



**State Water Implementation Fund
For Texas
Abridged Application
For
Lake Ralph Hall**

Submitted By: Upper Trinity Regional Water District

January 28, 2015



January 28, 2015

Mr. Tom Entsminger, Program Coordinator
State Water Implementation Fund for Texas (SWIFT)
Texas Water Development Board
P.O. Box 13231
Austin, Texas 78711-3231

Re: Abridged SWIFT Application - - Lake Ralph Hall Project - - Readiness Status

Dear Mr. Entsminger:

Your earnest consideration is requested - - of our application for financial assistance as necessary for development of Lake Ralph Hall, the first new water supply lake to receive a water rights permit in Texas in nearly 30 years, a very long "dry spell." This letter serves as transmittal for the Abridged Application; and, we wish to summarize the readiness status of Upper Trinity Regional Water District (UTRWD) and the Lake Ralph Hall Project. The Lake Ralph Hall Project includes a major component for water reuse per the Region C Plan - - and the overall Project is quite viable and ready to be fully implemented. To address Abridged Application instructions item 363.1304 (10) concerning "readiness" for financial assistance under the SWIFT Program, the following comments are provided about the Lake Ralph Hall Project.

UTRWD is a water conservation and reclamation district composed of 25 public entities that was created by the Texas Legislature to provide wholesale water and wastewater services on a regional basis as a non-profit governmental enterprise, without tax powers.

- As a regional enterprise, we place a special emphasis on planning and development of long-term water supplies by having a diversified portfolio of reliable water resources.
- Lake Ralph Hall is the central element of UTRWD's diversified portfolio, one that is necessary to carry out the TWDB mandate for an adequate water supply to meet the demands of our large and growing service area.
- After more than ten years of diligent work by UTRWD and the Texas Commission on Environmental Quality (TCEQ), Water Rights Permit No. 5821 (Exhibit No. 3 of the application) was issued for Lake Ralph Hall on December 11, 2013.
- Of the many communities we serve, most are classified as rural entities (see Section 2 of application, Exhibit No. 5).

- On a parallel track, UTRWD's application with the U.S. Army Corps of Engineers (USACE) for the Section 404 construction permit is in advanced stage of regulatory review - - with issuance expected by next year.

Planning and permitting efforts to date have been comprehensive; and, substantial progress has already been achieved toward implementation of the Project.

- Much work has been accomplished concerning the preliminary design of the dam and spillway.
- A system operations concept plan has been developed for the proposed Lake, taking into account other available sources of water in the UTRWD system.
- Land acquisition is well underway, with approximately 40% (4,700 acres) of the approximately 12,000 acres needed for the Project already acquired.

While overall project planning and land acquisition continue at a steady pace using local funds, financial assistance through the SWIFT program is urgently needed. Financial assistance is needed to enable completion of the Project by the time of need, and without an onerous burden on communities and customers. With the water rights permit in hand (and the forthcoming federal 404 permit), SWIFT funding will enable UTRWD to step up the pace of implementation and to proceed to construction on a timely basis.

Water conservation is a strong element of UTRWD's overall water supply strategy. UTRWD has had an active water conservation program since regional water service was first initiated in the mid 1990's. UTRWD is working diligently - - coordinating with its members and customers to preserve this precious resource to the fullest extent practicable. Enclosed as Exhibit No. 7 of the application is UTRWD'S latest Water Conservation Plan as approved by the TCEQ.

Like many other parts of Texas, the UTRWD service area continues in the grip of a persistent drought - - while at the same time we are faced with the challenges of growth, one of the fastest growing areas in the country.

- As evidenced by the Region C Plan, and the Regional project priority ranking, Lake Ralph Hall is among the most feasible of proposed projects to help meet the State's water needs.
- Implementation of the Lake Ralph Hall project is absolutely essential to UTRWD being able to meet the needs of the 25 growing communities who now depend on us - - and other communities yet to be served.
- Of special note, the calculation worksheet concerning excess capacity available for Board Participation is presented in Exhibit No. 8 of the Abridged Application.

The TWDB Board Participation funding option represents sound policy, at the state level - - and enables realistic solutions, at the local level, particularly for UTRWD and for the Lake Ralph Hall Project.



As always, we appreciate the time and assistance of TWDB staff; over the years we have relied heavily on and benefitted from TWDB's financial programs, always administered with a helping hand. When UTRWD was just getting started in the mid 90's, TWDB's State Participation Program was the right solution at the right time. Now, a few years later, the SWIFT program offers the right solutions at the right time.

Please see the enclosed UTRWD Board Resolution authorizing preparation of the SWIFT application for Lake Ralph Hall. Should you have any questions, or need additional information, please call me or contact Larry N. Patterson at (972) 219-1228 or at lpatterson@utrwd.com.

Sincerely,



Thomas E. Taylor
Executive Director

Enclosures: TWDB - - Abridged (SWIFT) Application with Exhibits
UTRWD - - Resolution #2014-29 (Authorization to Prepare SWIFT Application)

- C: Todd Madison, President, UTRWD
- Larry N. Patterson, Deputy Executive Director
- William A. Greenleaf, Director of Business Services
- David Medanich, First Southwest
- Nick Bulaich, First Southwest





RESOLUTION

RESOLUTION # 2014 - 29

A RESOLUTION BY THE BOARD OF DIRECTORS OF THE UPPER TRINITY REGIONAL WATER DISTRICT, DENTON COUNTY, TEXAS, AUTHORIZING THE PREPARATION OF AN APPLICATION FOR FINANCIAL ASSISTANCE FROM THE TEXAS WATER DEVELOPMENT BOARD TO SUPPORT DEVELOPMENT OF PROPOSED LAKE RALPH HALL.

WHEREAS, the Upper Trinity Regional Water District (the "District") provides regional water (and wastewater) services on a wholesale basis to more than 25 cities, towns and utilities, serving citizens and customers in the Trinity River Basin, State of Texas; and

WHEREAS, the District is a regional entity, created by the Texas Legislature, to serve a rapidly growing region in the northern portion of the Dallas/Fort Worth Metroplex; and

WHEREAS, ensuring an adequate water supply is vital to the public health and continued economic well-being of the State; and

WHEREAS, through the bottom-up planning process, the State of Texas has prepared regional and state water supply plans (the "Plan"), which Plan identifies future demands for water within the District's service area over the next 50 years; and

WHEREAS, one of the projects identified in the Plan is proposed Lake Ralph Hall, to be located on the North Sulphur River in Fannin County, Texas; and

WHEREAS, from current financial programs, the Texas Water Development Board (TWDB) has provided funds for certain of the District's regional systems - - for current and future needs of this rapidly growing service area, including a \$10.4 million loan for planning and engineering services for Lake Ralph Hall; and

WHEREAS, the planning, design, land acquisition and permitting activities for proposed Lake Ralph Hall are on-going and require additional funding; and

WHEREAS, the 83rd Legislature took significant steps forward to address the water needs of Texas by passage of two new laws creating the State Water Implementation Fund for Texas (SWIFT) and the State Water Implementation Revenue Fund for Texas; and

WHEREAS, on November 5, 2013, the citizens of the State of Texas voted to approve a constitutional amendment (Proposition 6) which authorized transfer of \$2 billion from the Texas Economic Stabilization Fund to finance the new funding programs; and

WHEREAS, Texas cities, counties, water districts, river authorities and nonprofit water supply corporations are eligible to use this new TWDB financial assistance program; and

WHEREAS, based on the District's application for water rights, the Texas Commission on Environmental Quality issued the Water Rights Permit Number 5821 for Lake Ralph Hall on September 24, 2013, which permit became effective on December 11, 2013; and

WHEREAS, the District has been notified by the TWDB that the Lake Ralph Hall project is eligible for financial assistance from SWIFT, upon issuance of the rules for the new TWDB financial assistance program; and

WHEREAS, the TWDB may have funds available for the Lake Ralph Hall project from current programs, not contingent on SWIFT; and

WHEREAS, the District's Water Supply Committee recognizes that Lake Ralph Hall is a high priority project for the State and for the District, and further, the Committee desires to obtain financial assistance from the TWDB to enable the District to conduct further engineering, planning, land acquisition and permitting activities for proposed Lake Ralph Hall and related facilities to meet the future demand for water within the District's service area.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UPPER TRINITY REGIONAL WATER DISTRICT, THAT:

SECTION 1. The Board of Directors does hereby find that planning for Lake Ralph Hall is an urgent priority for the District -- that development of the project requires additional planning activities and the expenditure of funds to help assure an adequate water supply for approximately 500,000 new residents projected for the District's service area in the future.

SECTION 2. The Board hereby reaffirms that proposed Lake Ralph Hall is an important source of future water supply necessary to avoid a water crisis for District customers.

SECTION 3. The staff is hereby authorized to coordinate with the TWDB concerning application for financial assistance for the continued planning, engineering services and land acquisition program for Lake Ralph Hall.

SECTION 4. The Executive Director of the District is hereby designated the authorized representative of the District for purposes of furnishing such information and executing such documents as may be required in connection with the application for financial assistance and complying with the rules of the TWDB.

SECTION 5. Further, in coordination with the Water Supply Committee, the Executive Director is hereby directed to make preparation for submission of an application to the TWDB for financial assistance from any on-going or new program, and to obtain approval by the Board of Directors prior to submission of said application(s) to the TWDB.

SECTION 6. The following firms and individuals as needed and requested are hereby authorized and directed to aid and assist in the preparation, submission and support of such application and to appear on behalf of and to represent the District before any meeting of the TWDB on such application, to wit:



Financial Advisor: First Southwest Company (David K. Medanich)
777 Main Street, Suite 1200
Fort Worth, Texas 76102
817-332-9710

Co-Bond Counsel: Bracewell & Giuliani L.L.P. (Rob Collins)
1445 Ross Avenue Suite 3800
Dallas, Texas 75202-2711
214-758-1012

Co-Bond Counsel: Boyle & Lowry L.L.P. (John F. Boyle, Jr.)
4201 Wingren, Suite 108
Irving, Texas 75062
972-650-7100

Engineer: CPY, Inc (Pete Patel)
1820 Regal Row, Suite 200
Dallas, Texas 75235
972-263-3960

Engineer: Alan Plummer Associates, Inc. (Alan Tucker)
1320 S. University, Suite 300
Fort Worth, Texas 76107
817-589-2226

Engineer: CH2M-HILL (Edward Motley)
12377 Merit Drive, 10th Floor
Dallas, TX 75251
972-980-2170

SECTION 7. This Resolution shall become effective immediately upon its passage.

DULY PASSED AND APPROVED THIS 30th DAY OF OCTOBER 2014.

Recommended:


Thomas E. Taylor, Executive Director

Executed:


Todd Madison, President

Attest:


Gary Calmes, Secretary





State Water Implementation Fund for Texas (SWIFT)

Abridged Application

Due February 3, 2015 by 5:00pm

By submitting this abridged application, you understand and confirm that the information provided is true and correct to the best of your knowledge and further understand that the failure to submit a complete abridged application by the stated deadlines, or to respond in a timely manner to additional requests for information, may result in the withdrawal of the abridged application without review.

Section 1. APPLICANT INFORMATION

| Name of Applicant | | Applicant County | Regional Water Planning Area | |
|---------------------------------------|---------------------------------------|---|---|--|
| Upper Trinity Regional Water District | | Denton | C - Region C | |
| Entity Contact Information | | Proposed Project or Strategy from 2011 Regional Water Plan & State Water Plan | | |
| Contact Person | Mr. Larry N. Patterson, P.E. | Name of Project (from 2012 State Water Plan) | Lake Ralph Hall and Indirect Reuse of Return Flows from Lake Ralph Hall | |
| Title | Deputy Executive Director | | | |
| Mailing Address | PO Drawer 305 Lewisville, TX 75067 | Where does the project appear in the 2011 Regional Water Plan? | Project on Page: | 4E.44 |
| | | | Capital Costs on Page: | Table Q-63 |
| Phone Number | 972-219-1228 | Phase(s) Applied For | <input checked="" type="checkbox"/> Planning | <input checked="" type="checkbox"/> Design |
| Fax Number | 972-219-7521 | | <input checked="" type="checkbox"/> Acquisition | <input checked="" type="checkbox"/> Construction |
| Email Address | lpatterson@utrwd.com | | | |

Section 2. PROJECT INFORMATION

Description of Proposed Project

Lake Ralph Hall is a proposed new reservoir by the Upper Trinity Regional Water District (the District) in the Sulphur River Basin on the North Sulphur River in Fannin County, Texas. The primary purpose is for municipal water supply. Water from the project is to be used to meet water demands within that portion of Fannin County that lies in the Sulphur River Basin and within the service area of the District shown in Exhibit 1. The proposed lake will provide a firm yield of approximately 30 mgd; and, the project boundary encompasses approximately 12,000 acres.

As a general description, the project elements include constructing an earthen dam, an intake / pump station, a state highway bridge over the lake, relocation of various state and county roads, utility relocations, a raw water transmission pipeline, a balancing reservoir, environmental and cultural resources mitigation, and reservoir and administration/support facilities.

Please see Exhibit 2 "Overview of the Upper Trinity Regional Water District and Lake Ralph Hall" for additional information.

On December 11, 2013 the Texas Commission on Environmental Quality issued Water Use Permit Number 5821 to the District for Lake Ralph Hall; this was the first such permit issued for a new reservoir in Texas in almost 30 years.

| | | | |
|--|---------|--|---|
| Population Served by Project When Fully Operational | 249,140 | Regional Project? <i>(If yes, attach Regional Project Worksheet)</i> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
|--|---------|--|---|

| | |
|---|--|
| Regional Water Planning Group Priority Ranking | Calculated by TWDB 31 TAC §363.1304 (12) |
|---|--|

| | |
|---------------------------------|---|
| Needs Met by the Project | Calculated by TWDB 31 TAC §363.1304 (5) |
|---------------------------------|---|

| | |
|--|--|
| Emergency <i>(select all that apply)</i> | <input type="checkbox"/> Applicant/entity's water supply will last less than 180 days. <input type="checkbox"/> Water supply need occurs earlier than anticipated in the State Water Plan. <input type="checkbox"/> Applicant has received or applied for Federal emergency funding. <input checked="" type="checkbox"/> None of the above. |
|--|--|

| | |
|---|---|
| Readiness to Proceed <i>(select all that apply)</i> | <input checked="" type="checkbox"/> Preliminary planning or design work (30% of total project) has been completed or is not required. <input checked="" type="checkbox"/> Applicant is prepared to begin implementation or construction within 18 months of application deadline. <input checked="" type="checkbox"/> Applicant has acquired all water rights associated with the proposed project, or none will be required. |
|---|---|

Section 3. REQUESTED ASSISTANCE AND OTHER PROJECT FINANCING

| | | | |
|--------------------------------|-------------------------------|-------|-------------------|
| Estimated Project Costs | TWDB Requested Amount | | \$ 320,126,472.00 |
| | Local Contribution | | \$ 49,436,188.00 |
| | Other: | Other | \$ 11,230.00 |
| | Total Estimated Project Costs | | \$ 369,573,890.00 |

| | | |
|--|---|--|
| Anticipated Commitment(s) <i>(Attach proposed schedule for multi-year commitments)</i> | <input type="checkbox"/> One Time Commitment <input checked="" type="checkbox"/> Multi-year Commitment | <input type="checkbox"/> Low-Interest Loan <input checked="" type="checkbox"/> Deferred Loan <input checked="" type="checkbox"/> Board Participation |
|--|---|--|

Section 4. SERVICE AREA INFORMATION

| | | | |
|----------|---------|-------|-----|
| PWS ID # | 0610213 | CCN # | N/A |
|----------|---------|-------|-----|

| | |
|---------------------|---|
| Conservation | <i>Calculated by TWDB 31 TAC §363.1304 (11)</i> |
|---------------------|---|

| | | |
|---|--|---|
| Efficiency <i>(Agricultural Projects Only)</i> | <input type="checkbox"/> <1% <input type="checkbox"/> 1%-1.9% <input type="checkbox"/> 2%-5.9% <input type="checkbox"/> 6%-9.9% | <input type="checkbox"/> 10%-13.9% <input type="checkbox"/> 14%-17.9% <input type="checkbox"/> ≥18% |
| Efficiency improvement achieved by implementing the proposed project. | <i>Please provide an attachment explaining the basis for your calculation.</i> | |

Household Cost Factor
(Household Cost Factor for SWIFT prioritization is calculated by dividing the service area's average residential water bill by its annual median household income. For regional projects, these should represent the combined service areas of all participating entities.)

| | | | |
|--|-----------|---------------------------------|--------------|
| Estimated average annual residential water bill: | \$ 569.40 | Annual Median Household Income: | \$ 96,917.00 |
|--|-----------|---------------------------------|--------------|

Notes
(Use this space to describe important project or budget details not captured in this form)

Exhibit 4 - Section 2 - Population served by project when fully operation. The number listed of 249,140 is the 2013 ACS 5-year estimate (survey data was used for entities not reported in the census). However, please note that per the 2011 Region C Plan the 2060 population for Upper Trinity is projected to reach approximately 850,000.

