be dated the Dated Date. In the event the book-entry only system referred to in Section 210 hereof is discontinued, Bonds delivered on transfer of or in exchange for other Series 2016 Bonds shall be numbered in the order of their authentication by the Trustee, shall be in the denomination of \$5,000 or integral multiples thereof, and shall mature on the same date and bear interest at the same rate as the Series 2016 Bond or Series 2016 Bonds in lieu of which they are delivered.

SECTION 204. Interest Payment Dates, Interest Rates and Maturity of the Series 2016 Bonds. The Bonds shall be issued, shall bear interest from the Date of Delivery at the rate or rates per annum set forth below, calculated on the basis of a 360-day year composed of twelve 30-day months and payable each Interest Payment Date until maturity or prior redemption, and shall mature and become payable on the dates and in the respective principal amounts as set forth below.

Maturity December 15	Principal Amount Maturing (\$)	Interest Rate (%)
2018	1,045,000	0.650%
2019	1,050,000	0.760%
2020	1,055,000	0.840%
2021	1,065,000	0.910%
2022	1,070,000	0.990%

2023	1,080,000	1.090%
2024	1,095,000	1.200%
2025	1,105,000	1.290%
2026	1,120,000	1.370%
2027	1,130,000	1.570%
2028	1,150,000	1.690%
2029	1,170,000	2.010%
2030	1,190,000	2.180%
2031	1,215,000	2.290%
2032	1,240,000	2.330%
2033	1,270,000	2.390%
2034	1,300,000	2.520%
2035	1,330,000	2.500%
2036	1,365,000	2.540%
2037	1,400,000	2.710%
2038	1,440,000	2.710%
2039	1,480,000	2.710%
2040	1,520,000	2.710%
2041	1,565,000	2.710%
2042	1,605,000	3.040%
2043	1,655,000	3.040%
2044	1,700,000	3.040%
2045	1,750,000	3.040%
2046	1,800,000	3.040%
	37,960,000	

SECTION 205. Manner of Payment of Series 2016 Bonds. Interest on the Series 2016 Bonds shall be paid as provided in the form of Series 2016 Bonds attached as Exhibit A hereto.

SECTION 206. Form of Series 2016 Bonds, Comptroller's Registration Certificate, and Trustee's Authentication Certificate. Subject to the provisions of the Indenture and this Eleventh Supplemental Indenture, the form of the Series 2016 Bonds, the authentication certificate (which shall be affixed to Series 2016 Bonds other than the Initial Bond), and the registration certificate of the Comptroller of Public Accounts of the State of Texas (which shall be affixed to the Initial Bond only), and other matters to be printed on the Series 2016 Bonds shall be as shown on Exhibit A.

The approving legal opinion of bond counsel may be printed on the Series 2016 Bonds over the certification of the Trustee, which may be executed in facsimile. CUSIP numbers and any bond insurance legend may be printed on the Series 2016 Bonds.

However, errors or omissions in the printing of the opinion or the CUSIP numbers shall have no effect on the validity of the Series 2016 Bonds.

On the Issuance Date, the Initial Bond, being a single bond representing the entire principal amount of the Series 2016 Bonds, payable in stated installments to the Purchaser or its designee, executed by manual or facsimile signature of the President or Vice President and Secretary or Assistant Secretary of the Authority's Board of Directors, approved by the Attorney General of Texas, and registered and manually signed by the Comptroller of Public Accounts of Texas, shall be delivered to the Trustee on behalf of the Purchaser. Upon payment for the Initial Bond, the Trustee shall cancel the Initial Bond and deliver Series 2016 Bonds to DTC in accordance with Section 210 hereof.

SECTION 207. Provisions For Issuance of Series 2016 Bonds. The Series 2016 Bonds shall be executed by the Authority and, except for the Initial Bond which shall be registered by the Comptroller of Public Accounts of the State of Texas, shall be delivered to the Trustee. Thereupon, the Series 2016 Bonds (except the Initial Bond registered by the Comptroller of Public Accounts of the State of Texas) shall be authenticated by the Trustee and delivered to the Purchaser or upon its order, but only upon receipt by the Trustee of the documents required under the Indenture. After issuance and authentication of such Series 2016 Bonds, all subsequent Series 2016 Bonds issued in exchange therefor shall be authenticated and delivered by and at the designated corporate trust office of the Trustee.

SECTION 208. Optional Redemption Prior to Maturity. The Series 2016 Bonds are subject to redemption prior to maturity as set forth in the form Series 2016 Bonds in Exhibit A.

SECTION 209. Appointment of Trustee as Paying Agent/Registrar. The Trustee is hereby appointed as the paying agent/registrar (the "*Paying Agent/Registrar*") for the Series 2016 Bonds, and shall maintain books of registration for the Series 2016 Bonds in the State of Texas at the Paying Agent/Registrar's office, a copy which shall be kept current by the Trustee.

SECTION 210. Book Entry Only System.

A. There may be appointed a qualified financial institution to be a clearing agency and securities depository for the Series 2016 Bonds (the "*Securities Depository*") in accordance with the provisions of this Section. Any Securities Depository will accept and hold the Series 2016 Bonds as the Registered Owner thereof and will maintain a book-entry-only system of recording the ownership and transfer of ownership of beneficial interests in the Series 2016 Bonds. Any Securities Depository so appointed shall be qualified to act as such under Section 17A of the Securities Exchange Act of

1934, as amended, capable of properly discharging its duties in such capacity and acceptable to the Trustee and the Authority.

B. Pursuant to the Authority's approval of the Blanket Letter of Representation, the Depository Trust Company, ("DTC") is hereby appointed to act as the initial Securities Depository for the Series 2016 Bonds. The Purchaser, or the Authority on behalf of the Purchaser, shall cause the definitive bonds to be registered in the name of Cede & Co., and shall deposit such definitive bonds with the initial Securities Depository, Cede & Co., in the form of a single fully registered Bond for each maturity.

With respect to Series 2016 Bonds registered in the name of the Securities Depository or its nominee, the Authority and the Trustee shall be entitled to treat the person in whose name any Series 2016 Bond is registered in the Register as the absolute owner of such Series 2016 Bond for all purposes, and neither the Authority nor the Trustee shall have any responsibility or obligation to any person who holds a beneficial interest in the Series 2016 Bonds. Without limiting the immediately preceding sentence, neither the Authority nor the Trustee shall have any responsibility or obligation with respect to (i) the accuracy of the records of the Securities Depository, its nominee, or any other person with respect to any ownership interest in the Series 2016 Bonds, (ii) the delivery to any person, other than an Owner as shown on the Register, of any notice with respect to the Series 2016 Bonds, or (iii) the payment to any person, other than an Owner as shown in the Register, of any amount with respect to the principal of or interest on the Series 2016 Bonds.

Notwithstanding any other provision of the Indenture or this Eleventh Supplemental Indenture to the contrary, so long as DTC or a successor Securities Depository is acting in such capacity with respect to the Series 2016 Bonds, all payments of principal of and interest on the Series 2016 Bonds, and all notices with respect to such Series 2016 Bonds, shall be made and given, respectively, in accordance with the written agreement between the Authority and the Securities Depository.

C. If DTC or any successor Securities Depository appointed by the Authority determines to discontinue acting as Securities Depository for the Series 2016 Bonds and the Authority desires to continue the book-entry-only system of recording the ownership and transfer of ownership of beneficial interests in the Series 2016 Bonds, the Authority shall appoint a successor Securities Depository for the Series 2016 Bonds. Upon acceptance by the successor Securities Depository of its appointment and its duties and responsibilities in such capacity, the Authority shall, upon receipt from the preceding Securities Depository of a certified copy of its records of ownership of beneficial interests in the Series 2016 Bonds, provide a copy of such records to the successor Securities Depository and cause the Trustee to authenticate and deliver exchange Series 2016 Bonds, to the successor Securities Depository, registered in the name of the nominee of such successor Securities Depository.

D. If the Authority shall have appointed a Securities Depository with respect to the Series 2016 Bonds and if any of the events specified below shall occur, the Trustee shall authenticate and deliver, in accordance with the Indenture and this Eleventh Supplemental Indenture, to each person who appears on the records of the Securities Depository as an owner of a beneficial interest in such Series 2016 Bonds, an exchange Series 2016 Bond(s), in any authorized denomination, of the same type, maturity and interest rate and in the same aggregate principal amount as the Series 2016 Bonds beneficially owned by such person or entity, as set forth in such record:

(a) If the Securities Depository determines not to continue to act as Securities Depository for the Series 2016 Bonds and the Authority is unable to locate a qualified successor Securities Depository;

(b) If the Authority determines that the Securities Depository is incapable of properly discharging its duties as Securities Depository for the Series 2016 Bonds and is unable to locate a qualified successor Securities Depository;

(c) If the Authority determines that it is in the best interest of the Authority to discontinue the book-entry system of registration of ownership of beneficial interest in the Series 2016 Bonds provided by the Securities Depository; or

(d) If the Authority determines that the continuance of the book-entry system of registration of ownership of beneficial interest in the Series 2016 Bonds provided by the Securities Depository might adversely affect the interests of the owners of such beneficial interest in the Series 2016 Bonds.