Lake Ralph Hall is an essential water supply needed in order to meet future water demands.

See attached List of Exhibits to this Abridged Application.



Upper Trinity Regional Water District

TWDB SWIFT Abridged Application

For

Lake Ralph Hall

LIST OF EXHIBITS

- **EXHIBIT 1** – SECTION 2 – UTRWD Service Area Map & Current Members and Customers
- **EXHIBIT 2** – SECTION 2 – Overview of UTRWD and Lake Ralph Hall
- **EXHIBIT 3** – SECTION 2 – Water Use Permit No. 5821 & Lake Ralph Hall Information Sheet
- **EXHIBIT 4** – SECTION 2 – Prorated Census Data Worksheet
- **EXHIBIT 5** – SECTION 2 – Regional Project Worksheet
- **EXHIBIT 6** – SECTION 3 – Requested Assistance and Other Project Financing
- **EXHIBIT 7** – NOTES SECTION – UTRWD Water Conservation Plan – September 2012
- **EXHIBIT 8** – NOTES SECTION – Excess Capacity Calculation for Lake Ralph Hall

EXHIBIT 1

SECTION 2 SWIFT Abridged Application

UTRWD Service Area Map & Current Members and Customers

EXHIBIT 1

SECTION 2 – SWIFT Abridged Application

Upper Trinity Regional Water District Current Members & Customers



- | | |
|--------------------------|-------------------------|
| Argyle | Double Oak |
| Argyle WSC | Flower Mound |
| Aubrey | Highland Village |
| Bartonville | Irving |
| Celina | Justin |
| Corinth | Krum |
| Cross Timbers WSC | Lake Cities MUA |
| Denton | Lewisville |
| Denton County | Lincoln Park |
| DCFWSD # 1A | Mustang SUD |
| DCFWSD # 7 | Northlake |
| DCFWSD # 8A | Pilot Point |
| DCFWSD # 9 | Ponder |
| DCFWSD # 10 | Prosper |
| DCFWSD # 11 | Sanger |



EXHIBIT 2

SECTION 2

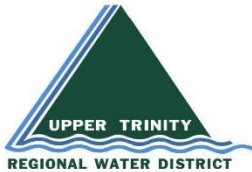
SWIFT Abridged Application

Overview of the Upper Trinity Regional Water District and Lake Ralph Hall

EXHIBIT 2

SECTION 2 – SWIFT Abridged Application

**Overview of the Upper Trinity Regional
Water District and Lake Ralph Hall**

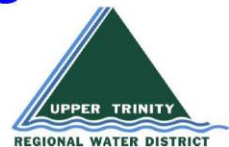


State Water Implementation Fund
for Texas
Abridged Application

February 3, 2015

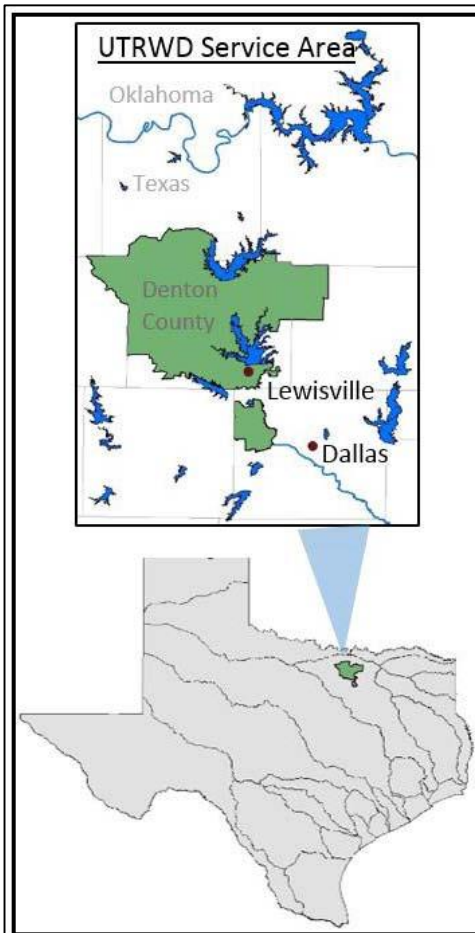


**Upper Trinity Headquarters
Lewisville, TX**



Upper Trinity - - Getting Started

- A Steering Committee
- TWDB Regional Planning Grant - - With Local Contribution
- Consensus Building
- Keep the Regional View
- Develop Alternative Strategies
- Be Realistic - - Be Visionary
- Create The Plan - - With TWDB as Partner
- Implement the Plan - - In Partnership with TWDB

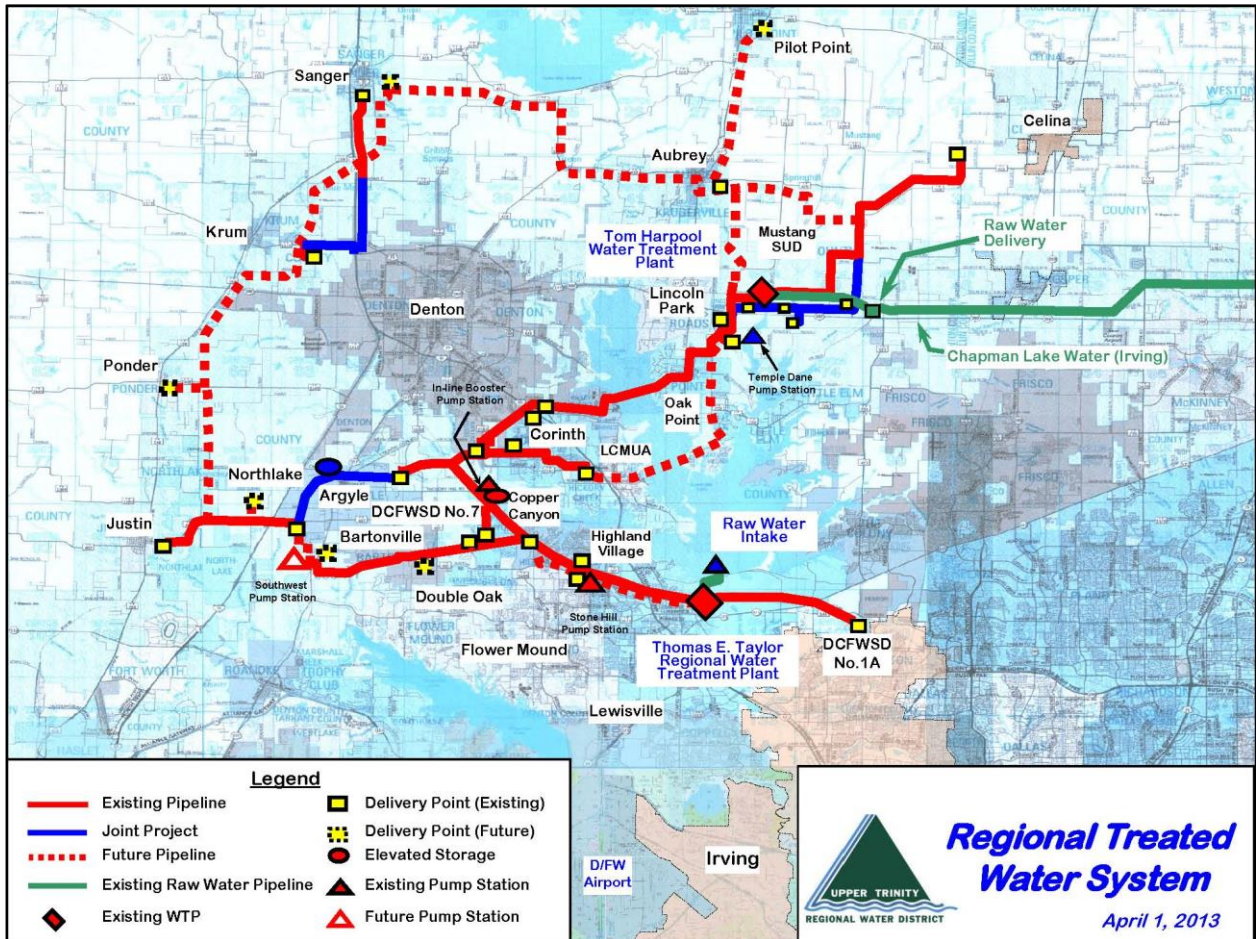
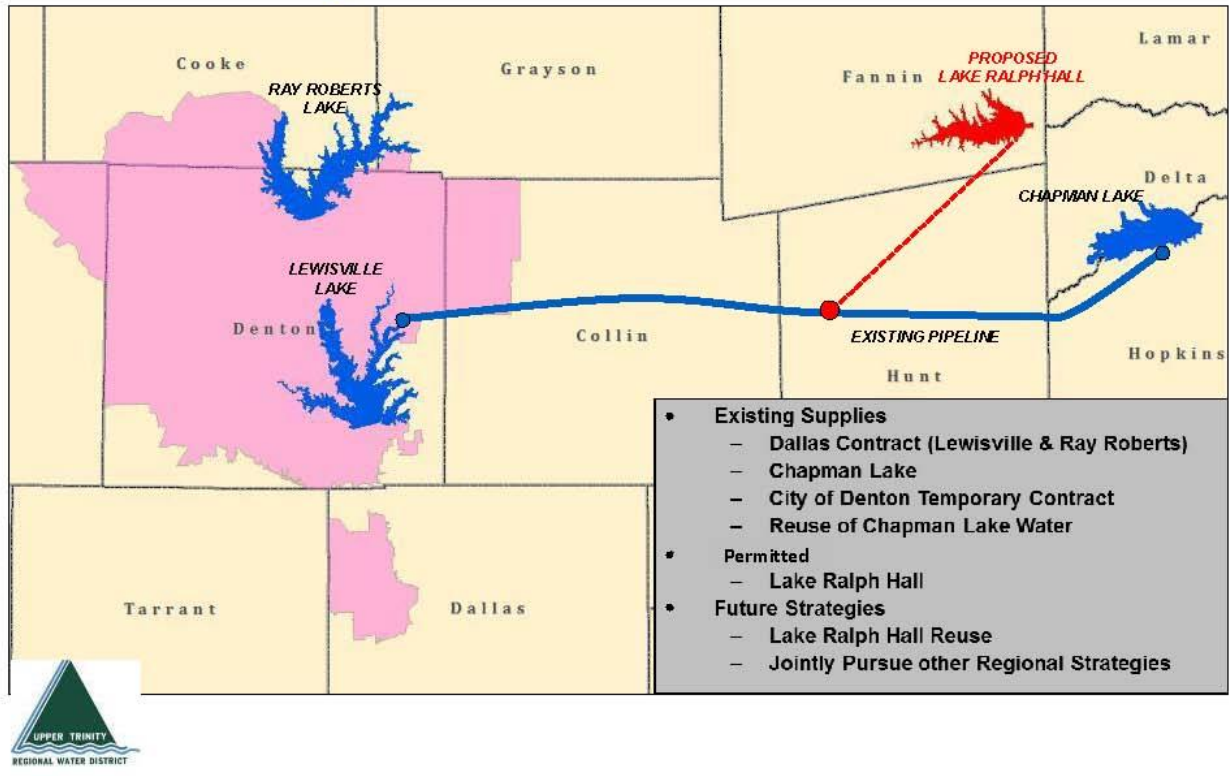


Upper Trinity Regional Water District Current Members & Customers

- | | |
|--------------------------|-------------------------|
| Argyle | Double Oak |
| Argyle WSC | Flower Mound |
| Aubrey | Highland Village |
| Bartonville | Irving |
| Celina | Justin |
| Copper Canyon | Krum |
| Corinth | Lake Cities MUA |
| Cross Timbers WSC | Lewisville |
| Denton | Lincoln Park |
| Denton County | Mustang SUD |
| DCFWSD # 1A | Northlake |
| DCFWSD # 7 | Oak Point |
| DCFWSD # 8A | Pilot Point |
| DCFWSD # 9 | Ponder |
| DCFWSD # 10 | Prosper |
| DCFWSD # 11 | Sanger |