Upon the occurrence of any of the foregoing events, the Authority shall provide written notice of such event to the Securities Depository and to the Trustee.

[END OF ARTICLE II]

ARTICLE III

SOURCE OF PAYMENT; SPECIAL ACCOUNTS AND OTHER MATTERS RELATING TO SERIES 2016 BONDS

SECTION 301. Source of Payment for Series 2016 Bonds. The Series 2016 Bonds are payable solely from, and secured by a lien on and pledge of, the Trust Estate. The Owners of Series 2016 Bonds shall never have the right to demand payment out of any funds raised or to be raised by ad valorem taxation or to have any claim against any property or revenues of the Authority except for Pledged Revenues and Pledged Funds described in the Indenture. The Authority does not have the power to impose an ad valorem tax.

The Series 2016 Bonds are issued as Junior Lien Bonds and, as such, the Parity Bonds, Parity Notes and Parity Obligations issued under the Indenture are and shall be secured by a lien on Pledged Revenues that is senior and superior to the lien on Pledged Revenues securing the Junior Lien Bonds (including the Series 2016 Bonds), Junior Lien Notes and Junior Lien Obligations; and Pledged Revenues shall first be applied to make all required deposits in and transfers to the Debt Service Fund and Debt Service Reserve Fund before making required deposits in and transfers to the Junior Lien Debt Service Fund and Junior Lien Debt Service Reserve Fund.

SECTION 302. Confirmation of Funds and Establishment of Special Accounts. Pursuant to the terms of the Indenture, the existence of the following Funds and Accounts are hereby confirmed:

- A. Revenue Fund;
- B. Debt Service Fund;
- C. Debt Service Reserve Fund;
- F. Junior Lien Debt Service Fund;
- G. Junior Lien Debt Service Reserve Fund;
- D. Coverage Fund; and
- E. Construction Fund.

For the purpose of maintaining a separate accounting of amounts allocable to Series 2016 Bonds, within certain of the Funds confirmed above, the following Accounts are hereby established: Series 2016 Escrow Account, Series 2016 Construction Account within the Construction Fund, and the Series 2016 Capitalized Interest Account within the Junior Lien Debt Service Fund.

Complete books and records shall be maintained with respect to the allocable amounts attributable to such Series 2016 Bonds maintained in each such account or sub-account. In addition, in order to facilitate compliance with the covenant set forth in Article IV hereof, the Authority reserves the right to request the Trustee to establish the Rebate Fund and rebate accounts within it to account for excess arbitrage profits and interest thereon that must be accounted for or rebated to the United States of America. In establishing and maintaining the foregoing accounts, maintaining all books and records relating thereto and making disbursements therefrom, particularly to the United States of America, the Trustee and the Authority may rely from time to time upon opinions issued by nationally-recognized bond counsel to the effect that any action by the Trustee and/or the Authority in reliance upon any interpretation of the Code or Regulations contained in such opinions will not cause interest on the Series 2016 Bonds to be includable in gross income for federal income tax purposes under existing law.

SECTION 303. Establishment of Junior Lien Reserve Fund Requirement.

Upon the issuance of the Series 2016 Bonds, the amount of the Junior Lien Reserve Fund Requirement for the Junior Lien Debt Service Reserve Fund is hereby established and stipulated to be \$2,505,637.00, which is the average annual Aggregate Debt Service requirements on the Junior Lien Bonds and Junior Lien Notes, in accordance with the requirements of the Indenture. The Junior Lien Reserve Fund Requirement will be satisfied by: (i) a deposit of \$1,137,280.94 previously made from proceeds of the Series 2015 Bonds, and (ii) a deposit of \$1,368,356.06 from proceeds of the Series 2016 Bonds.

This Section 303 supersedes Section 303 in all prior Supplemental Indentures regarding the quantification of the Junior Lien Reserve Fund Requirement and the method of satisfaction thereof.

SECTION 304. Application of Net Proceeds. After payment of the costs of issuance at the closing, net proceeds of the sale of the Series 2016 Bonds shall be applied as follows:

A. To the Junior Lien Debt Service Reserve Fund, \$1,368,356.06, which represents the Junior Lien Reserve Fund Requirement attributable to the Series 2016 Bonds.

B. To the Series 2016 Capitalized Interest Account within the Junior Lien Debt Service Fund, \$943,152.63, which represents capitalized interest for the Series 2016 Bonds, which shall be applied to pay interest on the Series 2016 Bonds. The Trustee shall apply the funds in the Series 2016 Capitalized Interest Account to pay interest on the Series 2016 Bonds prior to using any other funds in the Junior Lien Debt Service Fund to pay debt service on the Series 2016 Bonds.

C. The balance of the proceeds to the Authority for credit by the Authority to the Series 2016 Escrow Account, and, to the extent directed in writing by the TWDB, to the Series 2016 Construction Account. Moneys deposited in the Series 2016 Escrow Account shall be applied as provided in the Escrow Agreement.

SECTION 305. Use of Proceeds, Indemnity and Quarterly Reporting. The Series 2016 Bonds are being issued to be applied, together with other lawfully available funds, to: (i) fund costs of the Project; (ii) fund the Junior Lien Reserve Fund Requirement attributable to the Series 2016 Bonds, and (iii) pay for the costs of issuance of the Series 2016 Bonds. Any surplus proceeds from the Series 2016 Bonds remaining after completion of the Project, and after payment of the costs described in the preceding sentence, shall be used only for the following purposes, as approved by the TWDB's executive administrator: (i) to deposit into the Junior Lien Debt Service Fund for payment of principal and/or interest on the Series 2016 Bonds; or (ii) to fund eligible project costs as authorized by the TWDB. The proceeds of the Series 2016 Bonds shall be secured in the manner prescribed by law and in compliance with the Public Funds Investment Act, Chapter 2256, Government Code, and the Public Funds Collateral Act, Chapter 2257, Government Code.

[END OF ARTICLE III]

ARTICLE IV

PROVISIONS CONCERNING FEDERAL INCOME TAX EXCLUSION

SECTION 401. General Tax Covenant. The Authority intends that the interest on the Series 2016 Bonds shall be excludable from gross income for federal income tax purposes pursuant to sections 103 and 141 through 150 of the Internal Revenue Code of 1986, as amended (the "Code"), and the applicable Income Tax Regulations (the "Regulations"). The Authority covenants and agrees not to take any action, or knowingly omit to take any action within its control, that if taken or omitted, respectively, would cause the interest on the Series 2016 Bonds to be includable in gross income, as defined in section 61 of the Code, for federal income tax purposes. In particular, the Authority covenants and agrees to comply with each requirement of this Article; provided, however, that the Authority shall not be required to comply with any particular requirement of this Article if the Authority has received an opinion of nationally recognized bond counsel ("Counsel's Opinion") that such noncompliance will not adversely affect the exclusion from gross income for federal income tax purposes of interest on the Series 2016 Bonds or if the Authority has received a Counsel's Opinion to the effect that compliance with some other requirement set forth in this Article will satisfy the applicable requirements of the Code and the Regulations, in which case compliance with such other requirement specified in such Counsel's Opinion shall constitute compliance with the corresponding requirement specified in this Article.

SECTION 402. No Private Use or Payment and No Private Loan Financing. The Authority shall certify, through an authorized officer, employee or agent that based upon all facts and estimates known or reasonably expected to be in existence on the date the Series 2016 Bonds are delivered, that the proceeds of the Series 2016 Bonds will not be used, in a manner that would cause the Series 2016 Bonds to be "private activity bonds" within the meaning of section 141 of the Code and the Regulations promulgated thereunder. Moreover, the Authority covenants and agrees that it will make such use of the proceeds of the Series 2016 Bonds including interest or other investment income derived from Series 2016 Bond proceeds, regulate the use of property financed, directly or indirectly, with such proceeds, and take such other and further action as may be required so that the Series 2016 Bonds will not be "private activity bonds" within the meaning of section 141 of the Code and the Regulations promulgated thereunder.

SECTION 403. No Federal Guaranty. The Authority covenants and agrees that it has not and will not take any action, and has not knowingly omitted and will not knowingly omit to take any action within its control, that, if taken or omitted, respectively, would cause the Series 2016 Bonds to be "federally guaranteed" within the meaning of section 149(b) of the Code and the applicable Regulations thereunder, except as permitted by section 149(b)(3) of the Code and such Regulations.

SECTION 404. The Series 2016 Bonds are not Hedge Bonds. The Authority covenants and agrees that it has not and will not take any action, and has not knowingly omitted and will not knowingly omit to take any action, within its control, that, if taken or omitted, respectively, would cause the Series 2016 Bonds to be “hedge bonds” within the meaning of section 149(g) of the Code and the applicable Regulations thereunder.

SECTION 405. No-Arbitrage Covenant. The Authority shall certify, through an authorized officer, employee or agent that based upon all facts and estimates known or reasonably expected to be in existence on the date the Series 2016 Bonds are delivered, the Authority will reasonably expect that the proceeds of the Series 2016 Bonds will not be used in a manner that would cause the Series 2016 Bonds to be “arbitrage bonds” within the meaning of section 148(a) of the Code and the applicable Regulations promulgated thereunder. Moreover, the Authority covenants and agrees that it will make such use of the proceeds of the Series 2016 Bonds including interest or other investment income derived from the Series 2016 Bond proceeds, regulate investments of proceeds of the Series 2016 Bonds, and take such other and further action as may be required so that the Series 2016 Bonds will not be “arbitrage bonds” within the meaning of section 148(a) of the Code and the applicable Regulations promulgated thereunder.

SECTION 406. Arbitrage Rebate. If the Authority does not qualify for an exception to the requirements of Section 148(f) of the Code relating to the required rebate to the United States, the Authority will take all necessary steps to comply with the requirement that certain amounts earned by the Authority on the investment of the “gross proceeds” of the Series 2016 Bonds (within the meaning of section 148(f)(6)(B) of the Code), be rebated to the federal government. Specifically, the Authority will (i) maintain records regarding the investment of the gross proceeds of the Series 2016 Bonds as may be required to calculate the amount earned on the investment of the gross proceeds of the Series 2016 Bonds separately from records of amounts on deposit in the funds and accounts of the Authority allocable to other bond issue of the Authority or moneys which do not represent gross proceeds of any bonds of the Authority, (ii) calculate at such times as are required by applicable Regulations, the amount earned from the investment of the gross proceeds of the Series 2016 Bonds which is required to be rebated to the federal government, and (iii) pay, not less often than every fifth anniversary date of the delivery of the Series 2016 Bonds or on such other dates as may be permitted under applicable Regulations, all amounts required to be rebated to the federal government. Further, the Authority will not indirectly pay any amount otherwise payable to the federal government pursuant to the foregoing requirements to any person other than the federal government by entering into any investment arrangement with respect to the gross proceeds of the Series 2016 Bonds that might result in a reduction in the amount required to be paid to the federal government

because such arrangement results in a smaller profit or a larger loss than would have resulted if the arrangement had been at arm's length and had the yield on the issue not been relevant to either party.

SECTION 407. Information Reporting. The Authority covenants and agrees to file or cause to be filed with the Secretary of the Treasury, not later than the 15th day of the second calendar month after the close of the calendar quarter in which the Series 2016 Bonds are issued, an information statement concerning the Series 2016 Bonds, all under and in accordance with section 149(e) of the Code and the applicable Regulations promulgated thereunder.

SECTION 408. Continuing Obligation. Notwithstanding any other provision of this Eleventh Supplemental Indenture, the Authority's obligations under the covenants and provisions of this Article shall survive the defeasance and discharge of the Series 2016 Bonds.

[END OF ARTICLE IV]

ARTICLE V

CONTINUING DISCLOSURE UNDERTAKING

Attachment "A" to the Financing Agreement requires the Authority to comply with requirements for continuing disclosure of certain information on an on-going basis substantially in the manner required by the Rule and determined as if the TWDB were a participating underwriter within the meaning of the Rule.

SECTION 501. Annual Reports. The Authority shall provide annually to EMMA, within six months after the end of each fiscal year of the Authority ending in or after December 31, 2016, financial information and operating data with respect to the Authority of the general type included on Schedules 1 (footnote "b" only), 2, 3, 4, 5 and 6 and Appendix "A" of the final official statement for the Series 2015A Bonds. Any financial statements to be so provided shall be (1) prepared in accordance with the accounting principles described in the Authority's financial statements included as Appendix "A" to the final official statement for the Series 2015A Bonds or such other accounting principles as the Authority may be required to employ from time to time pursuant to state law or regulation and (2) audited, if the Authority commissions an audit of such statements and the audit is completed within the period during which they must be provided. If the audit of such financial statements is not complete within such period, then the Authority shall provide unaudited financial statements for the applicable fiscal year to EMMA within such six month period, and audited financial statements, if and when the audit report on such statements becomes available.

If the Authority changes its fiscal year, it will notify EMMA of the change (and of the date of the new fiscal year end) prior to the next date by which the Authority otherwise would be required to provide financial information and operating data pursuant to this Article.

The financial information and operating data to be provided pursuant to this Article may be set forth in full in one or more documents or may be included by specific reference to any document (including an official statement or other offering document) available to the public on the MSRB's internet website or filed with the SEC.

All documents provided to EMMA by the Authority pursuant to this Article shall be accompanied by identifying information as prescribed by the MSRB.

The Authority shall notify EMMA, in a timely manner, of any failure by the Authority to provide financial information or operating data in accordance with this Section by the time required by this Section.

SECTION 502. Event Notices. The Authority shall notify EMMA in a timely manner, not in excess of ten business days after the occurrence of the event, of any of the following events with respect to the Series 2016 Bonds:

- A. Principal and interest payment delinquencies;
- B. Non-payment related defaults, if Material;
- C. Unscheduled draws on debt service reserves reflecting financial difficulties;
- D. Unscheduled draws on credit enhancements reflecting financial difficulties;
- E. Substitution of credit or liquidity providers, or their failure to perform;
- F. Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other Material notices or determinations with respect to the tax status of the Series 2016 Bonds, or other Material events affecting the tax status of the Series 2016 Bonds;
- G. Modifications to rights of holders of the Series 2016 Bonds, if Material;
- H. Series 2016 Bond calls, if Material, and tender offers;
- I. Defeasances;
- J. Release, substitution, or sale of property securing repayment of the Series 2016 Bonds, if Material;
- K. Rating changes;
- L. Bankruptcy, insolvency, receivership or similar event of the Authority or other obligated person within the meaning of the Rule;
- M. Consummation of a merger, consolidation, or acquisition involving the Authority or other obligated person within the meaning of the Rule or the sale of all or substantially all of the assets of the Authority or other obligated person within the meaning of the Rule, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if Material; and
- N. Appointment of a successor or additional trustee or the change of name of a trustee, if Material.

SECTION 503. Limitations, Disclaimers, and Amendments. The Authority shall be obligated to observe and perform the covenants specified in this Article for so long as, but only for so long as, the Authority remains an “obligated person” with respect to the Series 2016 Bonds within the meaning of the Rule, except that the Authority in any event will give the notice required by Section 502 of any Series 2016 Bond calls and defeasances that cause the Authority to be no longer such an “obligated person.”

The provisions of this Article are for the sole benefit of the Owners of the Series 2016 Bonds, and nothing in this Article, express or implied, shall give any benefit or any legal or equitable right, remedy, or claim hereunder to any other person. The Authority undertakes to provide only the financial information, operating data, financial statements, and notices which it has expressly agreed to provide pursuant to this Article and does not hereby undertake to provide any other information that may be relevant or material to a complete presentation of the Authority's financial results, condition, or prospects or hereby undertake to update any information provided in accordance with this Article or otherwise, except as expressly provided herein. The Authority does not make any representation or warranty concerning such information or its usefulness to a decision to invest in or sell Series 2016 Bonds at any future date.

UNDER NO CIRCUMSTANCES SHALL THE AUTHORITY BE LIABLE TO THE OWNER OF ANY SERIES 2016 BOND OR ANY OTHER PERSON, IN CONTRACT OR TORT, FOR DAMAGES RESULTING IN WHOLE OR IN PART FROM ANY BREACH BY THE AUTHORITY, WHETHER NEGLIGENT OR WITHOUT FAULT ON ITS PART, OF ANY COVENANT SPECIFIED IN THIS ARTICLE, BUT EVERY RIGHT AND REMEDY OF ANY SUCH PERSON, IN CONTRACT OR TORT, FOR OR ON ACCOUNT OF ANY SUCH BREACH SHALL BE LIMITED TO AN ACTION FOR MANDAMUS OR SPECIFIC PERFORMANCE.

No default by the Authority in observing or performing its obligations under this Article shall constitute a breach of or default under the Indenture for purposes of any other provision of the Indenture.

Nothing in this Article is intended or shall act to disclaim, waive, or otherwise limit the duties of the Authority under federal and state securities laws.