Upper Trinity Regional Water District Water System Service Area & Sources



Thomas E. Taylor Regional Water Treatment Plant

Located in Lewisville



Current Capacity – 70 mgd

Harpool Water Treatment Plant

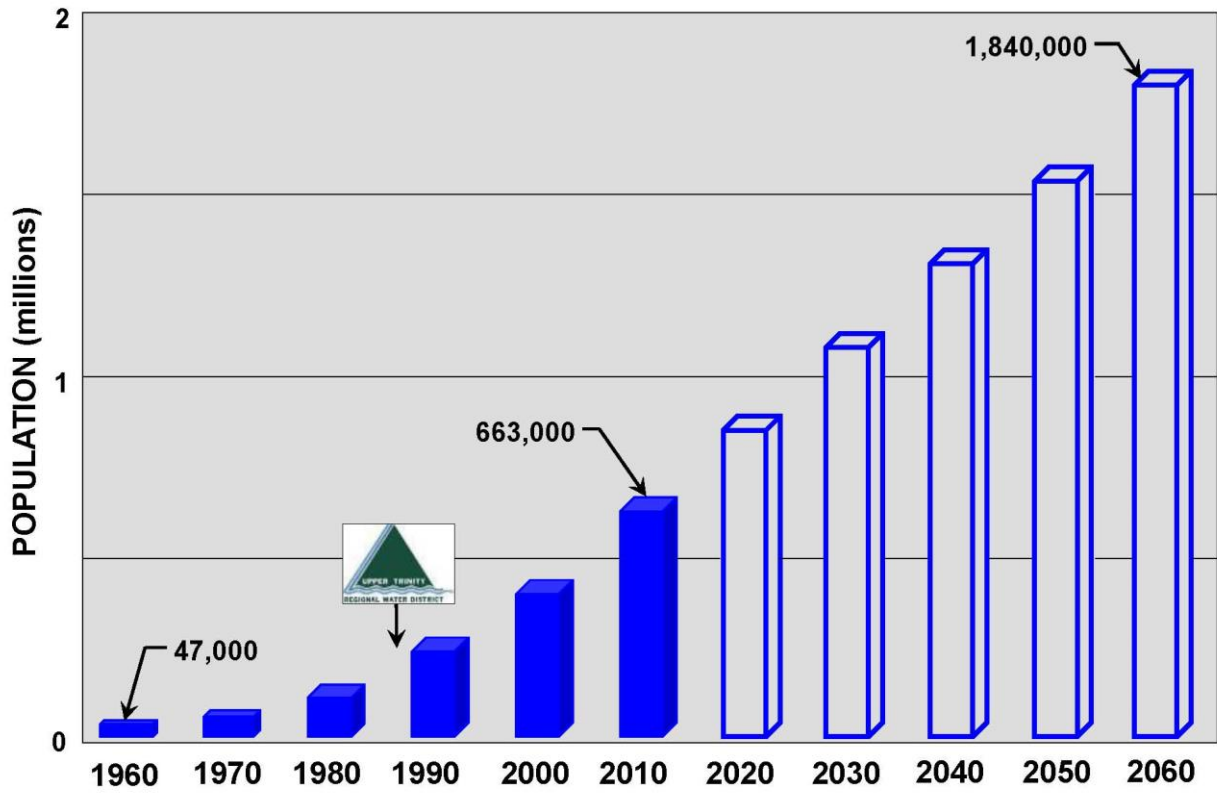


Current Capacity – 20 mgd

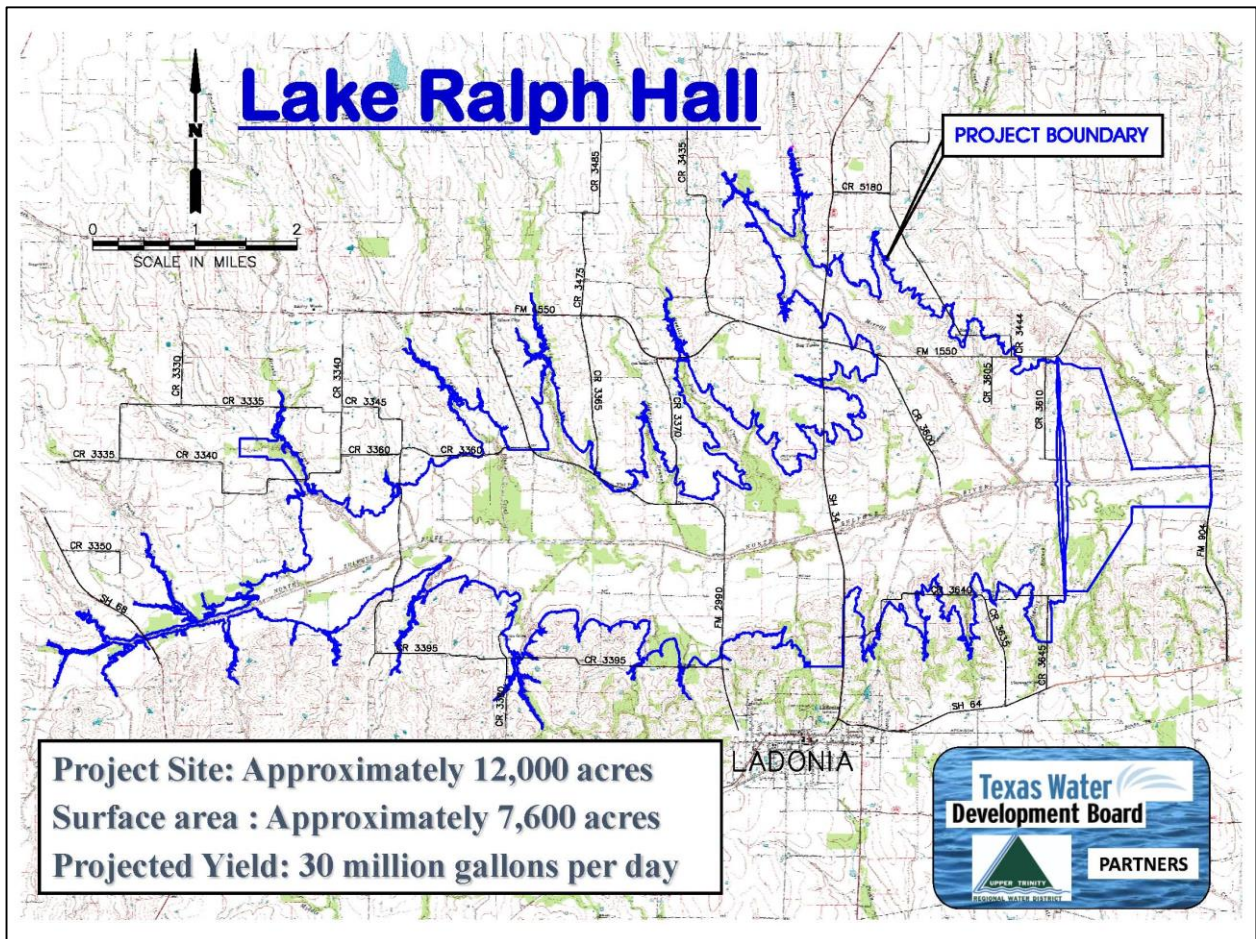
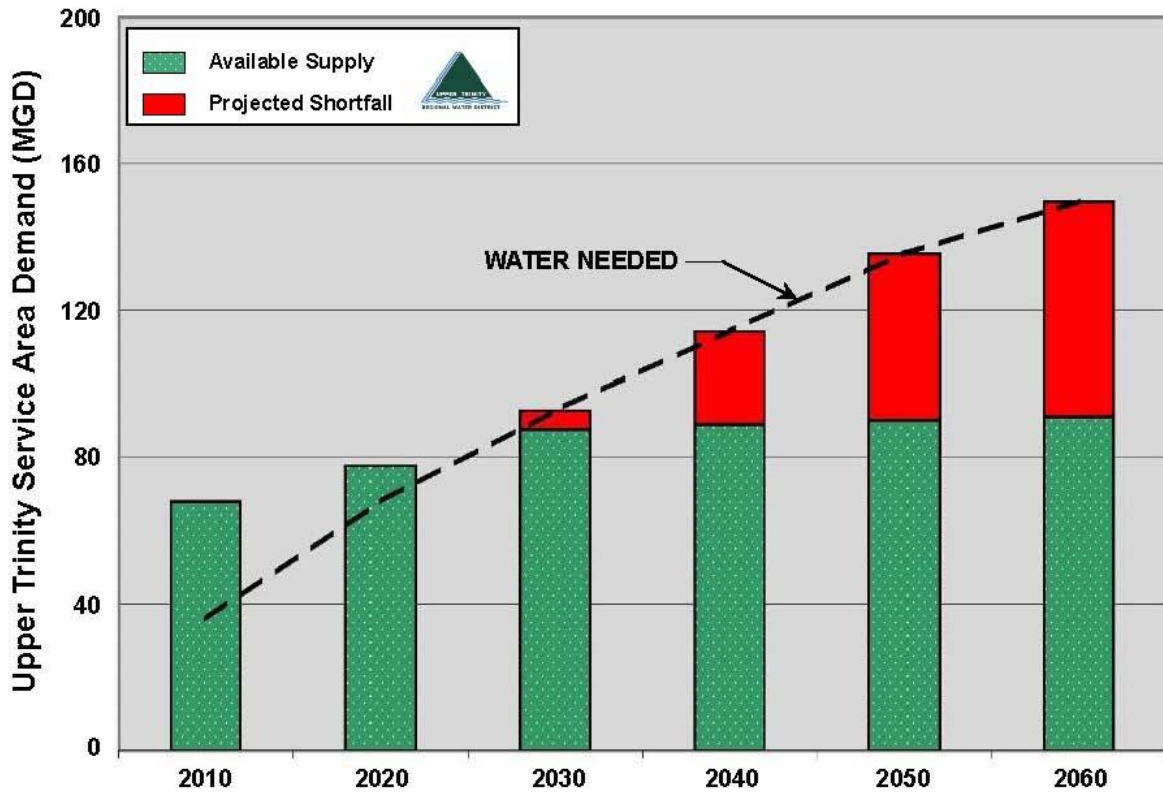
Harpool Plant Membrane Building



Denton County Population Growth




Water Resources Projections



Yes to Lake Ralph Hall

Region needs the water; state needs the precedent

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



WATER USE PERMIT

| | |
|--|--|
| Permit No. 3821 | Type §§ 11.123, 11.085 |
| Permitter: Upper Trinity Regional Water District | Address: P.O. Drawer 905 Lewistville, Texas 75067 |
| Filed: August 13, 2004 | Granted: December 11, 2013 |
| Purpose: Municipal, Industrial, Agricultural, and Recreation | Counties: Fannin, Collin, Cooke, Dallas, Denton, Grayson, and Wise |
| Watercourse: North Sulphur River, Tributary of the Sulphur River | Watershed: Sulphur and Trinity River Basins |

WHEREAS, Upper Trinity Regional Water District (UTRWD, Applicant or Permittee) applied for a water use permit to construct and maintain a dam and reservoir (Lake Ralph Hall) with a maximum capacity of 180,000 acre-feet of water and a surface area of approximately 8,500 acres, on the North Sulphur River, Tributary of the Sulphur River, Sulphur River Basin in Fannin County for recreation purposes; and

WHEREAS, Applicant seeks to divert and use not to exceed 45,000 acre-feet of water per year from the perimeter of Lake Ralph Hall for municipal, industrial, and agricultural purposes at a maximum combined diversion rate of 20% (90,000 gpm); and

WHEREAS, Applicant indicates that diversions from the reservoir may be "overdrawn" as a part of the system operation with existing UTRWD supplies from other basins to achieve maximum conservation of limited water resources; and

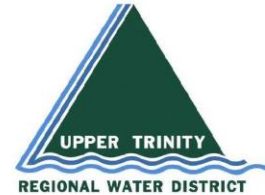
WHEREAS, Applicant indicates that of the 45,000 acre-feet of water per year requested, 34,082 acre-feet of water per year is available on a firm basis; and

This water use permit is issued subject to all superior and senior water rights in the Sulphur River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this permit.

This water use permit is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State resources exercised by the Commission.

Approved 9/24/13



PRIORITIZED STRATEGIES FROM THE 2011 REGION C WATER PLAN

SHORT LIST of 176 Projects (\$20.96 Billion):

Lake Ralph Hall - (Ranked 23rd)

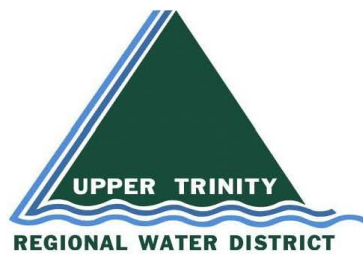
Lake Ralph Hall - (Indirect Reuse) (Ranked 23rd)



With Vision and Courage, We Plan



QUESTIONS



Larry N. Patterson, P.E.
Deputy Executive Director

www.utrwd.com

(972) 219-1228

EXHIBIT 3

SECTION 2 SWIFT Abridged Application

TCEQ Water Use Permit
No. 5821
Issued - December 11, 2013
& Lake Ralph Hall
Information Sheet

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



WATER USE PERMIT

STATE OF TEXAS
COUNTY OF TRAVIS
RECORDS & CLERK
1500 N. BRIDGES BLVD., SUITE 1000
AUSTIN, TEXAS 78701
DEC 16 2013
RECORDS & CLERK

Permit No. 5821

Type §§ 11.121, 11.085

Permittee: Upper Trinity Regional
Water District

Address: P.O. Drawer 305
Lewisville, Texas 75067

Filed: August 13, 2004

Granted: **DEC 11 2013**

Purposes: Municipal, Industrial,
Agricultural, and
Recreation

Counties: Fannin, Collin, Cooke,
Dallas, Denton, Grayson,
and Wise

Watercourse: North Sulphur River,
Tributary of the
Sulphur River

Watershed: Sulphur and Trinity River
Basins

WHEREAS, Upper Trinity Regional Water District (UTRWD, Applicant or Permittee) applied for a water use permit to construct and maintain a dam and reservoir (Lake Ralph Hall) with a maximum capacity of 180,000 acre-feet of water and a surface area of approximately 8,500 acres, on the North Sulphur River, tributary of the Sulphur River, Sulphur River Basin in Fannin County for recreation purposes; and

WHEREAS, Applicant seeks to divert and use not to exceed 45,000 acre-feet of water per year from the perimeter of Lake Ralph Hall for municipal, industrial, and agricultural purposes at a maximum combined diversion rate of 205 cfs (92,000 gpm); and

WHEREAS, Applicant indicates that diversions from the reservoir may be "overdrafted" as a part of the system operation with existing UTRWD supplies from other basins to achieve maximum conservation of limited water resources; and

WHEREAS, Applicant indicates that of the 45,000 acre-feet of water per year requested, 34,082 acre-feet of water per year is available on a firm basis; and

WHEREAS, Applicant seeks to use the water within its service area in all or parts of Collin, Cooke, Dallas, Denton, Fannin, Grayson, and Wise Counties and also seeks authorization for the interbasin transfer of water to those counties in the Trinity River Basin pursuant to Texas Water Code (TWC) ' 11.085; and

WHEREAS, the proposed Lake Ralph Hall is located 22.5 miles in a southeast direction from City of Bonham and 4.8 miles in a northeast direction from City of Ladonia. Station 70+00 on the centerline of the proposed dam is S 32E W, 1,600 feet from the northeast corner of H. McMillian Survey, Abstract No. 713, in Fannin County, Texas also being at 33.463E N Latitude, 95.901E W Longitude; and

WHEREAS, to the extent that return flows exist, they will be returned to various streams in the Trinity River Basin and the Sulphur River Basin; and

WHEREAS, the Texas Commission on Environmental Quality (TCEQ) finds that jurisdiction over the application is established; and

WHEREAS, Applicant submitted the *Conceptual Design and Analysis of the Proposed North Sulphur River Riparian Habitat Mitigation Area for Lake Ralph Hall*, which was accepted and approved by the Executive Director; and

WHEREAS, Applicant submitted the *Lake Ralph Hall Accounting Plan*, which was accepted and approved by the Executive Director; and

WHEREAS, the Executive Director performed a water availability analysis and determined that 34,082 acre-feet of water per year is available on a firm basis from the proposed reservoir; and

WHEREAS, the Executive Director recommends that special conditions be included in the permit to protect instream uses, water quality conditions, and senior and superior water rights; and

WHEREAS, notice of the application was mailed and published, and public meetings were held on March 27, 2006 and March 28, 2006; and

WHEREAS, numerous requests for a contested case hearing were received for this application; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this water use permit;

NOW, THEREFORE, this Water Use Permit No. 5821 is issued to Upper Trinity Regional Water District subject to the following terms and conditions:

1. IMPOUNDMENT

Permittee is authorized to construct and maintain a dam and reservoir (Lake Ralph Hall) with a maximum capacity of 180,000 acre-feet of water on the North Sulphur River, tributary of the Sulphur River, Sulphur River Basin in Fannin County. Station 70+00 on the centerline of the dam will be located S 32E W, 1,600 feet from the northeast corner of H. McMillian Survey, Abstract No. 713 in

Fannin County, at 33.463E N Latitude, 95.901E W Longitude, 22.5 miles in a southeast direction from City of Bonham, and 4.8 miles in a northeast direction from City of Ladonia in Fannin County, Texas.

2. USE

- A. Permittee is authorized to use the impounded water for recreation purposes.
- B. Permittee is authorized to divert and use not to exceed 45,000 acre-feet of water per year, of which 34,082 acre-feet of water per year is available on a firm basis, for municipal, industrial, and agricultural purposes.
- C. Permittee is authorized an interbasin transfer to use the authorized water within its service area in all or parts of Fannin, Collin, Cooke, Dallas, Denton, Grayson, and Wise Counties within the Sulphur and Trinity River Basins.

3. DIVERSION

- A. Permittee is authorized to divert the authorized water from any point on the perimeter of Lake Ralph Hall.
- B. Permittee is authorized to divert the authorized water at a maximum combined diversion rate of 205 cfs (92,000 gpm).

4. TIME PRIORITY

The time priority for this right is August 13, 2004.

5. CONSERVATION

Permittee shall implement water conservation plans that provide for the utilization of those practices, techniques, and technologies that will reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, and prevent the pollution of water, so that a water supply is made available for future or alternative uses. Permittee shall develop, submit, and implement water conservation plans as required by law. Each water conservation plan submitted to the Executive Director shall comply with relevant state conservation standards and shall be designed to result in the highest practicable levels of water conservation and efficiency achievable within the jurisdiction of the Permittee at the time of submission. Such plans shall include a requirement that in every wholesale water contract entered into, on or after the effective date of this permit, including any contract extension or renewal, each successive wholesale customer will develop and implement conservation measures that will result in the highest practicable levels of water conservation and efficiency in

order to comply with TWC § 11.085 (1)(2). If Permittee authorizes the resale of water by a customer, then the contract for resale must have water conservation requirements so that each successive wholesale customer in the resale of the water will be required to implement water conservation measures.

6. SPECIAL CONDITIONS

- A. Permittee shall only impound and divert water authorized by this permit in accordance with the most recently approved *Lake Ralph Hall Accounting Plan*. Permittee shall maintain said plan in electronic format and make the data available to the Executive Director upon request. Any modifications to the *Lake Ralph Hall Accounting Plan* shall be approved by the Executive Director. Only such modification that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive Director of any modifications to the plan, Permittee shall immediately cease impoundments and diversions authorized in Paragraph 1. IMPOUNDMENT and Paragraph 2. USE, and either apply to amend the permit, or voluntarily forfeit the permit. If Permittee fails to amend the accounting plan or forfeit the permit, the Commission shall be notified immediately by Permittee upon modification of the accounting plan and provided with the appropriate documents effectuating such changes.
- B. All mitigation plans and monitoring required herein shall comply with conditions set forth in 33 United States Code, § 1341, commonly known as the federal Clean Water Act (CWA) § 401 and Title 30 TAC § 279. Mitigation and monitoring plans shall also comply with § 404 of the CWA.
- C. Following deliberate impoundment of water in Lake Ralph Hall to elevation 510 feet mean sea level (MSL), Permittee shall complete and maintain the restored channel mitigation area with stored water released from Lake Ralph Hall as described in the *Conceptual Design and Analysis of the Proposed North Sulphur River Riparian Habitat Mitigation Area for Lake Ralph Hall (revised March 18, 2010)* and documented in the *Lake Ralph Hall Accounting Plan*. Prior to operation of the recirculation pump system in the restored channel mitigation area, Permittee shall obtain the appropriate authorizations under § 11.042 of the Texas Water Code.
- D. As identified in the *Conceptual Design and Analysis of the Proposed North Sulphur River Riparian Habitat Mitigation Area for Lake Ralph Hall*, Permittee shall construct approximately 14,500 linear feet of riparian habitat along a segment of the abandoned channel of the original North Sulphur River (the restored channel mitigation area) located on the south bank of the existing river channel immediately downstream of the proposed dam for Lake Ralph Hall.

- E. Impoundment of water and diversions under this permit are contingent upon commencement of construction of the approved *Conceptual Design and Analysis of the Proposed North Sulphur River Riparian Habitat Mitigation Area for Lake Ralph Hall*. Modifications or changes to this design must be approved by the Executive Director. Only such modification that changes the permit terms must be in the form of an amendment to the permit.
- F. Permittee shall install flow measurement devices to measure flow associated with the recirculation pump system identified in the *Conceptual Design and Analysis of the Proposed North Sulphur River Riparian Habitat Mitigation Area for Lake Ralph Hall*. Those measurement devices shall be connected to the SCADA system as required by Special Condition G.
- G. Permittee shall install multiple water quality and water level logger instrumentation in the deeper pool habitats, as identified in the *Conceptual Design and Analysis of the Proposed North Sulphur River Riparian Habitat Mitigation Area for Lake Ralph Hall*, in the restored channel mitigation area to continuously monitor dissolved oxygen, temperature, and water level within the pools. Permittee shall connect the monitoring instruments to a supervisory control and data acquisition (SCADA) system to detect a measurement below the *Texas Surface Water Quality Standards* (Title 30 Texas Administrative Code (TAC) § 307) for Segment 0305 for a period of greater than 24 hours or detect if the water surface in the pools drops more than one foot below its normal level. The instrumentation and SCADA system shall be maintained in good working order throughout the term of the permit. Permittee shall maintain records of the SCADA system data for a period of not less than five years after its collection and shall make it available to the Executive Director upon request.
- H. In the event that the above mentioned water level and/or water quality parameters within the restored channel mitigation area drop below the Water Quality Standards for Segment 0305 for a period greater than 24 hours, Permittee shall release water from Lake Ralph Hall, and/or utilize the recirculation pump system to provide flow through the mitigation area in order to restore the water level or help ensure compliance with the Water Quality Standards.
- I. Upon completion of the construction and enhancement of the restored channel mitigation area, Permittee shall establish and maintain an appropriate fish community representative of the aquatic life use designation for Segment 0305 of the *Texas Surface Water Quality Standards* (Title 30 TAC § 307). If available, the initial fish stocking shall be composed of, at a minimum, fish species listed in the *Conceptual Design and Analysis of the Proposed North Sulphur River Riparian*

Habitat Mitigation Area for Lake Ralph Hall. Permittee shall obtain the fish to be stocked in the restored channel from local sources if available.

- J. Permittee shall visit the restored channel mitigation area at a minimum of once per month for a period of five years following deliberate impoundment of water in Lake Ralph Hall and completion of the mitigation area to inspect and observe the condition of the mitigation area and take any appropriate action, such as initiate reservoir releases or engage the recirculation pump system, so as to ensure compliance with the *Conceptual Design and Analysis of the Proposed North Sulphur River Riparian Habitat Mitigation Area for Lake Ralph Hall*.
- K. In consultation with the Executive Director, Permittee shall conduct monitoring of the restored channel mitigation area twice a year for a period of five years following deliberate impoundment of water in Lake Ralph Hall and completion of the mitigation area. Monitoring shall include discharge measurements, assessment of fish and macroinvertebrate communities, physical habitat assessment, and documenting survival success of the planted vegetation within the restored channel riparian area. All aquatic biological monitoring and physical habitat assessments shall take place in the index period (March 15 – October 15) with at least one of the twice a year monitoring events taking place in the critical period (July 1 – September 15). Aquatic biological monitoring and habitat characterization shall follow TCEQ protocols set forth in the *Surface Water Quality Monitoring Procedures, Volume 2: Methods for Collecting and Analyzing Biological Community and Habitat Data*. (TCEQ 2005).
- L. Permittee shall submit a report to the Executive Director every two years summarizing the twice a year monitoring activities in Special Condition K. Permittee shall also submit a final report at the end of the five-year monitoring period summarizing the monitoring efforts. The report shall include an assessment of the fish and macroinvertebrate communities and the biological metric scoring criteria used to assess aquatic life uses. In the event that aquatic life is not meeting the water quality standards for Segment 0305, the report shall identify and outline remedial management strategies to be implemented to meet the designated aquatic life use.
- M. Permittee shall establish and maintain a riparian buffer zone of permanent vegetation around the perimeter of the reservoir averaging at least 50 feet in width with the exception of reasonable access areas and the area of the dam and spillway. Permittee shall also establish and maintain riparian buffer zones 25 to 50 feet wide at or below elevation 560 feet MSL along Bear Creek, Brushy Creek, Pickle Creek, Davis Creek, Leggets Branch, Bralley Pool Creek, Merrill Creek, the North Sulphur River, and along unnamed tributaries within the area of the reservoir project. The buffer zone shall be planted with native vegetation as necessary to ensure

complete coverage at maturity.

- N. Permittee shall implement measures to minimize impacts to aquatic resources due to entrainment or impingement including, but not limited to, the installation of screens at the diversion facilities.
- O. Permittee shall install and maintain measuring devices which account for, within 5% accuracy, the quantity of water diverted from the points authorized above in Paragraph 3. DIVERSION and maintain measurement records. Permittee shall allow representatives of the TCEQ reasonable access to the property to inspect the measuring device and records.

7. TIME LIMITATIONS

- A. Construction of the dam and reservoir shall be in accordance with plans approved by the Executive Director. Construction of the dam without final approval of the construction plans is a violation of this authorization.
- B. Construction shall begin within two years of issuance of this permit and be completed within ten years of the issuance of this permit, unless Permittee applies for and is subsequently granted an extension of time before the expiration of these time limitations.

This water use permit is issued subject to all superior and senior water rights in the Sulphur River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this permit.

All other matters requested in the application which are not specifically granted by this water use permit are denied.

This water use permit is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State resources exercised by the Commission.



For the Commission

ISSUED: DEC 11 2013



Our water supply is too critical of a resource to leave to chance. Since 1989, the members of **Upper Trinity Regional Water District** have proactively planned to secure a safe and reliable water supply for the future. Practical solutions like Lake Ralph Hall will help ensure that future generations of North Texans never face a water crisis. The member cities and utilities of Upper Trinity are counting on this new lake.



Reliable Water Supply Regional Benefits

A Future Water Supply Source. Upper Trinity plans to use all the water that is available from existing sources; yet, there will not be enough to avoid a shortfall within 15 years. More water from Dallas, increased water conservation efforts and more reuse of existing supplies are all vital. However, additional water supplies are absolutely critical, making **Lake Ralph Hall** an important defense against future water crisis.

Safe, Dependable Source. The proposed Lake Ralph Hall will provide about 30 million gallons of water per day (mgd), plus about 15 mgd in reuse for the Upper Trinity service area. Also, water will be available for the City of Ladonia and for portions of Fannin County. Though similar in size to Grapevine Lake, greater rainfall in the Sulphur River Basin will allow Lake Ralph Hall to yield about 20% more water.

A Great Site. Preliminary field studies confirm that the North Sulphur River near the City of Ladonia is an outstanding site for a new water supply lake. There are no oil or gas wells, and no cemeteries that would be under water. No major pipelines or electric transmission lines within the project site - - and, only a few residences will be affected.

Economic Benefits. Lake Ralph Hall and its water supply are expected to contribute approximately \$18 billion dollars in economic benefits to Denton, Dallas, Collin and Fannin Counties.

| | |
|--|--|
| The logo for Upper Trinity Regional Water District, featuring a green triangle with a white outline, containing the text 'UPPER TRINITY' and 'REGIONAL WATER DISTRICT' below it. | <p>Upper Trinity Regional Water District 900 North Kealy Lewisville, Texas 75067 972-219-1228</p> |
|--|--|

For more information about the proposed new water supply reservoir, please visit:
www.LakeRalphHallinfo.com

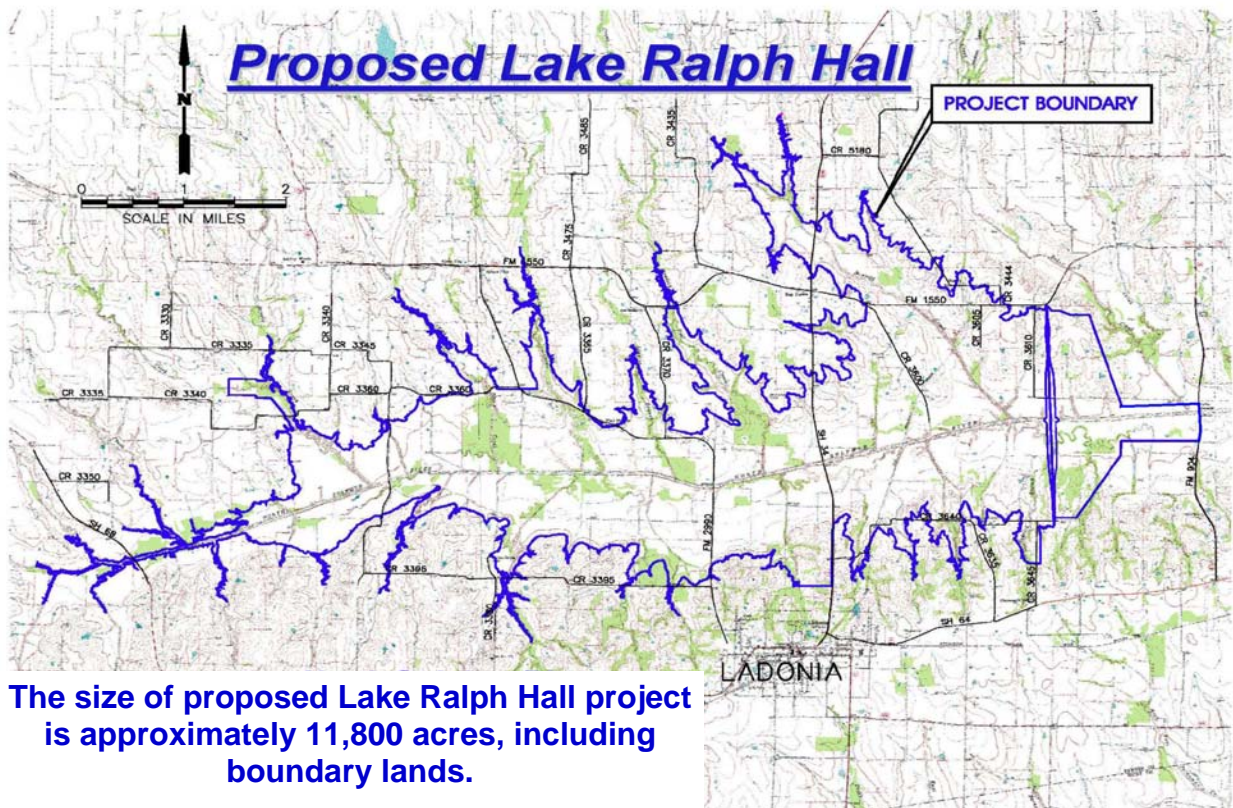
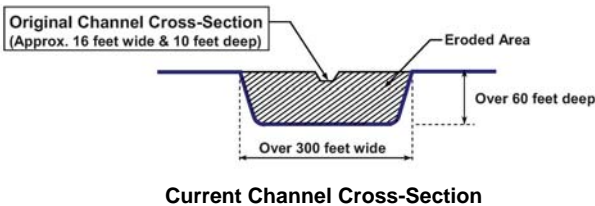
Environmental Benefits of Lake Ralph Hall

The North Sulphur River, the proposed site for Lake Ralph Hall, has an on-going environmental problem of epic proportions. Over the past 80 years, hundreds of acres of valuable land have disappeared - - eroded away from the main channel and tributaries, washing away valuable soil, trees, wetlands and wildlife habitat - - taking the material downstream and creating serious problems.