The provisions of this Article may be amended by the Authority from time to time to adapt to changed circumstances that arise from a change in legal requirements, a change in law, or a change in the identity, nature, status, or type of operations of the Authority, but only if (1) the provisions of this Article, as so amended, would have permitted Purchaser to purchase or sell the Series 2016 Bonds in the primary offering of the Series 2016 Bonds in compliance with the Rule, taking into account any amendments or interpretations of the Rule to the date of such amendment, as well as such changed circumstances, and (2) either (a) the Owners of a majority in aggregate principal amount (or any greater amount required by any other provision of the Indenture that authorizes such an amendment) of the Outstanding Series 2016 Bonds consent to such amendment or (b) a person that is unaffiliated with the Authority (such as nationally recognized bond counsel) determines that such amendment will not materially impair the interests of the beneficial owners of the Series 2016 Bonds. If the Authority so amends the provisions of this Article, it shall include with any amended financial information or operating data next provided in accordance with this Article an explanation, in narrative form, of the reasons for the amendment and of the impact of

any change in the type of financial information or operating data so provided. The Authority may also amend or repeal the provisions of this Article if the SEC amends or repeals the applicable provisions of the Rule or a court of final jurisdiction enters judgment that such provisions of the Rule are invalid, but in either case only if and to the extent that its right to do so would not prevent Purchaser from lawfully purchasing or selling Series 2016 Bonds in the primary offering of the Series 2016 Bonds.

SECTION 504. Definitions. As used in this Article, the following terms have the meanings ascribed to such terms below:

“EMMA” means the MSRB via the Electronic Municipal Market Access system established by the MSRB.

“Material” shall have the meaning of such word as used under federal securities laws.

“MSRB” shall mean the Municipal Securities Rulemaking Board.

“Rule” shall mean SEC Rule 15c2-12, as amended from time to time.

“SEC” shall mean the United States Securities and Exchange Commission.

[END OF ARTICLE V]

ARTICLE VI

COVENANTS AND MISCELLANEOUS PROVISIONS

SECTION 601. Notice. Any notice, demand, direction, request, or other instrument authorized or required by the Indenture of or relating to the Series 2016 Bonds to be given to or filed with the Authority, the Trustee, the Paying Agent, the Registrar, and the Authenticating Agent shall be deemed to have been given only upon receipt. Any notice under or in connection with the Indenture of or relating to the Series 2016 Bonds shall be sent by personal delivery or first class mail, postage prepaid, to the address specified below or, to such other address as may be designated in writing by the applicable party below:

Authority: West Harris County Regional Water Authority
c/o Allen Boone Humphries Robinson LLP
3200 Southwest Freeway, Suite 2600
Houston, Texas 77027
Attention: President

Trustee: Regions Bank, Trustee
3773 Richmond Avenue, Suite 1100
Houston, TX 77046
Attention: Corporate Trust

SECTION 602. Unclaimed Funds. Any money held by any Fiduciary in trust for the payment and discharge of any of the Series 2016 Bonds shall be treated and handled in the manner provided in the Indenture; unless it is determined that any of such money is unclaimed property subject to Title 6 of the Texas Property Code, and then such money in question shall be treated as property subject to such Code.

SECTION 603. Execution in Several Counterparts. This Eleventh Supplemental Indenture may be simultaneously executed in several counterparts, all of which shall constitute one and the same instrument and each of which shall be, and shall be deemed to be, an original.

SECTION 604. TWDB Requirements.

A. The Series 2016 Bonds shall not be used by the Authority when sampling, testing, removing or disposing of contaminated soils and/or media at the Project site. The Authority hereby covenants, to the extent permitted by law, to indemnify, hold harmless and protect the TWDB from any and all claims, causes of action or damages to the person or property of third parties arising from the sampling, analysis, transport, storage, treatment and disposition of any contaminated sewage sludge, contaminated sediments and/or contaminated media that may be generated by the Authority, its

contractors, consultants, agents, officials and employees as a result of activities relating to the Project.

B. Until such time as the proceeds of the Series 2016 Bonds have been expended, the Authority shall submit to the TWDB the amounts of the Series 2016 Bonds, if any, that were used to compensate historically underutilized businesses.

C. The Authority shall not acquire any of the bonds issued by the TWDB to provide financing for the Series 2016 Bonds in an amount related to the Series 2016 Bonds.

D. Notwithstanding anything to the contrary contained herein, the TWDB may exercise all remedies available to it in law or equity.

E. The Authority shall cause to be prepared an annual audit of its financial statements and shall file such audit with the TWDB's executive administrator each year. Each such audit shall be prepared in accordance with generally accepted auditing standards by a certified public accountant or licensed public accountant.


F. In accordance with the terms of Section 701(b) of the Indenture, the Authority shall maintain property insurance for the Project.

G. To the extent applicable to the Authority, the Authority shall abide by the TWDB's rules and relevant statutes.

[END OF ARTICLE VI]

IN WITNESS WHEREOF, the Authority and the Trustee have caused this Eleventh Supplemental Indenture to be signed and attested on their behalf by their duly authorized representatives, all as of the date first hereinabove written.

**WEST HARRIS COUNTY
REGIONAL WATER AUTHORITY**

By: 

President

ATTEST:

By: 

Secretary

REGIONS BANK, as Trustee

By: 
Title: VICE PRESIDENT

EXHIBIT A

The form of the Series 2016 Bonds, including the form of the Trustee's Authentication Certificate, the Form of Assignment, and the form of the Comptroller's Registration Certificate for the Series 2016 Bonds to be initially issued, shall be substantially as follows, with such additions, deletions and variations, as may be necessary or desirable and not prohibited by this Eleventh Supplemental Indenture, including any legend regarding bond insurance if such insurance is obtained:

(a) Form of Series 2016 Bond

UNITED STATES OF AMERICA
STATE OF TEXAS

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY WATER SYSTEM
JUNIOR LIEN REVENUE BOND, SERIES 2016

NUMBER	DENOMINATION
R-	\$
REGISTERED	<u>REGISTERED</u>

INTEREST RATE: MATURITY DATE: DATED DATE: CUSIP:

October 1, 2016

Registered Owner:

Principal Amount:

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY, a political subdivision of the State of Texas, (herein the "Authority"), FOR VALUE RECEIVED hereby acknowledges itself indebted to and PROMISES TO PAY to the Registered Owner identified above, or registered assigns, on the Maturity Date specified above, unless redeemed prior thereto as provided in this bond, upon presentation and surrender of this bond at Regions Bank, or at the designated corporate trust office of the successor to Regions Bank, as Trustee under the hereinafter described Indentures, the Principal Amount identified above (or so much thereof as shall not have been paid or deemed to have been paid upon prior redemption) in lawful money of the United States of America, without charge for Trustee services, and to pay at the Interest Rate per annum identified above on each June 15 and December 15, commencing June 15, 2017 (each an "Interest Payment Date"), interest on the unpaid principal balance of this bond from the later of the delivery date of the Bonds or the most recent Interest Payment Date to which interest has been paid or duly provided for, calculated on the basis of a 360-

day year composed of twelve 30 day months, until the maturity or redemption date of this bond, or until the Authority's obligation with respect to the payment of this bond has been satisfied. All interest on this bond shall be payable by check or draft mailed by the Trustee to the Registered Owner of this bond at its address as it appears on the registration books required to be maintained for the bonds of this series by the Trustee, or in such other manner as may be mutually acceptable to the Trustee and the Owner of this bond. Interest on this bond payable on any Interest Payment Date shall be paid to the Registered Owner of this bond as of the 15th day of the calendar month immediately prior to the Interest Payment Date (the "Record Date").

THIS BOND IS ONE OF A SERIES OF BONDS designated "West Harris County Regional Water Authority Water System Junior Lien Revenue Bonds, Series 2016" (the "Series 2016 Bonds" or "Bonds") issued in the aggregate principal amount of \$37,960,000. The Series 2016 Bonds pay interest on each Interest Payment Date until maturity or prior redemption.

THE SERIES 2016 BONDS ARE ISSUED under and pursuant to an Indenture of Trust dated August 1, 2003 (the "Indenture"), between the Authority and Regions Bank, as successor trustee (together with any successor, the "Trustee"), and an Eleventh Supplemental Indenture of Trust dated October 1, 2016, between the Authority and the Trustee (the "Eleventh Supplemental Indenture" and together with the Indenture called the "Indentures") to: (i) fund costs of the Project (as defined in the Eleventh Supplemental Indenture); (ii) fund the Junior Lien Reserve Fund Requirement (as defined in the Eleventh Supplemental Indenture) attributable to the Series 2016 Bonds, and (iii) pay for the costs of issuance of the Series 2016 Bonds.

THIS BOND SHALL NOT BE VALID OR OBLIGATORY for any purpose or be entitled to any benefit of the Indentures unless this bond is registered by the Comptroller of Public Accounts of the State of Texas or is authenticated by the Trustee by due execution and dating of the authentication certificate endorsed hereon.

THE SERIES 2016 BONDS ARE PAYABLE FROM AND SECURED BY a lien on and pledge of the Trust Estate as defined in the Indenture. Owners of the Bonds shall never have the right to demand payment of the Bonds or interest thereon out of any funds raised or to be raised by ad valorem taxation or to have any claim against any property or revenues of the Authority except for the Pledged Revenues and Pledged Funds described in the Indenture. The Authority does not have the power to levy or collect ad valorem taxes.

THE SERIES 2016 BONDS ARE ISSUED AS JUNIOR LIEN BONDS and, as such, the Parity Bonds, Parity Notes and Parity Obligations issued under the Indenture are and shall be secured by a lien on Pledged Revenues that is senior and superior to the lien on Pledged Revenues securing the Junior Lien Bonds (including the Series 2016 Bonds), Junior Lien Notes and Junior Lien Obligations; and Pledged Revenues shall first be applied to make all required deposits in and transfers to the Debt Service Fund and

Debt Service Reserve Fund before making required deposits in and transfers to the Junior Lien Debt Service Fund and Junior Lien Debt Service Reserve Fund.

THE INDENTURE ALSO PERMITS THE AUTHORITY TO ISSUE OR INCUR Credit Agreements, Hedge Agreements and Other Authority Obligations, each as defined in the Indenture, in an unlimited aggregate principal amount which is and may be secured by a lien on and pledge of the Trust Estate on a parity with, senior to, or subordinate to the lien securing the Series 2016 Bonds.

REFERENCE IS HEREBY MADE TO THE INDENTURES, copies of which are filed with the Trustee, for the full provisions thereof (including, among others, those with respect to the nature and extent of the rights, duties and obligations of the Authority, the Trustee and the Owners of the Series 2016 Bonds; the nature and extent of the covenants of the Authority to impose fees, user fees, rates and charges (including for the sale of water, for the pumpage of water from water wells, and for the importation of water into the Authority's boundaries); the rights of the Authority to issue other bonds, notes and obligations; the terms upon which the Series 2016 Bonds are issued and secured and the modification or amendment of the Indentures), to all of which the Owners of the Series 2016 Bonds assent by the acceptance of the Series 2016 Bonds.

ON DECEMBER 15, 2026, OR ON ANY DATE THEREAFTER, the Authority shall have the option of calling the Series 2016 Bonds maturing on or after December 15, 2027, for redemption prior to maturity, in inverse order of maturity, in whole or in part in integral multiples of \$5,000 (but if less than all the Series 2016 Bonds of a single maturity are to be redeemed, those to be redeemed shall be selected by the Trustee by lot), for an amount equal to the principal amount redeemed plus accrued interest thereon to the date fixed for redemption.

THE SERIES 2016 BONDS MAY BE REDEEMED IN PART only in integral multiples of \$5,000. If a Series 2016 Bond subject to redemption is in a denomination larger than \$5,000, a portion of such Series 2016 Bond may be redeemed, but only in integral multiples of \$5,000. In selecting portions of Series 2016 Bonds for redemption, the Trustee shall treat each Series 2016 Bond as representing that number of Series 2016 Bonds of \$5,000 denomination which is obtained by dividing the principal or maturity amount of such Series 2016 Bond by \$5,000. Upon surrender of any Series 2016 Bond for redemption in part, the Trustee, in accordance with the provisions of the Indentures, shall authenticate and deliver in exchange therefor a Series 2016 Bond or Series 2016 Bonds of like maturity and interest rate in an aggregate principal or maturity amount equal to the unredeemed portion of the Series 2016 Bond so surrendered.

NOTICE OF ANY REDEMPTION identifying the Series 2016 Bonds to be redeemed in whole or in part shall be given by the Trustee at least 30 days prior to the date fixed for redemption by sending written notice by United States mail, first class postage paid, to the Registered Owner of each Series 2016 Bond to be redeemed in whole or in part at the address shown on the Register. The notice shall also be given by

the Trustee at least 30 days prior to the date fixed for redemption by United States certified mail, return receipt requested, to each registered Securities Depository (as defined in the Indentures). Such notice shall identify the Series 2016 Bonds or portions thereof to be redeemed by stating the CUSIP number, certificate number, date of issuance, interest rate and maturity date of such Series 2016 Bonds or portions thereof to be redeemed, and shall state the redemption date, the redemption price, the amount of accrued interest payable on the redemption date, and the place at which Series 2016 Bonds are to be surrendered for payment. Any notice given as provided in this paragraph shall be conclusively presumed to have been duly given, whether or not the owner receives such notice. By the date fixed for redemption, due provision shall be made with the Trustee for the payment of the redemption price of the Series 2016 Bonds to be redeemed, plus accrued interest to the date fixed for redemption. When the Series 2016 Bonds have been called for redemption in whole or in part and due provision has been made to redeem same as herein provided, the Series 2016 Bonds or portions thereof so redeemed shall no longer be regarded as outstanding except for the purpose of receiving payment solely from the funds so provided for redemption, and the rights of the owners to collect interest which would otherwise accrue after the redemption date on any Series 2016 Bond or portion thereof called for redemption shall terminate on the date fixed for redemption.

THIS BOND IS TRANSFERABLE, as provided in the Indentures, only upon the books of registration of the Authority kept for that purpose at the office of the Trustee, by the Owner hereof in person, or by the Owner's attorney duly authorized in writing, upon surrender of this bond together with a written instrument of transfer satisfactory to the Trustee duly executed by the Owner or the Owner's duly authorized attorney, and, upon payment of any tax or governmental charges required to be paid with respect to such transfer or exchange, a new bond or bonds in the same aggregate principal amount shall be issued to the transferee in exchange therefor as provided in the Indentures. The Trustee is not required to accept any bond for transfer or exchange during a period of 15 days preceding the selection of bonds for redemption or after this bond has been called for redemption. The Authority and the Trustee may deem and treat the person in whose name this bond is registered as the absolute owner hereof for the purpose of receiving payment of, or on account of, the principal or redemption price hereof and interest due hereon and for all other purposes.

IT IS HEREBY CERTIFIED, RECITED AND REPRESENTED that the issuance of this bond and the Series 2016 Bonds is duly authorized by law; that all acts, conditions and things required to be done precedent to and in the issuance of this bond and of the Series 2016 Bonds have been properly done, have happened and have been performed in regular and due time, form and manner, as required by law; the Authority has granted a lien on and pledge of the Trust Estate to the Series 2016 Bonds as provided in the Indenture.

IN WITNESS WHEREOF, the Authority has caused this bond to be signed by the President or Vice President and attested by the Secretary or Assistant Secretary by their manual or facsimile signatures and sealed with the official seal of the Authority or a facsimile thereof.

WEST HARRIS COUNTY REGIONAL
WATER AUTHORITY

By: _____
President

ATTEST:

By: _____
Secretary

(b) Form of Authentication Certificate

AUTHENTICATION CERTIFICATE

This bond is one of the bonds referred to in the within mentioned Indentures; and that, except as to the bonds initially delivered, this bond has been issued in conversion of and exchange for or replacement of a bond, bonds or a portion of a bond or bonds of an issue which originally was approved by the Attorney General of the State of Texas and registered by the Comptroller of Public Accounts of the State of Texas.

Regions Bank,
as Trustee

By: _____
Authorized Signature

(c) Form of Registration Certificate of the Comptroller of Public Accounts of the State of Texas which is to be Affixed to each of the Initially Issued Series 2016 Bonds

CERTIFICATE OF REGISTRATION OF COMPTROLLER OF PUBLIC ACCOUNTS

OFFICE OF THE COMPTROLLER

REGISTER NO. _____

THE STATE OF TEXAS

I HEREBY CERTIFY that there is on file and of record in my office a certificate of the Attorney General of the State of Texas to the effect that this bond has been examined by him as required by law, that he finds that it has been issued in conformity with the Constitution and laws of the State of Texas, and it is a valid and binding obligation of WEST HARRIS COUNTY REGIONAL WATER AUTHORITY and said Bond has this day been registered by me.

WITNESS MY HAND AND SEAL OF OFFICE, _____, 2016.

Comptroller of Public Accounts
of the State of Texas

(d) Form of Assignment to be Printed on Each of the Series 2016 Bonds

ASSIGNMENT

FOR VALUE RECEIVED the undersigned Registered Owner of this bond, or duly authorized representative or attorney thereto, hereby assigns this bond to

/
(Assignee's social
security or taxpayer
identification number)

/
(print or typewrite Assignee's
name and address, including
zip code)

and hereby irrevocably constitutes and appoints

attorney to transfer the registration of this bond on the Register, with full power of substitution in the premises.