State and County highway bridges have been rebuilt because the erosion has continued to undermine their foundation. Construction of Lake Ralph Hall will help mitigate erosion, restore natural conditions and beauty to the region, will provide new water and food sources for animals, and will help preserve

soil and natural resources. Lake Ralph Hall will make life better - - for nature and for people.

The original channel dug in 1928-29 was approximately 16 ft. wide and 10 ft. deep. However, today it is over 300 ft. wide and 60 ft. deep - - some 10 times its original size. Environmental experts recently visited the site of the proposed new water reservoir and were astounded. This photograph depicts the current condition of the channel of this small river.



The size of proposed Lake Ralph Hall project is approximately 11,800 acres, including boundary lands.

EXHIBIT 4

SECTIONS 2 & 4
SWIFT Abridged Application

Prorated Census Data Worksheet

EXHIBIT 4

SECTION 2 & 4 - SWIFT Abridged Application

Texas Water Development Board

State Water Implementation Fund for Texas (SWIFT)

Upper Trinity Regional Water District - - Lake Ralph Hall & Lake Ralph Hall Indirect Reuse
Prorated Census Data Worksheet

| Entity | Population | AMHI | Avg. HH Size | # HH Connections | % Total | Entity's Population | Entity's AMHI | Entity's Avg HH Size | County | Source |
|---|------------|-----------|--------------|------------------|---------|---------------------|---------------|----------------------|--------|--|
| Argyle | 3,369 | \$113,177 | 2.99 | 1,127 | 1.35% | 3,369 | \$1,530 | 0.04043 | Denton | Census - American Fact Finder |
| Argyle WSC (outside Argyle) | 3,042 | \$113,177 | 2.99 | 1,017 | 1.22% | 3,042 | \$1,382 | 0.03650 | Denton | Census - American Fact Finder & Survey |
| Aubrey | 2,653 | \$60,202 | 2.80 | 948 | 1.06% | 2,653 | \$641 | 0.02982 | Denton | Census - American Fact Finder |
| Bartonville | 1,729 | \$101,964 | 3.04 | 569 | 0.69% | 1,729 | \$708 | 0.02110 | Denton | Census - American Fact Finder |
| Bolivar WSC | 7,201 | \$50,288 | 3.09 | 2,330 | 2.89% | 7,201 | \$1,453 | 0.08931 | Denton | Region C Water Plan - Census |
| Celina | 6,387 | \$88,789 | 3.01 | 2,122 | 2.56% | 6,387 | \$2,276 | 0.07716 | Denton | Census - American Fact Finder |
| Copper Canyon | 1,233 | \$107,500 | 2.79 | 442 | 0.49% | 1,233 | \$532 | 0.01381 | Denton | Census - American Fact Finder |
| Corinth | 20,126 | \$87,577 | 2.84 | 7,087 | 8.08% | 20,126 | \$7,075 | 0.22942 | Denton | Census - American Fact Finder |
| Cross Roads | 851 | \$106,250 | 2.93 | 290 | 0.34% | 851 | \$363 | 0.01001 | Denton | Census - American Fact Finder |
| Cross Timbers WSC (outside cities) ¹ | 472 | \$111,548 | 3.02 | 157 | 0.19% | 472 | \$211 | 0.00572 | Denton | Census - American Fact Finder & Survey |
| DCFWSD #1A (Castle Hills) | 9,913 | \$137,295 | 3.25 | 3,050 | 3.98% | 9,913 | \$5,463 | 0.12931 | Denton | Census - American Fact Finder & Survey |
| DCFWSD #7 (Lantana) | 9,578 | \$137,295 | 3.25 | 2,947 | 3.84% | 9,578 | \$5,278 | 0.12494 | Denton | Census - American Fact Finder & Survey |
| DCFWSD #8 (Paloma Creek - North) | 4,569 | \$69,792 | 3.55 | 1,287 | 1.83% | 4,569 | \$1,280 | 0.06510 | Denton | Census - American Fact Finder & Survey |
| DCFWSD #9 - Providence | 6,187 | \$84,450 | 3.27 | 1,892 | 2.48% | 6,187 | \$2,097 | 0.08120 | Denton | Census - American Fact Finder & Survey |
| DCFWSD #10 (Savannah/Artesia) | 4,931 | \$77,121 | 3.41 | 1,446 | 1.98% | 4,931 | \$1,526 | 0.06749 | Denton | Census - American Fact Finder & Survey |
| DCFWSD #11 (Paloma Creek - South) | 4,814 | \$69,792 | 3.55 | 1,356 | 1.93% | 4,814 | \$1,348 | 0.06859 | Denton | Census - American Fact Finder & Survey |
| Denton County-unincorporated | 19,607 | \$51,418 | 2.91 | 6,744 | 7.87% | 19,607 | \$4,046 | 0.22881 | Denton | Census - American Fact Finder |
| Double Oak | 2,922 | \$125,179 | 3.22 | 907 | 1.17% | 2,922 | \$1,468 | 0.03777 | Denton | Census - American Fact Finder |
| Flower Mound | 66,523 | \$120,855 | 3.10 | 21,459 | 26.70% | 66,523 | \$32,270 | 0.82773 | Denton | Census - American Fact Finder |
| Hickory Creek | 3,439 | \$82,083 | 2.95 | 1,166 | 1.38% | 3,439 | \$1,133 | 0.04072 | Denton | Census - American Fact Finder |
| Highland Village | 15,364 | \$129,688 | 3.02 | 5,087 | 6.17% | 15,364 | \$7,998 | 0.18624 | Denton | Census - American Fact Finder |
| Justin | 3,281 | \$79,881 | 2.78 | 1,180 | 1.32% | 3,281 | \$1,052 | 0.03661 | Denton | Census - American Fact Finder |

| | | | | | | | | | | |
|------------------------------|--------|-----------|------|---------------|----------------|----------------|-----------------|-------------|--------|--|
| Krugerville | 1,589 | \$87,500 | 3.02 | 526 | 0.64% | 1,589 | \$558 | 0.01926 | Denton | Census - American Fact Finder |
| Krum | 4,340 | \$77,132 | 3.25 | 1,335 | 1.74% | 4,340 | \$1,344 | 0.05661 | Denton | Census - American Fact Finder |
| Ladonia | 639 | \$30,938 | 2.59 | 247 | 0.26% | 639 | \$79 | 0.00664 | Denton | Census - American Fact Finder |
| Lake Dallas | 7,205 | \$67,701 | 2.59 | 2,782 | 2.89% | 7,205 | \$1,958 | 0.07490 | Denton | Census - American Fact Finder |
| Lincoln Park | 273 | \$45,000 | 2.24 | 122 | 0.11% | 273 | \$49 | 0.00245 | Denton | Census - American Fact Finder |
| Mustang SUD (outside cities) | 5,645 | \$52,549 | 2.73 | 2,072 | 2.27% | 5,645 | \$1,191 | 0.06174 | Denton | Census - American Fact Finder & Survey |
| Northlake | 2,213 | \$62,337 | 2.35 | 942 | 0.89% | 2,213 | \$554 | 0.02087 | Denton | Census - American Fact Finder |
| Oak Point | 2,904 | \$90,926 | 2.87 | 1,012 | 1.17% | 2,904 | \$1,060 | 0.03345 | Denton | Census - American Fact Finder |
| Pilot Point | 3,922 | \$44,895 | 2.65 | 1,480 | 1.57% | 3,922 | \$707 | 0.04172 | Denton | Census - American Fact Finder |
| Ponder | 1,485 | \$77,105 | 3.24 | 458 | 0.60% | 1,485 | \$460 | 0.01931 | Denton | Census - American Fact Finder |
| Prosper | 10,969 | \$118,281 | 3.27 | 3,354 | 4.40% | 10,969 | \$5,208 | 0.14397 | Denton | Census - American Fact Finder |
| Sanger | 7,091 | \$50,288 | 3.09 | 2,295 | 2.85% | 7,091 | \$1,431 | 0.08795 | Denton | Census - American Fact Finder |
| Shady Shores | 2,676 | \$110,647 | 2.86 | 936 | 1.07% | 2,676 | \$1,188 | 0.03072 | Denton | Census - American Fact Finder |
| | | | | 82,170 | 100.00% | 249,140 | \$96,917 | 3.05 | | |

Footnotes:

1.) Cross Timbers WSC - previously known as Bartonville WSC

U. S. Census Bureau
American Fact Finder

Table: B01003
Total Population

2009-2013 ACS 5-Year Estimates



B01003

TOTAL POPULATION

Universe: Total population
2009-2013 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

| | Denton County, Texas | | Argyle city, Texas | | Aubrey city, Texas | |
|-------|----------------------|-----------------|--------------------|-----------------|--------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total | 687,857 | ***** | 3,369 | +/-27 | 2,653 | +/-22 |

| | Bartonville town, Texas | | Celina city, Texas | | Copper Canyon town, Texas | |
|-------|-------------------------|-----------------|--------------------|-----------------|---------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total | 1,729 | +/-247 | 6,387 | +/-140 | 1,233 | +/-251 |

| | Corinth city, Texas | | Cross Roads town, Texas | | Double Oak town, Texas | |
|-------|---------------------|-----------------|-------------------------|-----------------|------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total | 20,126 | +/-44 | 851 | +/-166 | 2,922 | +/-24 |

| | Flower Mound town, Texas | | Hickory Creek town, Texas | | Highland Village city, Texas | |
|-------|--------------------------|-----------------|---------------------------|-----------------|------------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total | 66,523 | +/-409 | 3,439 | +/-28 | 15,364 | +/-23 |

| | Justin city, Texas | | Krugerville city, Texas | | Krum city, Texas | |
|-------|--------------------|-----------------|-------------------------|-----------------|------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total | 3,281 | +/-29 | 1,589 | +/-297 | 4,340 | +/-24 |

| | Ladonia town, Texas | | Lake Dallas city, Texas | | Lantana CDP, Texas | |
|-------|---------------------|-----------------|-------------------------|-----------------|--------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total | 639 | +/-132 | 7,205 | +/-49 | 7,809 | +/-507 |

| | Lincoln Park town, Texas | | Northlake town, Texas | | Oak Point city, Texas | |
|-------|--------------------------|-----------------|-----------------------|-----------------|-----------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total | 273 | +/-65 | 2,213 | +/-397 | 2,904 | +/-24 |

| | Paloma Creek CDP, Texas | | Pilot Point city, Texas | | Ponder town, Texas | |
|-------|-------------------------|-----------------|-------------------------|-----------------|--------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total | 3,181 | +/-537 | 3,922 | +/-22 | 1,485 | +/-373 |

| | Prosper town, Texas | | Sanger city, Texas | | Shady Shores town, Texas | |
|-------|---------------------|-----------------|--------------------|-----------------|--------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total | 10,969 | +/-360 | 7,091 | +/-35 | 2,676 | +/-26 |

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2009-2013 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-l' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-l' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+u' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '****' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

U. S. Census Bureau
American Fact Finder

Table: B19013

Median Household Income
in the Past 12 Months

(In 2013 Inflation-Adjusted Dollars)

2009-2013 ACS 5-Year Estimates



B19013

MEDIAN HOUSEHOLD INCOME IN THE PAST 12 MONTHS (IN 2013 INFLATION-ADJUSTED DOLLARS)

Universe: Households

2009-2013 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

| | Denton County, Texas | | Argyle city, Texas | | Aubrey city, Texas | |
|--|----------------------|-----------------|--------------------|-----------------|--------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Median household income in the past 12 months (in 2013 inflation-adjusted dollars) | 74,155 | +/-1,005 | 113,177 | +/-11,592 | 60,202 | +/-7,076 |

| | Bartonville town, Texas | | Celina city, Texas | | Copper Canyon town, Texas | |
|--|-------------------------|-----------------|--------------------|-----------------|---------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Median household income in the past 12 months (in 2013 inflation-adjusted dollars) | 101,964 | +/-16,714 | 88,789 | +/-10,418 | 107,500 | +/-36,024 |

| | Corinth city, Texas | | Cross Roads town, Texas | | Double Oak town, Texas | |
|--|---------------------|-----------------|-------------------------|-----------------|------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Median household income in the past 12 months (in 2013 inflation-adjusted dollars) | 87,577 | +/-7,226 | 106,250 | +/-26,834 | 125,179 | +/-15,499 |

| | Flower Mound town, Texas | | Hickory Creek town, Texas | | Highland Village city, Texas | |
|--|--------------------------|-----------------|---------------------------|-----------------|------------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Median household income in the past 12 months (in 2013 inflation-adjusted dollars) | 120,855 | +/-4,481 | 82,083 | +/-10,412 | 129,688 | +/-4,168 |

| | Justin city, Texas | | Krugerville city, Texas | | Krum city, Texas | |
|--|--------------------|-----------------|-------------------------|-----------------|------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Median household income in the past 12 months (in 2013 inflation-adjusted dollars) | 79,881 | +/-10,368 | 87,500 | +/-14,375 | 77,132 | +/-19,259 |

| | Ladonia town, Texas | | Lake Dallas city, Texas | | Lantana CDP, Texas | |
|--|---------------------|-----------------|-------------------------|-----------------|--------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Median household income in the past 12 months (in 2013 inflation-adjusted dollars) | 30,938 | +/-12,189 | 67,701 | +/-4,565 | 137,295 | +/-14,485 |

| | Lincoln Park town, Texas | | Northlake town, Texas | | Oak Point city, Texas | |
|--|--------------------------|-----------------|-----------------------|-----------------|-----------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Median household income in the past 12 months (in 2013 inflation-adjusted dollars) | 45,000 | +/-14,224 | 62,337 | +/-6,133 | 90,926 | +/-13,554 |

| | Paloma Creek CDP, Texas | | Pilot Point city, Texas | | Ponder town, Texas | |
|--|-------------------------|-----------------|-------------------------|-----------------|--------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Median household income in the past 12 months (in 2013 inflation-adjusted dollars) | 69,792 | +/-12,051 | 44,895 | +/-15,622 | 77,105 | +/-16,773 |

| | Prosper town, Texas | | Sanger city, Texas | | Shady Shores town, Texas | |
|--|---------------------|-----------------|--------------------|-----------------|--------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Median household income in the past 12 months (in 2013 inflation-adjusted dollars) | 118,281 | +/-13,301 | 50,288 | +/-7,350 | 110,647 | +/-14,632 |

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2009-2013 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '****' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