DATED:

Registered Owner

NOTICE: The signature must correspond with the name of the Registered Owner appearing on the face of this bond.

Signature Guaranteed:

NOTICE: This signature should be guaranteed by an eligible guarantor institution (banks, stockbrokers, savings and loan associations and credit unions with membership in an approved signature guarantee medallion program) pursuant to S.E.C. rule 17Ad-15.

(e) Form of Statement of Insurance. This is not applicable because no bond insurance is obtained for the Series 2016 Bonds.

(f) The Initial Bond shall be in the form set forth in paragraphs (a), (c), (d) and (e) of this Section, except for the following alterations:

(i) immediately under the name of the Bond, the headings "INTEREST RATE" and "MATURITY DATE" shall both be completed with the words "As Shown Below" and the word "CUSIP" deleted;

(ii) in the first paragraph of the Series 2016 Bond, the words “on the Maturity Date specified above” and “at the Interest Rate per annum identified above” shall be deleted and the following shall be inserted at the end of the first sentence “..., with such principal to be paid in installments on December 15 in each of the years and in the principal amounts identified in the following schedule and with such installments bearing interest at the per annum rates set forth in the following schedule:

Maturity December 15	Principal Amount Maturing (\$)	Interest Rate (%)
2018	1,045,000	0.650%
2019	1,050,000	0.760%
2020	1,055,000	0.840%
2021	1,065,000	0.910%
2022	1,070,000	0.990%
2023	1,080,000	1.090%
2024	1,095,000	1.200%
2025	1,105,000	1.290%
2026	1,120,000	1.370%
2027	1,130,000	1.570%
2028	1,150,000	1.690%
2029	1,170,000	2.010%
2030	1,190,000	2.180%
2031	1,215,000	2.290%
2032	1,240,000	2.330%
2033	1,270,000	2.390%
2034	1,300,000	2.520%
2035	1,330,000	2.500%
2036	1,365,000	2.540%
2037	1,400,000	2.710%
2038	1,440,000	2.710%
2039	1,480,000	2.710%
2040	1,520,000	2.710%
2041	1,565,000	2.710%
2042	1,605,000	3.040%
2043	1,655,000	3.040%
2044	1,700,000	3.040%
2045	1,750,000	3.040%
2046	1,800,000	3.040%
	37,960,000	

- (iii) the Initial Bond shall be numbered IB-1.
- (iv) the Initial Bond shall be registered in the name of the Purchaser.
- (v) the term bond language shall be removed from the Initial Bond in the event there are no term bonds.

PRIVATE PLACEMENT MEMORANDUM DATED _____, 2017**NEW ISSUE BOOK-ENTRY-ONLY**

On the date of initial delivery of the Bonds (defined below), Bond Counsel (defined on page 2) will render its opinion substantially in the form attached in APPENDIX C - FORM OF OPINION OF BOND COUNSEL.

\$_____,000

**WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
WATER SYSTEM JUNIOR LIEN REVENUE BONDS, SERIES 2017(the "Bonds")**

Dated: October 1, 2016

Due: December 15, as set forth in Appendix A

- Interest Date:** Interest on the Bonds will be payable on June 15 and December 15 of each year, commencing June 15, 2018 (each an "Interest Payment Date"). The Bonds will bear interest at the rates per annum set forth in "APPENDIX A - MATURITY SCHEDULE."
- Record Date:** The term "Record Date" shall mean the 15th day of the calendar month immediately prior to the Interest Payment Date.
- Date Interest Accrues:** Each Bond shall bear interest from the later of the Delivery Date thereof or the most recent Interest Payment Date to which interest has been paid or duly provided for, calculated on the basis of a 360-day year composed of twelve 30 day months, until the maturity or redemption of the Bonds, or until the Authority's obligation with respect to the payment of the Bonds has been satisfied.
- Redemption:** The Bonds are subject to redemption prior to maturity as provided herein. See "THE BONDS - Redemption Provisions" herein.
- Authorized Denominations:** The Bonds are being issued as fully registered bonds in denominations of \$5,000, or any integral multiple thereof.
- Paying Agent/Registrar:** The initial paying agent and registrar ("Paying Agent/Registrar") for the Bonds is Regions Bank, an Alabama state banking corporation.
- Book-Entry-Only System:** Upon initial issuance, the ownership of the Bonds will be registered on the registration books of the Authority kept by the Paying Agent/Registrar, in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York ("DTC") to which principal, redemption premium, if any, and interest payments on the Bonds will be made. The purchaser of the Bonds will not receive physical delivery of bond certificates. Principal of, interest, and premium, if any, on the Bonds will be payable at the designated office of the Paying Agent/Registrar in Houston, Texas as the same become due and payable.
- Issuer:** The West Harris County Regional Water Authority (the "Authority") was created as a political subdivision of the State of Texas pursuant to Act of May 28, 2001, 77th Texas Legislature, Regular Session, Chapter 414, 2001 Tex. Gen. Laws, as amended (the "Act").
- Official Action:** RESOLUTION AUTHORIZING THE ISSUANCE, SALE, AND DELIVERY OF THE WEST HARRIS COUNTY REGIONAL WATER AUTHORITY WATER SYSTEM JUNIOR LIEN REVENUE BONDS, SERIES 2017; APPROVING THE FORM AND SUBSTANCE AND AUTHORIZING THE EXECUTION OF A TWELFTH SUPPLEMENTAL INDENTURE OF TRUST RELATING TO SUCH BONDS; AUTHORIZING AND RATIFYING OTHER ACTIONS OF THE AUTHORITY; MAKING CERTAIN FINDINGS AND CONTAINING OTHER PROVISIONS RELATING TO THE SUBJECT, dated _____, 2017 ("Bond Resolution") and THE TWELFTH SUPPLEMENTAL INDENTURE OF TRUST, dated October 1, 2017.
- Purpose:** See "APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST, AND TWELFTH SUPPLEMENTAL INDENTURE OF TRUST."
- Security for the Bonds:** See "APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST, AND TWELFTH SUPPLEMENTAL INDENTURE OF TRUST."
- Ratings:** See "OTHER INFORMATION - Ratings"
- Delivery Date:** October __, 2017 or the actual date of delivery of the Bonds to the initial purchaser thereof.

See APPENDIX A – MATURITY SCHEDULE for Principal Amounts, Maturities, Interest Rates, and Initial CUSIP Numbers

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY

Board of Directors

<u>Name</u>	<u>Office</u>	<u>Term Expires</u>
Bruce G. Parker	President	May 2018
Larry A. Weppler	Vice-President	May 2018
Douglas C. Postle	Secretary	May 2020
Eric Hansen	Asst. Secretary	May 2020
Gary Struzick	Asst. Vice President	May 2020
Mark G. Janneck	Director	May 2020
Karla Cannon	Director	May 2018
Michael Thornhill	Director	May 2018
Dennis Gordon	Director	May 2018

Regions Bank, an Alabama state banking corporation, Paying Agent/Registrar

Principal Consultants

Allen Boone Humphries Robinson LLP, Bond Counsel

Robert W. Baird & Co. Incorporated, Co-Financial Advisor
FirstSouthwest A Division of Hilltop Securities Inc., Co-Financial Advisor

Dannenbaum Engineering Corporation, Consulting Engineer

Myrtle Cruz, Inc., Bookkeeper

McCall Gibson Swedlund Barfoot, PLLC, Auditor

Severn Trent Environmental Services, Inc., Operator

TABLE OF CONTENTS

	Page
INTRODUCTION	2
THE BONDS.....	2
General Description	2
Purpose	2
Authority for Issuance	2
Security for the Bonds	2
Redemption Provisions.....	3
Notice of Redemption; Selection of Bonds to Be Redeemed	3
Book-Entry-Only System	3
TAX MATTERS	4
Opinion	4
OTHER INFORMATION	4
Forward Looking Statements.....	4
Ratings.....	4
LITIGATION	4
General	4
The Authority	4
CONTINUING DISCLOSURE OF INFORMATION.....	4
Compliance with Prior Undertakings	4
MISCELLANEOUS.....	4
ADDITIONAL INFORMATION.....	5
APPENDIX A	MATURITY SCHEDULE
APPENDIX B	BOND RESOLUTION, MASTER INDENTURE OF TRUST AND ELEVENTH SUPPLEMENTAL INDENTURE OF TRUST
APPENDIX C	FORM OF OPINION OF BOND COUNSEL
APPENDIX D	ANNUAL FINANCIAL REPORT OF THE AUTHORITY FOR FISCAL YEAR ENDED DECEMBER 31, 2015

**Private Placement Memorandum
relating to**

\$ _____,000

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
(A political subdivision of the State of Texas)
WATER SYSTEM JUNIOR LIEN REVENUE BONDS, SERIES 2017 (the “Bonds”)

INTRODUCTION

This Private Placement Memorandum, including the cover page and appendices, contains brief descriptions of the Authority, provides certain information with respect to the issuance by the Authority, and summaries of certain provisions of the “Bonds” pursuant to the Bond Resolution, and to the Indenture of Trust dated as of August 1, 2003 and the Twelfth Supplemental Indenture of Trust dated as of October 1, 2017 (collectively, the “Indenture”). Except as otherwise set forth herein, capitalized terms used but not defined in this Private Placement Memorandum have the meanings assigned to them in the Bond Resolution and Indenture. See “APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST AND TWELFTH SUPPLEMENTAL INDENTURE OF TRUST” attached hereto.