U. S. Census Bureau
American Fact Finder

Table: B25010

Average Household Size of
Occupied Housing Units By Tenure

2009-2013 ACS 5-Year Estimates



B25010

AVERAGE HOUSEHOLD SIZE OF OCCUPIED HOUSING UNITS BY TENURE

Universe: Occupied housing units
2009-2013 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

| | Denton County, Texas | | Argyle city, Texas | | Aubrey city, Texas | |
|-----------------|----------------------|-----------------|--------------------|-----------------|--------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total: | 2.78 | +/-0.02 | 2.99 | +/-0.24 | 2.80 | +/-0.20 |
| Owner occupied | 2.99 | +/-0.02 | 3.04 | +/-0.25 | 2.72 | +/-0.23 |
| Renter occupied | 2.37 | +/-0.04 | 2.63 | +/-0.75 | 2.95 | +/-0.36 |

| | Bartonville town, Texas | | Celina city, Texas | | Copper Canyon town, Texas | |
|-----------------|-------------------------|-----------------|--------------------|-----------------|---------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total: | 3.04 | +/-0.25 | 3.01 | +/-0.24 | 2.79 | +/-0.32 |
| Owner occupied | 3.03 | +/-0.25 | 2.98 | +/-0.28 | 2.85 | +/-0.31 |
| Renter occupied | 3.38 | +/-0.89 | 3.10 | +/-0.63 | 1.61 | +/-0.58 |

| | Corinth city, Texas | | Cross Roads town, Texas | | Double Oak town, Texas | |
|-----------------|---------------------|-----------------|-------------------------|-----------------|------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total: | 2.84 | +/-0.14 | 2.93 | +/-0.28 | 3.22 | +/-0.25 |
| Owner occupied | 2.98 | +/-0.15 | 2.99 | +/-0.31 | 3.09 | +/-0.19 |
| Renter occupied | 2.11 | +/-0.35 | 2.50 | +/-0.90 | 5.23 | +/-2.32 |

| | Flower Mound town, Texas | | Hickory Creek town, Texas | | Highland Village city, Texas | |
|-----------------|--------------------------|-----------------|---------------------------|-----------------|------------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total: | 3.10 | +/-0.06 | 2.95 | +/-0.26 | 3.02 | +/-0.10 |
| Owner occupied | 3.15 | +/-0.06 | 3.01 | +/-0.26 | 3.07 | +/-0.10 |
| Renter occupied | 2.64 | +/-0.24 | 2.25 | +/-0.58 | 2.11 | +/-0.52 |

| | Justin city, Texas | | Krugerville city, Texas | | Krum city, Texas | |
|-----------------|--------------------|-----------------|-------------------------|-----------------|------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total: | 2.78 | +/-0.23 | 3.02 | +/-0.30 | 3.25 | +/-0.27 |
| Owner occupied | 2.77 | +/-0.21 | 2.95 | +/-0.33 | 3.12 | +/-0.31 |
| Renter occupied | 2.84 | +/-0.83 | 3.63 | +/-0.82 | 3.83 | +/-0.50 |

| | Ladonia town, Texas | | Lake Dallas city, Texas | | Lantana CDP, Texas | |
|-----------------|---------------------|-----------------|-------------------------|-----------------|--------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total: | 2.59 | +/-0.37 | 2.59 | +/-0.17 | 3.25 | +/-0.18 |
| Owner occupied | 2.31 | +/-0.32 | 2.56 | +/-0.20 | 3.29 | +/-0.19 |
| Renter occupied | 3.15 | +/-1.04 | 2.64 | +/-0.31 | 2.85 | +/-0.82 |

| | Lincoln Park town, Texas | | Northlake town, Texas | | Oak Point city, Texas | |
|-----------------|--------------------------|-----------------|-----------------------|-----------------|-----------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total: | 2.24 | +/-0.28 | 2.35 | +/-0.25 | 2.87 | +/-0.29 |
| Owner occupied | 1.97 | +/-0.33 | 3.38 | +/-0.54 | 2.93 | +/-0.33 |
| Renter occupied | 2.58 | +/-0.55 | 1.89 | +/-0.22 | 2.22 | +/-0.38 |

| | Paloma Creek CDP, Texas | | Pilot Point city, Texas | | Ponder town, Texas | |
|-----------------|-------------------------|-----------------|-------------------------|-----------------|--------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total: | 3.55 | +/-0.29 | 2.65 | +/-0.31 | 3.24 | +/-0.38 |
| Owner occupied | 3.45 | +/-0.39 | 2.75 | +/-0.39 | 3.30 | +/-0.41 |
| Renter occupied | 3.92 | +/-0.55 | 2.40 | +/-0.47 | 2.80 | +/-0.76 |

| | Prosper town, Texas | | Sanger city, Texas | | Shady Shores town, Texas | |
|-----------------|---------------------|-----------------|--------------------|-----------------|--------------------------|-----------------|
| | Estimate | Margin of Error | Estimate | Margin of Error | Estimate | Margin of Error |
| Total: | 3.27 | +/-0.20 | 3.09 | +/-0.20 | 2.86 | +/-0.25 |
| Owner occupied | 3.41 | +/-0.17 | 3.05 | +/-0.26 | 2.92 | +/-0.25 |
| Renter occupied | 2.77 | +/-0.56 | 3.18 | +/-0.35 | 2.24 | +/-1.38 |

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2009-2013 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
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6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

EXHIBIT 5

SECTION 2 SWIFT Abridged Application

Regional Project Worksheet

EXHIBIT 5

SECTION 2 – SWIFT Abridged Application

Texas Water Development Board

State Water Implementation Fund for Texas (SWIFT)

Abridged Application Regional Project Worksheet

Applicant: Upper Trinity Regional Water District

Project Name: Lake Ralph Hall and Indirect Reuse of Return Flows from Lake Ralph Hall

Instructions: List all entities (aside from the applicant) that will be served by the proposed project. Use the “Rural” column to indicate the entities serving populations of 10,000 or fewer.

Press “Tab” to add new rows as needed.

| Entity Name | Rural |
|--|--------------------|
| 1. Argyle (served by Argyle Water Supply Corporation) | Rural |
| 2. Argyle Water Supply Corporation (Outside of Argyle) | Rural |
| 3. Aubrey (served by Argyle Water Supply Corporation) | Rural |
| 4. Bartonville (served by Cross Timbers Water Supply Corporation) | Rural |
| 5. Bolivar Water Supply Corporation | Rural |
| 6. Celina | Rural |
| 7. Copper Canyon (served by Cross Timbers Water Supply Corporation) | Rural |
| 8. Corinth | |
| 9. Cross Roads (served by Mustang Special Utility District) | Rural |
| 10. Cross Timbers Water Supply Corporation (previously Bartonville WSC) | Rural |
| 11. Denton County Fresh Water Supply District Number 1A (Castle Hills) | Rural |
| 12. Denton County Fresh Water Supply District Number 7 (Lantana) | Rural |
| 13. Denton County Fresh Water Supply District Number 8 (Paloma Creek North) | Rural |
| 14. Denton County Fresh Water Supply District Number 9 (Providence) | Rural |
| 15. Denton County Fresh Water Supply District Number 10 (Artesia/Savannah) | Rural |
| 16. Denton County Fresh Water Supply District Number 11 (Paloma Creek South) | Rural |
| 17. Denton County Other - Unincorporated | Rural ¹ |
| 18. Double Oak (served by Cross Timbers Water Supply Corporation) | Rural |
| 19. Flower Mound | |
| 20. Hickory Creek (served by Lake Cities Municipal Utility Authority) | Rural |
| 21. Highland Village | |
| 22. Justin | Rural |
| 23. Krugerville (served by Mustang Special Utility District) | Rural |
| 24. Krum | Rural |
| 25. Ladonia | Rural |
| 26. Lake Cities Municipal Utility Authority | Rural |
| 27. Lake Dallas (served by Lake Cities Municipal Utility Authority) | Rural |
| 28. Lincoln Park | Rural |

State Water Implementation Fund for Texas (SWIFT)

Abridged Application Regional Project Worksheet

| | |
|--|-------|
| 29. Mustang Special Utility District (Outside of Cities) | Rural |
| 30. Northlake | Rural |
| 31. Oak Point (served by Mustang Special Utility District) | Rural |
| 32. Pilot Point | Rural |
| 33. Ponder | Rural |
| 34. Prosper | |
| 35. Sanger | Rural |
| 36. Shady Shores (served by Lake Cities Municipal Utility Authority) | Rural |

Footnote:

- 1.) Denton County – unincorporated is assumed to be Rural because the population is distributed throughout Denton County.

EXHIBIT 6

SECTION 3 SWIFT Abridged Application

Requested Assistance and Other Project Financing

EXHIBIT 6

SECTION 3 - SWIFT Abridged Application

Texas Water Development Board

State Water Implementation Fund for Texas (SWIFT)

Upper Trinity Regional Water District - - Lake Ralph Hall & Lake Ralph Hall Indirect Reuse
Requested Assistance and Other Project Financing

| | Prior Year Costs | FY 2015 | FY 2016 | FY 2017 | FY 2018 | FY 2019 | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | Total Costs | |
|---|----------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------|-----------------------|----------------|
| Planning / Permitting | | | | | | | | | | | | | | |
| Permitting (State/Federal) | \$ 7,296,678 | \$ 1,416,579 | \$ 813,750 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 9,527,007 | |
| Contested Hearing (Water Rights) | \$ 2,479,958 | \$ 100,000 | \$ 60,000 | \$ 40,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 2,679,958 | |
| Reuse (Permitting) | \$ 1,453 | \$ 96,348 | \$ 169,522 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 267,323 | |
| Subtotal - Planning / Permitting | \$ 9,778,089 | \$ 1,612,927 | \$ 1,043,272 | \$ 40,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 12,474,288 | |
| Engineering (Design) | | | | | | | | | | | | | | |
| TxDOT Relocations | \$ - | \$ 60,515 | \$ 58,166 | \$ 885,479 | \$ 1,770,957 | \$ 1,180,638 | \$ 590,319 | \$ 295,160 | \$ - | \$ - | \$ - | \$ - | \$ 4,841,234 | |
| Utilities Relocations | \$ - | \$ 42,448 | \$ 39,999 | \$ - | \$ 287,439 | \$ 287,439 | \$ 95,813 | \$ 95,813 | \$ - | \$ - | \$ - | \$ - | \$ 848,951 | |
| County Road Relocations | \$ - | \$ 19,886 | \$ 18,739 | \$ - | \$ 134,663 | \$ 134,663 | \$ 59,850 | \$ 29,925 | \$ - | \$ - | \$ - | \$ - | \$ 397,728 | |
| Dam & Spillway | \$ - | \$ 142,280 | \$ 136,755 | \$ 4,163,766 | \$ 4,163,766 | \$ 925,281 | \$ 925,281 | \$ 925,281 | \$ - | \$ - | \$ - | \$ - | \$ 11,382,410 | |
| Pump Station & Outlet Works | \$ - | \$ 43,632 | \$ 160,709 | \$ 235,867 | \$ 235,867 | \$ 131,037 | \$ 65,519 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 872,630 | |
| Raw Water Pipeline & Pumping | \$ - | \$ - | \$ - | \$ 656,769 | \$ 328,384 | \$ 985,153 | \$ 1,477,730 | \$ 1,477,730 | \$ 656,769 | \$ 656,769 | \$ 328,384 | \$ - | \$ 6,567,688 | |
| Balancing Reservoir | \$ - | \$ - | \$ - | \$ - | \$ 21,250 | \$ 42,500 | \$ 42,500 | \$ 42,500 | \$ 40,139 | \$ 37,778 | \$ - | \$ - | \$ 226,669 | |
| Environmental / Cultural Resources Mitigation | \$ - | \$ - | \$ - | \$ - | \$ 326,926 | \$ 326,926 | \$ 254,276 | \$ 181,626 | \$ - | \$ - | \$ - | \$ - | \$ 1,089,754 | |
| Subtotal - Engineering (Design) | \$ - | \$ 308,761 | \$ 414,369 | \$ 5,941,880 | \$ 7,269,253 | \$ 4,013,639 | \$ 3,511,289 | \$ 3,048,035 | \$ 696,908 | \$ 694,547 | \$ 328,384 | \$ - | \$ 26,227,065 | |
| Construction | | | | | | | | | | | | | | |
| TxDOT Relocations | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 12,592,049 | \$ 25,184,097 | \$ 12,592,049 | \$ - | \$ - | \$ - | \$ - | \$ 50,368,195 | |
| Utilities Relocations | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 4,416,242 | \$ 4,416,242 | \$ - | \$ - | \$ - | \$ - | \$ 8,832,483 | |
| County Road Relocations | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 2,758,644 | \$ 1,379,322 | \$ - | \$ - | \$ - | \$ - | \$ 4,137,967 | |
| Dam & Spillway | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 39,474,199 | \$ 39,474,199 | \$ 39,474,199 | \$ - | \$ - | \$ - | \$ - | \$ 118,422,596 | |
| Pump Station & Outlet Works | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 6,052,564 | \$ 3,026,282 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 9,078,846 | |
| Raw Water Pipeline & Pumping | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 27,878,728 | \$ 27,878,728 | \$ 13,939,364 | \$ - | \$ 69,696,820 | |
| Balancing Reservoir | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 817,846 | \$ 1,635,692 | \$ - | \$ - | \$ 2,453,537 | |
| Environmental / Cultural Resources Mitigation | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 3,779,269 | \$ 7,558,537 | \$ - | \$ - | \$ - | \$ - | \$ 11,337,806 | |
| Subtotal - Construction | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 58,118,812 | \$ 78,638,733 | \$ 65,420,348 | \$ 28,696,574 | \$ 29,514,420 | \$ 13,939,364 | \$ - | \$ 274,328,250 | |
| Land Acquisition | | | | | | | | | | | | | | |
| National Grasslands Compensation / Swap | \$ - | \$ 312,500 | \$ 625,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 937,500 | |
| Reservoir and Appurtenances | \$ - | \$ 1,700,000 | \$ 4,633,333 | \$ 4,633,333 | \$ 4,633,333 | \$ 3,900,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 19,500,000 | |
| Raw Water Pipeline & Balancing Reservoir | \$ - | \$ - | \$ - | \$ 400,500 | \$ 400,500 | \$ 400,500 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 1,201,500 | |
| Subtotal - Land Acquisition | \$ 11,481,968 | \$ 2,012,500 | \$ 5,258,333 | \$ 5,033,833 | \$ 5,033,833 | \$ 4,300,500 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 33,120,968 | |
| Project Management & Support | \$ 3,139,403 | \$ 393,419 | \$ 671,597 | \$ 1,101,571 | \$ 1,230,309 | \$ 2,500,000 | \$ 3,500,000 | \$ 3,500,000 | \$ 2,939,348 | \$ 3,020,897 | \$ 1,426,775 | \$ - | \$ 23,423,319 | |
| Total Lake Ralph Hall Project Costs | \$ 24,399,460 | \$ 4,327,607 | \$ 7,387,572 | \$ 12,117,284 | \$ 13,533,395 | \$ 68,932,950 | \$ 85,650,021 | \$ 71,968,383 | \$ 32,332,830 | \$ 33,229,863 | \$ 15,694,523 | \$ - | \$ 369,573,890 | |
| FUNDING SOURCES | | | | | | | | | | | | | %s | |
| Commercial Paper | \$ 14,134,227 | \$ 4,097,607 | \$ 4,228,199 | \$ 451,577 | \$ 483,761 | \$ 2,934,676 | \$ 3,802,356 | \$ 3,339,712 | \$ 2,180,119 | \$ 2,241,363 | \$ 1,058,588 | \$ - | \$ 38,952,185 | 10.54% |
| Donated Assets | \$ 11,230 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 11,230 | 0.00% |
| WIF-10 Funding | \$ 10,254,003 | \$ 230,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 10,484,003 | 2.84% |
| SWIFT Funding - Deferred Interest | \$ - | \$ - | \$ 1,457,641 | \$ 6,532,666 | \$ 7,884,407 | \$ 4,263,639 | \$ 3,861,289 | \$ 3,398,035 | \$ 696,908 | \$ 694,547 | \$ 328,384 | \$ - | \$ 29,117,516 | 7.88% |
| SWIFT Funding - Board Participation | \$ - | \$ - | \$ 1,701,732 | \$ 5,133,042 | \$ 5,165,226 | \$ 61,734,636 | \$ 77,986,377 | \$ 65,230,636 | \$ 29,455,803 | \$ 30,293,953 | \$ 14,307,551 | \$ - | \$ 291,008,956 | 78.74% |
| Total LRH Funding Sources | \$ 24,399,460 | \$ 4,327,607 | \$ 7,387,572 | \$ 12,117,284 | \$ 13,533,395 | \$ 68,932,950 | \$ 85,650,021 | \$ 71,968,383 | \$ 32,332,830 | \$ 33,229,863 | \$ 15,694,523 | \$ - | \$ 369,573,890 | 100.00% |
| FUNDING TIMETABLES | | | | | | | | | | | | | | |
| Commercial Paper | \$ 14,134,227 | \$ 4,097,607 | \$ 4,228,199 | \$ 451,577 | \$ 483,761 | \$ 2,934,676 | \$ 3,802,356 | \$ 3,339,712 | \$ 2,180,119 | \$ 2,241,363 | \$ 1,058,588 | \$ - | \$ 38,952,185 | |
| Donated Assets | \$ 11,230 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 11,230 | |
| Revenue Bonds - LRH Exp. Pd w/CP | \$ - | \$ 4,848,747 | \$ - | \$ - | \$ 9,285,480 | \$ - | \$ 4,097,607 | \$ - | \$ 8,098,213 | \$ - | \$ 6,058,743 | \$ 6,563,395 | \$ 38,952,185 | |
| WIF-10 Funding | \$ 10,254,003 | \$ 230,000 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 10,484,003 | |
| SWIFT Funding - Deferred Interest | \$ - | \$ - | \$ 22,000,000 | \$ - | \$ - | \$ - | \$ 7,117,516 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 29,117,516 | |
| SWIFT Funding - Board Participation | \$ - | \$ - | \$ 12,000,000 | \$ - | \$ - | \$ 61,734,636 | \$ 77,986,377 | \$ 65,230,636 | \$ 74,057,307 | \$ - | \$ - | \$ - | \$ 291,008,956 | |