APPENDIX A contains the maturity schedule for the Bonds. APPENDIX B contains the Bond Resolution and the Indenture and a description of the purpose for the proceeds of the Bonds. APPENDIX C contains a copy of the proposed opinion of Bond Counsel with respect to the Bonds. The summaries of the documents contained in the forepart of this Private Placement Memorandum are not complete or definitive, and every statement made in this Private Placement Memorandum concerning any provision of any document is qualified by reference to such document in its entirety.

THE BONDS

General Description

The Bonds are being issued in the aggregate principal amount set forth in “APPENDIX A - MATURITY SCHEDULE” of this Private Placement Memorandum and will mature and be subject to redemption prior to maturity as described therein. The Bonds are being issued as fully registered bonds in denominations of \$5,000, or any integral multiple thereof. The Bonds will be dated as of the stated date of issue and will mature on the dates referenced thereon, and will bear interest at the rates per annum set forth in “APPENDIX A - MATURITY SCHEDULE”.

Interest on the Bonds is payable semiannually on each Interest Payment Date, and will be calculated on the basis of a 360-day year consisting of twelve 30-day months. Principal of and the redemption price with respect to the Bonds will be payable to the owners upon presentation and surrender at the principal office of the Paying Agent/Registrar.

Purpose

See “APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST AND TWELFTH SUPPLEMENTAL INDENTURE OF TRUST.”

Authority for Issuance

The Bonds are being issued pursuant to Texas law (including particularly the Act of May 28, 2001, 77th Texas Legislature, Regular Session, Chapter 414, 2001 Tex. Gen. Laws, as amended and Chapter 1371 of the Texas Government Code, as amended), the Indenture and the Bond Resolution adopted by the Board of Directors of the Authority.

Security for the Bonds

See “APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST AND TWELFTH SUPPLEMENTAL INDENTURE OF TRUST.”

The Bonds are being issued as “Junior Lien Bonds” (and not as “Parity Bonds”) under the Indenture. Under the Indenture: (i) Parity Bonds, Parity Notes and Parity Obligations are secured by a lien on Pledged Revenues that is senior and superior to the lien on Pledged Revenues securing the Junior Lien Bonds (including the Bonds), Junior Lien Notes and Junior Lien Obligations, and (ii) Pledged Revenues are first applied to make all required deposits in

and transfers to the Debt Service Fund and Debt Service Reserve Fund before making required deposits in and transfers to the Junior Lien Debt Service Fund and Junior Lien Debt Service Reserve Fund.

Redemption Provisions

On December 15, 2027, or on any date thereafter, the Bonds maturing on and after December 15, 2028 may be redeemed prior to their scheduled maturities, upon the written direction of the Authority, with funds provided by the Authority, for an amount equal to the principal amount redeemed plus accrued interest to the date fixed for redemption as a whole, or in part, and if less than all of a maturity is to be redeemed the Paying Agent/Registrar will determine by lot the Bonds, or portions thereof within such maturity to be redeemed (provided that a portion of a Bond may be redeemed only in Authorized Denominations).

Notice of Redemption; Selection of Bonds to Be Redeemed

See “APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST AND TWELFTH SUPPLEMENTAL INDENTURE OF TRUST.”

The Paying Agent/Registrar, so long as a Book-Entry-Only System is used for the Bonds, will send any notice of redemption of the Bonds, notice of proposed amendment to the Indenture or other notices with respect to the Bonds only to DTC. Any failure by DTC to advise any DTC participant, or of any DTC participant or indirect participant to notify the beneficial owner, shall not affect the validity of the redemption of the Bonds called for redemption or any other action premised on any such notice. Redemption of portions of the Bonds by the Authority will reduce the outstanding principal amount of such Bonds held by DTC.

Book-Entry-Only System

The information in this caption concerning The Depository Trust Company, New York, New York (“DTC”) and DTC’s book entry system has been obtained from DTC and the Authority makes no representation or warranty nor takes any responsibility for the accuracy or completeness of such information.

DTC will act as securities depository for the Bonds. The Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered certificate will be issued for each maturity of the Bonds and deposited with DTC. See “APPENDIX B - BOND RESOLUTION, MASTER INDENTURE OF TRUST AND TWELFTH SUPPLEMENTAL INDENTURE OF TRUST.”

DTC is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity, corporate and municipal debt issues, and money market instrument (from over 100 countries) that DTC’s participants (the “Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions, in deposited securities, through electronic computerized book entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearance Corporation, and Fixed Income Clearance Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has a Standard & Poor’s rating: “AA+.” The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com and www.dtc.org.

TAX MATTERS

Opinion

Bond Counsel will deliver its opinion on the date of delivery of the Bonds substantially in the form as attached in "APPENDIX C - FORM OF OPINION OF BOND COUNSEL."

OTHER INFORMATION

Forward-Looking Statements

The statements contained in this Private Placement Memorandum, including the cover page, appendices, and any other information or documents provided by the Authority, that are not purely historical, are forward-looking statements, including statements regarding the Authority's expectations, hopes, intentions, or strategies regarding the future. Holders and beneficial owners of the Bonds have placed reliance on forward-looking statements. All forward-looking statements included in this Private Placement Memorandum are based on information available to the Authority on the date hereof. It is important to note that the Authority's actual results could differ materially from those in such forward-looking statements.

Ratings

No application has been made to any ratings agency or municipal bond insurance company for qualification of the Bonds for ratings or municipal bond insurance, respectively.

LITIGATION

General

On the date of delivery of the Bonds to the initial purchaser thereof, the Authority will execute and deliver a certificate to the effect that, except as disclosed herein, no litigation of any nature has been filed or is pending, as of that date, to restrain or enjoin the issuance or delivery of the Bonds or which would affect the provisions made for their payment or security or in any manner questioning the validity of the Bonds.

The Authority

There is no litigation, proceeding, inquiry, or investigation pending by or before any court or other governmental authority or entity (or, to the best knowledge of the Authority, threatened) that adversely affects the power, authority or obligation of the Authority to deliver the Bonds, the security for, or the validity of, the Bonds or the financial condition of the Authority.

CONTINUING DISCLOSURE OF INFORMATION

In the Official Action, the Authority has made the following agreement for the benefit of the holders and beneficial owners of the Bonds. The Authority is required to observe the agreement for so long as it remains obligated to advance funds to pay the Bonds. Under the agreement, the Authority will be obligated to provide certain updated financial information and operating data, and timely notice of specified events, to the Municipal Securities Rulemaking Board through the Electronic Municipal Market Access system. SEE "APPENDIX B – BOND RESOLUTION, MASTER INDENTURE OF TRUST AND TWELFTH SUPPLEMENTAL INDENTURE OF TRUST."

Compliance with Prior Undertakings

During the last five years, the Authority has complied in all material respects with its continuing disclosure agreements in accordance with SEC Rule 15c2-12.

On December 11, 2012, Standard & Poor's Ratings Services upgraded the Authority's long term rating and unenhanced rating from "A" to "A+." On May 30, 2013, the Official Statement for the Authority's Water System Revenue Refunding Bonds, Series 2013 was filed with EMMA, and the Authority's Financial Statements attached thereto included certain information regarding such A+ rating from Standard & Poor's. On June 28, 2013, the Authority's Annual Report for the year ended December 31, 2012, was filed with EMMA with these same Financial Statements attached thereto. On July 30, 2014, the Authority filed a notice of such rating upgrade with EMMA.

MISCELLANEOUS

Any statements made in this Private Placement Memorandum involving matters of opinion or of estimates, whether or not so expressly stated, are set forth as such and not as representations of fact, and no representation is

made that any of the estimates will be realized. Neither this Private Placement Memorandum nor any statement that may have been made verbally or in writing is to be construed as a contract with the owners of the Bonds.

The information contained above is neither guaranteed as to accuracy or completeness nor to be construed as a representation by the Authority. The information and expressions of opinion herein are subject to change without notice and neither the delivery of this Private Placement Memorandum nor any sale made hereunder is to create, under any circumstances, any implication that there has been no change in the affairs of the Authority or the Authority from the date hereof.

The Private Placement Memorandum is submitted in connection with the sale of the securities as referred to herein to the Texas Water Development Board on the Delivery Date and may not be reproduced or used, as a whole or in part, for any other purpose.

ADDITIONAL INFORMATION

The Private Placement Memorandum speaks only as of its date and the information contained herein is subject to change. Descriptions of the Bonds, the Indenture and the Bond Resolution and any other agreements and documents contained herein constitute summaries of certain provisions thereof and do not purport to be complete. This Private Placement Memorandum was approved by the Authority.

APPENDIX A
MATURITY SCHEDULE

<u>Maturity (December 15)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>CUSIP Nos. 95308R(a)</u>	<u>Maturity (December 15)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>CUSIP Nos. 95308R(a)</u>
2019	\$_____,000			2034(b)	\$_____,000		
2020	_____,000			2035(b)	_____,000		
2021	_____,000			2036(b)	_____,000		
2022	_____,000			2037(b)	_____,000		
2023	_____,000			2038(b)	_____,000		
2024	_____,000			2039(b)	_____,000		
2025	_____,000			2040(b)	_____,000		
2026	_____,000			2041(b)	_____,000		
2027	_____,000			2042(b)	_____,000		
2028(b)	_____,000			2043(b)	_____,000		
2029(b)	_____,000			2044(b)	_____,000		
2030(b)	_____,000			2045(b)	_____,000		
2031(b)	_____,000			2046(b)	_____,000		
2032(b)	_____,000			2047(b)	_____,000		
2033(b)	_____,000						

(a) CUSIP numbers have been assigned to this issue by the CUSIP Service Bureau and are included solely for the convenience of the purchaser of the Bonds. Neither the Authority nor the Financial Advisors shall be responsible for the selection or correctness of the CUSIP numbers set forth herein. CUSIP data herein is provided by CUSIP Global Services, managed by S&P Capital IQ on behalf of The American Bankers Association. This data is not intended to create a database and does not serve in any way as a substitute for the CUSIP Services.

(b) The Bonds scheduled to mature on or after December 15, 2028, are subject to redemption, in whole or in part and in inverse order, prior to their scheduled maturities, on December 15, 2027, or on any date thereafter, for an amount equal to the principal amount redeemed plus accrued interest thereon to the date fixed for redemption. See “THE BONDS –Redemption Provisions.”

APPENDIX B

**BOND RESOLUTION, MASTER INDENTURE OF TRUST, AND TWELFTH SUPPLEMENTAL
INDENTURE OF TRUST**

APPENDIX C

FORM OF OPINION OF BOND COUNSEL

APPENDIX D

ANNUAL FINANCIAL REPORT FOR THE YEAR ENDED DECEMBER 31, 2016

Not Applicable

Part I

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Green Project Reserve: DWSRF Green Project Worksheets

TWDB-0163 (<http://www.twdb.texas.gov/financial/instructions/doc/TWDB-0163.pdf>)

Attached Yes
 No
 N/A

TWDB will make the final determination whether your project (or project component) meets federal criteria as "green". You may be required to submit a **business case, utilizing the Green guidance**

Part I: Summary of attachments to application

Following is a list of the documents that may be necessary in order to process this application. While not all of the listed information below may be required for all projects, an applicant should review the application carefully because incomplete applications will not be processed until all of this information has been provided. In addition, please make sure your entity system name appears on every attachment. **Label each attachment with the number of the pertinent application section (i.e. "Part B5")**.

Check list for your convenience

Part A

- No. 6
 No. 12

General Information

Draft or executed consulting contracts (engineering, financial advisor, bond counsel)
Existing security document for refinancing

Part B

- No. 17
 No. 18
 No. 19
 No. 20

Legal

Resolution (TWDB-0201A)
Application Affidavit (TWDB-0201)
Certificate of Secretary (TWDB-201B)
Water Supply Corporations
 Articles of Incorporation
 Certificate of incorporation from the Texas Secretary of State
 By-laws and any amendments
 Certificate of status from the Texas Secretary of State
 Certificate of account status from Texas Comptroller

- No. 21
 No. 22
 No. 23
 No. 24
 No. 25
 No. 26

Resolution/ordinance authorizing the issuance of parity debt
Certificate of Convenience & Necessity
Enforcement Actions
Affidavit of No Objection
Two copies of the Water Conservation Plan (TWDB-1968 and TWDB-1965)
Water use surveys

- No. 27

Water Loss Audit
<http://www.twdb.texas.gov/waterplanning/waterusesurvey/index.asp>
<http://www.twdb.texas.gov/conservation/resources/waterloss-resources.asp>

Part C

- No. 39
 No. 40
 No. 45
 No. 46
 No. 47
 No. 49
 No. 52

Financial

Assessed Values by Classifications
Direct and Overlapping Tax Table
Proforma for each year of debt outstanding
Five year comparative system operating statement.
Annual audit and management letter
Outstanding debt schedule
Service provider contracts

Please label each attachment with the number of the pertinent application section (i.e. "Part D5")

Part D

Project Information

- No. 54a Preliminary Engineering Feasibility Data (PEFD)
- No. 54b Engineering Feasibility Report
 - Water (TWDB-0555)
 - Wastewater (TWDB-0556)
- No. 54c Project Draw Schedule (TWDB-1202)
- No. 56 Project Map
- No. 57 Census Tract(s)
- No. 58 Project Schedule
- No. 59 Current and future populations and projected water use or wastewater flows
- No. 60 Project Cost Estimate Budget (TWDB-1201)
- No. 61 Wastewater Project Information Form (WRD-253a)
Water Project Information Form (WRD-253d)
- No. 62 Texas Pollution Discharge Elimination System Permit
- No. 63 If applicant has property rights and permits
 - a. WRD-208A (Surface Water)
 - b. WRD-208B (Groundwater)
- No. 63c Additional Permits
- No. 64 Site certificate, evidencing land ownership for the project. (ED-101)
- No. 65 Categorical Exclusion (CE), Finding of No Significant Impact (FONSI), Record of Decision or any other supporting document
- No. 67 Social or environmental issues

Part E

State Water Implementation Fund for Texas

- No. 69 Multi-year/phased commitment schedule
- No. 71a Draft Bond Ordinance
- No. 71b Private Placement Memorandum

Part F

Economically Distressed Areas Program

- No. 73 Resolution/ordinance establishing a mandatory hookup policy
- No. 74 EDAP applicants
 - Inadequacy documentation
 - Financial resources documentation
 - Existence of residences prior to 06/01/2005
- No. 75 Public health nuisance
- No. 76 Plats
- No. 77 EDAP Planning Phase – Facility Engineering Plan/Scope of Services (WRD-023A)

Part G

CWSRF/DWSRF Applicants Only NOT APPLICABLE

- No. 82 Lobbying Activities (WRD-213)
- No. 83 Certification Regarding Debarment, Suspension and Other Responsibility Requirements. (SRF-404)
- No. 84 Assurances – Construction Programs (EPA-424D)
Disadvantaged Business Requirements Guidance (TWDB-0210)

Please label each attachment with the number of the pertinent application section (i.e. “Part D5”)

- No. 86 Affirmative Steps Certification and Goals (TWDB-0215)
- No. 87 Affirmative Steps Solicitation Report (TWDB-216)
- No. 88 Loan/ Grant Participation Summary (TWDB-0373)
- No. 89 Prime Contractor Affirmative Steps Certification and Goals (TWDB-217)
- No. 90 Designated Management Agency (WRD-210)

Part H Green Projects NOT APPLICABLE
Guidance (TWDB-0161)

- No. 93 CWSRF Green Project Worksheets (TWDB-0162)
DWSRF Green Project Worksheets (TWDB-0163)

Part J: Guidance and Forms

Part A General Information
CWSRF – 31 TAC 375
DWSRF – 31 TAC 371
EDAP and SWIFT - 31 TAC 363
For more information visit, <http://www.twdb.texas.gov/about/rules/index.asp>.

Part D Project Information
[State Programs - 31 TAC 363](#)
[Drinking Water State Revolving Fund - 31 TAC 371](#)
[Clean Water State Revolving Fund / Equivalency - 31 TAC 375](#)
[Clean Water State Revolving Fund / Non-Equivalency - 31 TAC 375](#)

Guidelines for Environmental Assessment, Clean Water Non-Equivalency (ED-001A)
Clean Water EID Instructions (SRF-099)
Guidelines for Environmental Assessment, State Participation, Defund, RWAF and WIF,
(ED-001B)
Guidelines for Environmental Assessment, EDAP (ED-001C)
Drinking Water EID Instructions (DW-001)

Part H Green Projects and Project Components
Green Project Reserve: Guidance for determining project eligibility
(TWDB-0161)