EXHIBIT 7

NOTES SECTION
SWIFT Abridged Application

UTRWD Water Conservation Plan
September 2012

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



REC'D JUL 23 2014

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 18, 2014

MR. THOMAS TAYLOR, EXECUTIVE DIRECTOR
UPPER TRINITY REGIONAL WATER DISTRICT
P. O. DRAWER 305
LEWISVILLE, TX 75067

**Re: Administrative Review
Upper Trinity Regional Water District
Water Conservation Plan, Drought Contingency Plan, and Water
Conservation Implementation Report**

Dear Mr. Taylor:

The Texas Commission on Environmental Quality (TCEQ) has reviewed the water conservation plan, the drought contingency plan, and the water conservation implementation report received on May 5, 2014, to determine if the plans and report meet all of the minimum requirements as set forth in the TCEQ Rules, Title 30 Texas Administrative Code (TAC) Chapter 288.

Title 30 TAC Chapter 288.30(1) states:

The holder of an existing permit, certified filing, or certificate of adjudication for the appropriation of surface water in the amount of 1,000 acre-feet a year or more for industrial uses shall develop, submit and implement a water conservation plan meeting the requirements of Subchapter A of this Chapter.

The TCEQ records indicate that Upper Trinity Regional Water District holds a water right of 1,000 acre-feet a year or more for municipal uses.

Title 30 TAC Chapter 288.30(6) states:

Wholesale public water suppliers shall submit a drought contingency plan meeting the requirements of Subchapter B of this Chapter to the executive director.

The TCEQ records indicate that Upper Trinity Regional Water District is a wholesale public water supplier.

The submitted plans and report meet the minimum requirements, as defined in the TCEQ Rules, Title 30 TAC Chapter 288, and the plans and report are declared administratively complete.

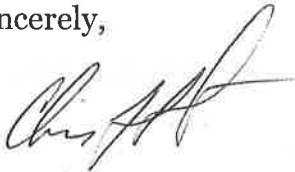
Mr. Thomas Taylor, Executive Director
Page 2
July 18, 2014

Re: Administrative Review
Upper Trinity Regional Water District
Water Conservation Plan, Drought Contingency Plan, and Water Conservation
Implementation Report

Please be advised that in accordance with Title 30 TAC Chapter 288, the next revision of the water conservation and drought contingency plan shall be updated, adopted, and submitted to TCEQ no later than May 1, 2019. Additionally, any future revised water conservation and drought contingency plan shall be submitted to TCEQ within 90 days of adoption.

If you have questions, Kristin Wang of Resource Protection Team can be reached at (512) 239-2952.

Sincerely,



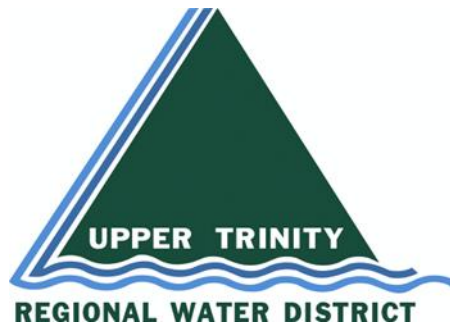
Chris Loft, Team Leader
Resource Protection Team
Water Availability Division
CL/kw

Mail Code - 160

Upper Trinity Regional Water District

WATER CONSERVATION PLAN

Updated



September 2012

Prepared By:

Upper Trinity Regional Water District
PO Drawer 305
Lewisville, TX 75067
972-219-1228

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UPPER TRINITY REGIONAL WATER DISTRICT

Water Conservation Plan

Updated September 2012

SECTION 1

Introduction

Water supply has always been a key issue in the growth and development of communities in Texas. In recent years, the growing population and economic development of North Central Texas has led to increasing demands for water. Additional supplies to meet these demands will be both expensive and difficult to develop. Therefore, it is important that we make the most efficient use of existing supplies - - to minimize the need for new resources.

Effective water conservation can postpone or reduce the need for development of new water supplies, minimize the associated environmental impacts, and reduce the high cost of water supply development. Even with robust conservation measures, new sources of water will be needed; conservation alone is not enough. Therefore, to respond to the growing population of this region, the planning for new water resources must continue. Upper Trinity Regional Water District ("Upper Trinity") considers water conservation (including reuse of reclaimed wastewater) an integral part of this planning and water supply development process.

Upper Trinity was created in 1989 by the Texas Legislature to provide treated water service on a wholesale basis to towns, cities, and other water utility providers. Currently, Upper Trinity provides wholesale treated water service to twenty members and customers (serving more than twenty-five communities) in Denton and Collin Counties (herein "Customers").

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality ("TCEQ") has promulgated guidelines and requirements governing the development of water conservation plans for Wholesale Public Water Suppliers. Upper Trinity developed its original plans for Water Conservation and for Drought Contingency in May 1993, later amended in March 2005 and April 2009. This update of the Water Conservation Plan (the "Plan") has been coordinated with the suggested model water conservation plan prepared by Upper Trinity for Customers offering retail service; and, is consistent with the latest TCEQ requirements outlined below. This Plan also incorporates water conservation practices and strategies recommended by the Water Conservation and Implementation Task Force ("Task Force") and the Water Conservation Advisory Council ("Advisory Council"). Both the Task Force and the Advisory Council were created by the Texas Legislature to foster basic and enhanced water conservation measures and practices for Wholesale Public Water Suppliers like Upper Trinity.

Objectives

Water is a basic tenant in all aspects of sustainability. Water conservation is one critical element of a utility's effort to meet future water supply needs, in an economical manner and without sacrificing quality of life standards. The following are the central objectives of this Plan:

- Provide support and incentives to communities to maintain and continue sound conservation practices;
- Reduce water consumption from levels that would otherwise prevail without conservation efforts;

- Reduce the loss and waste of water, as evidenced by per capita water use;
- Continue to improve efficiency in the use of water;
- Achieve greater reuse of reclaimed wastewater in helping to sustain an adequate supply; and
- Extend the adequacy of current water supplies by reducing the pace of growth in the demand for water.

In an effort to meet each of the above central objectives, Upper Trinity will provide leadership and technical assistance to its Customers in order to maximize water savings and water efficiency within its service area. Upper Trinity has dedicated staff to lead its regional water conservation program and to assist its Customers with implementation of their respective conservation strategies. Similarly, to coordinate and communicate consistent conservation strategies, Upper Trinity is creating a work group within the Customer Advisory Council for the Regional Treated Water System to focus on water conservation matters and will encourage each Customer to designate a staff member with responsibility for implementing and reporting on its water conservation program.

1.1 Texas Commission on Environmental Quality Rules

TCEQ rules governing the development of water conservation plans for Wholesale Public Water Suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter A, and Rule 288.5 of the Texas Administrative Code. Copies of these rules are included in Appendix A. The rules define a water conservation plan as:

“A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water.”

A. Basic Water Conservation Plan Requirements

TCEQ requires that water conservation plans for Wholesale Public Water Suppliers, like Upper Trinity, include the following components:

- *Utility Profile*: Information regarding population and customer data, water use data, water supply system data, and wastewater system data. (Section 2)
- *Goals*: Specific quantified five-year and ten-year targets for water savings to include goals for water loss programs, in gallons per capita per day (GPCD). (Section 3)
- *Accurate Metering Devices*: TCEQ requires that metering devices have an accuracy of plus or minus five percent (5%) for measuring water diverted from the supply source. (Section 4.1)
- *Record Management System*: A system to record water delivered, water sold, and water lost. (Section 4.2)
- *Program for Leak Detection & Repair, and Water Loss Accounting*: A program to detect and repair leaks, and water loss accounting for the water storage, delivery, and distribution system. (Section 4.3)

- *Wholesale Customer Requirements:* A requirement that every water supply contract entered into or renewed after official adoption of the water conservation plan, including any contract extension, include a provision that each successive wholesale customer develop and implement a water conservation plan with similar water conservation strategies to this Plan, including applicable elements of Title 30 TAC Chapter 288. (Section 4.4)
- *Reservoir Systems Operational Plan:* A requirement to provide a coordinated operational structure for operation of reservoirs owned by the water supply entity within a common watershed or river basin in order to optimize available water supplies. (Section 4.5)
- *Coordination with Regional Water Planning Group:* Document that the Plan has been coordinated with the Regional Water Planning Group to insure consistency with the appropriate approved regional water plan. (Section 4.6)
- *Means of Implementation and Enforcement:* A strategy for implementing and enforcing the provisions of this Plan, as evidenced by an ordinance, resolution, or tariff, and a description of the authority by which the Plan is enforced. (Section 6)

B. Enhanced Water Conservation Strategies

Upper Trinity will also incorporate the following additional conservation strategies, as needed, to achieve the conservation goals stated in this Plan:

- *Program for Reuse and/or Recycling:* Upper Trinity has implemented a program of reclaiming and recycling treated wastewater effluent in order to further the efficient use of water. (Section 5.1)
- *Public Education Program:* Upper Trinity has implemented public education and outreach programs that include an informative school program, a literature program, special events and promotions program, a website dedicated to water conservation, a public awareness program, and it provides speakers to various groups on conservation while coordinating with other North Texas water suppliers and Customers to promote water conservation. (Section 5.2)
- *Water Conserving Landscaping:* As part of its public education activities, Upper Trinity has implemented and fostered programs to support the conservative use of water in landscape by its Customers and their retail customers. (Section 5.3)
- *Landscape Water Management:* A strategy for implementing and achieving the efficient use and stewardship of water in landscape irrigation, including watering a maximum of two times per week and time-of-day watering provisions. (Section 5.4)
- *Enhanced Contract Language:* Upper Trinity will implement additional language in future contracts to continue to improve conservation and the efficient use of water. (Section 5.7)
- *Irrigation System Evaluations / Technical Assistance:* A program to provide technical assistance and training to Customers and their retail customers (residential, industrial, commercial, and institutional), if requested, regarding efficient and effective landscape

watering practices. (Section 5.8)

- *ICI Program:* A facilities and processes audit program that will assist Customers and their retail industrial, commercial, and institutional (“ICI”) customers with audits of their facilities to explore the development of economical and practical water efficiency measures that will contribute to increased water conservation in their processes. (Section 5.9)

Other Strategies: Upper Trinity has developed model water conservation and drought contingency plans for use by its Customers (Section 5.15). In addition, Upper Trinity has a dedicated staff to lead its regional water conservation program and to assist Customers with implementation of their respective conservation strategies; and, has created a work group within Upper Trinity’s Customer Advisory Council to focus on water conservation matters in order to better coordinate and communicate consistent conservation strategies (Section 5.16). Other strategies also include pressure controls to maintain System integrity to avoid the loss of water (Section 5.5), watershed protection measures (Section 5.6), and establishing a means for measuring success in water conservation (Section 5.11).

Upper Trinity will continue to evaluate and implement water conservation strategies and practices that will further the conservation of its water supplies. This Plan sets forth a program of long-term strategies under which Upper Trinity can maintain and continue existing conservation results, plus improve the overall efficiency of water use and conserve its water resources. Shorter-term strategies that address specific water management conditions (i.e., periods of drought, unusually high water demands, unforeseen equipment or system failure, or contamination of water supply sources) are provided in Upper Trinity’s Drought Contingency Plan.

SECTION 2

Water Utility Profile

Upper Trinity’s Regional Treated Water System (“System”) provides services to its wholesale Customers through two water treatment plants (Thomas E. Taylor Water Treatment Plant and the Tom Harpool Water Treatment Plant), and a system of pipelines and pump stations that deliver water to each Customer at specified points of delivery. The System does not include facilities “downstream” of such points of delivery (i.e., internal, retail distribution system). Upper Trinity currently obtains its raw water from Lewisville Lake, Ray Roberts Lake, Jim Chapman Lake and from the reuse of water imported from Jim Chapman Lake. A dependable supply of water from these sources is confirmed and enabled by various contractual agreements between Upper Trinity and the respective water rights holders.

Upper Trinity’s planning area, as established by the Region C Water Planning Group, includes all communities currently served plus additional portions of Denton, Grayson, Wise and Cooke counties. See Figure 2.1 for a map of Upper Trinity’s planning (service) area.



Figure 2.1
Map of Planning & Service Area

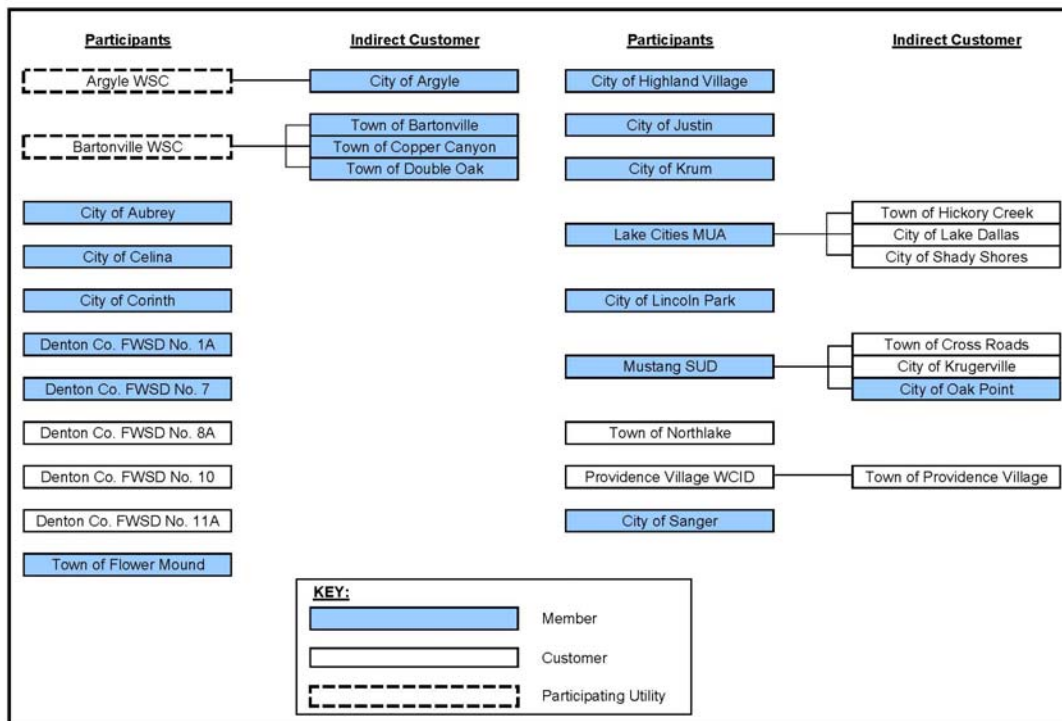


Figure 2.2
Upper Trinity Wholesale Water Customers

Using surface water supplies, Upper Trinity currently provides treated water service to twenty Customers serving more than twenty-five communities in Denton and Collin Counties. Figure 2.2 lists both direct Customers of Upper Trinity and the other communities served indirectly.

Projections of water needs are based on dry-year demands anticipated by Customers, and reviewed and considered by Upper Trinity. Actual water usage will vary from year to year depending on climatic conditions, and on growth and development within the service area and on various factors affecting retail customers within a Customer's residential, commercial, industrial and institutional customer categories. Upper Trinity's population projections and raw water demand projections for its planning area are included in the 2011 Region C Water Plan, and the 2012 State Water Plan.

Some Upper Trinity Customers also use groundwater for a portion of their water supply. In Denton County, groundwater resources are very limited; the County has been included in a "Priority Groundwater Management Area" by the TCEQ, and a groundwater conservation district has been created to manage and conserve groundwater resources within the County. One of the key purposes of Upper Trinity's regional water program is to avoid further draw-down of these limited ground water resources, and to make surface water available as a more reliable and sustainable source for further growth in Upper Trinity's service area. To this end, conservation, reuse, and the development of additional water supply resources that will allow for additional reuse supplies, will contribute greatly to the conservation program's success.

Appendix B of this Plan includes an updated water utility profile for Upper Trinity, based on the format recommended by TCEQ. The water utility profile includes additional information regarding population and Customer data, water use data, water supply system data, and

wastewater system data.

SECTION 3

Water Conservation Planning Goals

As a wholesale water supplier, Upper Trinity does not have a direct relationship with retail customers who are the ultimate consumers of the treated water it provides to its Customers. Further, Upper Trinity doesn't have ordinance or policy power over such retail customers or their use of treated water supplied in wholesale transactions with Customers. As a result, and as noted in Section 4.4 below and Section 5.7, Upper Trinity has limited control or influence over the use of water being purchased by its Customers. Some Upper Trinity Customers are projected to require increased supplies for their future growth and development, which may result in increases to historical municipal per capita use, during and following periods of population growth. Reasons for such potential increases include:

- Upper Trinity's service area continues to transform from a historically rural to a primarily urban land use, causing some communities to experience an increase in per capita water use.
- Some Upper Trinity Customers will experience substantial population growth in future years, generating changes in commercial and economic activity. With a growing infrastructure of retail industrial, commercial, and institutional customers using water supplied by Upper Trinity to its wholesale Customers, increases in municipal per capita water use can be expected for these communities.
- The municipal per capita use for Upper Trinity's System can be affected by changes in per capita use for its Customers. It can also be affected by how much water Upper Trinity is asked to supply to different communities with widely varying growth factors and water usage characteristics. Nonetheless, Upper Trinity's water conservation efforts are expected to significantly influence per capita water use that could otherwise result from continued growth in its service area. Upper Trinity will make every effort to measure and quantify savings achieved through the programs it implements, and will encourage its Customers to measure savings from the programs they implement, as well.

Upper Trinity does, however, control the operation of its own water treatment and transmission system and it can take direct action to maximize the water use efficiency of System operation. Upper Trinity adopts the following water conservation and efficiency goals within the System:

- Maintain the level of unaccounted-for water in the System below five percent (5%) annually;
- Maintain a program of universal metering of Customers and regular meter calibration; and, meter replacement and repair;
- Maintain a program of leak detection and repair;
- Continue to utilize wastewater reuse as a major source of future water supply, to the maximum extent feasible;
- Continue to recycle wash-water from Upper Trinity water treatment plants, to the

maximum extent feasible;

- Continue to implement other in-house water conservation efforts;
- Continue to raise public awareness of water conservation and encourage responsible public behavior through a coordinated public education program;
- Encourage landscape water management strategies on a routine basis to help instill good habits and responsible stewardship for water conservation;
- Maintain and promote a first-class demonstration program for water-smart practices in landscape and gardening;
- Expand public education about the need to protect water quality through a continuing program for watershed protection.

Upper Trinity has developed 5-year and 10-year water conservation goals as part of the Plan. Table 3.1 below shows the projected municipal per capita water use for Upper Trinity, as recommended by Region C Water Planning Group and approved by the Texas Water Development Board (“TWDB”). This table also shows Upper Trinity’s goals for municipal per capita water use with a reduction for results in implementing this Plan; and, as supported by plans to be implemented by Upper Trinity Customers.

**Table 3.1
Per Capita Water Use Goals**

| | 5-Year GPCD Goal (Gallons) | 10-Year GPCD Goal (Gallons) |
|---|---------------------------------------|--|
| Average Per Capita Use Per Day | 204 | 208 |
| Less Projected Reduction Due to Strategies of this Plan | 29 | 38 |
| Water Conservation Goal | 175 | 170 |

SECTION 4

Basic Water Conservation Strategies

This section outlines Upper Trinity’s basic water conservation program strategies that will be implemented to achieve and exceed the stated water conservation goals above.

4.1 Accurate Supply Source Metering

Upper Trinity measures all raw water diversions using meters with an accuracy of plus or minus two percent (2%) in accordance with AWWA standards. Said meters are calibrated annually in accordance AWWA standards. When necessary, Upper Trinity will repair or replace meters not conforming to an accuracy of plus or minus two percent (2%).

4.2 Monitoring and Record Management of Water Deliveries, Sales and Losses

Upper Trinity regularly monitors all water deliveries and sales to all Customers. All critical data, such as raw water conveyance to water treatment plants or to Customers, treated water pumped, and unaccounted-for water, are available on a regular basis as needed. All water sources and water delivered to Customers is metered and recorded, as follows:

- Water delivered to all Customers is measured by individual meters with an accuracy of plus or minus two percent (2%) in accordance with AWWA standards, and in most cases with rate-of-flow controllers. Said meters are read monthly by Upper Trinity personnel, with the meter readings being used to invoice Customers. Meters are calibrated and tested annually, and as needed, in accordance with AWWA standards. Customers may witness the calibrations of these meters.
- Treated drinking water leaving the District's water treatment plants and pumping facilities is also measured by meters with a minimum accuracy of plus or minus two percent (2%).
- Upper Trinity monitors unaccounted-for water in its treatment and transmission system to its Customers. (For Upper Trinity, unaccounted-for water is defined as the amount of raw water diverted to or received at the treatment plants, less metered sales to Customers, less water used during the treatment process, and water used for line flushing and construction purposes.)

A goal of Upper Trinity's water conservation program is to maintain unaccounted water below five percent (5%).

4.3 Program for Leak Detection & Repair, and Water Loss Accounting

Upper Trinity's metering program for raw and treated water is described in Sections 4.1 and 4.2 above. As evidenced by a historically low level of unaccounted-for water, Upper Trinity has an effective program to control, detect and repair leaks:

- In most projects, Upper Trinity's water pipelines consist of ductile iron pipe, reinforced concrete cylinder pipe, or steel cylinder pipe with an internal protective liner and an external protective coating and/or polywrap. Because of the multi layers of material, these pipelines have very long service lives and are not subject to excessive leaks.
- Most joints in Upper Trinity pipelines are designed with bell and spigot joint construction, including a rubber gasket. Some joints are welded. For larger lines other than ductile iron, each joint is also coated with grout for corrosion protection.
- All Upper Trinity pipelines are constructed in legally defined and identified rights-of-way, properly registered with authorities in each county. Most are in exclusive rights of way on private property, protecting the pipelines from possible damage by a third party.
- Upper Trinity routinely inspects its facilities and pipelines for leaks or mechanical problems. Repairs are undertaken as soon as practicable in order to minimize waste.
- Upper Trinity operates a program for identification of construction projects adjacent to Upper Trinity facilities and pipelines in order to minimize leaks caused by pipeline damage during construction.
- Upper Trinity's metering program allows comparison of metered flows in the System with metered deliveries to Customers, which can be used to identify leaks.
- Upper Trinity's regular monitoring of unaccounted-for water provides a further check for problems in the transmission system.

4.4 Requirement for Water Conservation Plans by Wholesale Customers

Contracts for the wholesale purchase of water by Upper Trinity Customers provide that the wholesale Customer will develop water conservation and an emergency water demand management plan appropriate and adequate for local conditions and circumstances. These plans are subject to review and approval by Upper Trinity. Any new contract for wholesale water service entered and any renewed or extended contract with a Customer after the adoption of this Plan will require the Customer to adopt similar water conservation strategies as outlined in this Plan, and providing enforcement thereof. In addition, each Customer has agreed to coordinate with Upper Trinity the implementation of any action to limit or curtail water supplies to minimize adverse impact on Upper Trinity's water system operations, and on adequacy of service, and to promote public understanding of the need for and terms of such limitation or curtailment.

Current wholesale contracts utilized by Upper Trinity include some version of the following provisions:

It is the policy of the District to prepare, adopt, and maintain a regional water conservation plan which incorporates loss reduction measures and demand management practices which insure that the available supply of the System is used in an economically efficient and environmentally sensitive manner. Similarly, it is the policy of the District to prepare, adopt and maintain a drought and emergency conditions plan for water supply to Customers. Each Customer agrees to cooperate in the implementation of both plans and to adopt and enforce such or similar plans for use within its respective jurisdiction. Customer may be required by State or Federal agencies to implement a water conservation plan; also, the District reserves the right to require Customer to implement a water conservation plan. The Customer's water conservation plan is subject to approval by District.

Towns and cities have ordinance powers and greater capability to manage and enforce their own water conservation programs, as compared to a wholesale water supplier. Thus, in order to encourage local initiative and to respond to the diversity of powers, needs, and circumstances, Upper Trinity allows each Customer to develop its own conservation program, but Upper Trinity's contracts allow for its approval of such programs. To assist its Customers, Upper Trinity provides a model water conservation plan for all wholesale customers for use in developing their own water conservation plans.

4.5 Reservoir System Operation Plan

Upper Trinity currently purchases raw water from the City of Dallas and City of Denton out of Lewisville Lake and Ray Roberts Lake. In addition, Upper Trinity has a contract for up to 14.4 million gallons of raw water per day from Jim Chapman Lake in the Sulphur River Basin. Further, Upper Trinity has received a permit from TCEQ for the reuse of raw water being imported to the Trinity River Basin, treated to potable water standards, utilized by its Customers, returned to state streams via effluent discharges, and then diverted by Upper Trinity for a second treatment, delivery, and use by its Customers.

Water from Jim Chapman Lake is pumped by pipeline to Lewisville Lake. Treated wastewater effluent from Upper Trinity's three (3) water reclamation facilities and from treatment plants operated by certain Customers is returned to the Lewisville Lake watershed. Upper Trinity relies on the Cities of Dallas and Denton (and the U. S. Army Corps of Engineers) for the operation of Lewisville Lake and Ray Roberts Lake. In addition, the water rights holders of Jim Chapman Lake have developed a water supply operating plan which allows for overdrafting of the reservoir when it is relatively full and also protects the firm annual yield of the reservoir should the drought of record occur. Upper Trinity manages its use of water from these four sources

(Lewisville Lake, Ray Roberts Lake, Jim Chapman Lake and from Reuse) on a system-wide basis to make maximum use of the most efficient or most available source.

4.6 Coordination with Regional Water Planning Groups

Appendix C includes a copy of a letter sent to the Chair of Region C Water Planning group to coordinate Upper Trinity's Plan with Region C. In addition, copies of the adopted Plan have been provided to the Executive Director of TCEQ and the Executive Administrator of the TWDB.

SECTION 5

Enhanced Water Conservation Strategies

This section outlines enhanced water conservation strategies that Upper Trinity will include as part of its water conservation program.

5.1 Reuse and Recycling of Reclaimed Wastewater

Upper Trinity has completed construction of three (3) regional water reclamation facilities with a total treatment capacity of approximately eight (8) million gallons per day. These regional facilities provide wastewater treatment services to twelve (12) municipalities, six (6) special districts and one (1) utility. Reuse is practiced on the plant site for service water and irrigation of landscape.

Upper Trinity has constructed facilities and sells treated wastewater effluent to one of its Customers for golf course irrigation. Upper Trinity continues to promote additional opportunities to expand recycle and reuse markets.

Upper Trinity reuses up to 60% of the water it diverts from Jim Chapman Lake pursuant to a TCEQ reuse permit. The reuse permit is for a single reuse and pass-through cycle of the water imported from Jim Chapman Lake in the Sulphur River Basin. An extensive daily accounting system provides for management of this reuse project.

5.2 Public Education Program

As a regional wholesale water supplier, Upper Trinity does not interact directly with retail water customers at whom typical water conservation public education efforts are aimed. However, Upper Trinity's public education program is intended to assist and supplement the public education efforts of its Customers.

The ultimate success of any water conservation program is dependent on an informed public. The individual retail customers must have an awareness of the benefits and needs for water conservation. They must also have knowledge of how to contribute to the success of the Plan. Upper Trinity's public education and information program, including dedicated staff for this program, is designed in cooperation with Customers to provide information to as many of the Customers' retail customers as possible. The elements of Upper Trinity's education program are described below.

- *Informative School Program.* This program currently provides area schools with textbook covers containing water conservation messages. Upper Trinity is working with local school districts to integrate the *Waters to the Sea: Trinity River* into middle school science classrooms. This engaging, multimedia interactive program connects the students to environmental history, hydrology, ecology and water quality and conservation. Also, water conservation is demonstrated to students using a watershed model. The EnviroScape model provides hands-on interaction to show at least twenty

different ways of protecting and conserving water. Educational tours of Upper Trinity's water treatment plants and demonstration garden are also available, promoting water conservation and water quality protection. Educational opportunities include poster contests, classroom presentations, curriculum aids and materials, and teacher workshops.

- *Literature Program.* As part of its water conservation literature program, brochures are designed to educate the public on various water conservation methods. Upper Trinity will make available water conservation brochures covering the following topics:
 - Saving water outdoors,
 - Saving water indoors,
 - Use of native plants and wildflowers in low water-use landscaping,
 - Retrofitting existing structures with high efficiency showerheads and high efficiency toilets.
- *Special Events and Promotions.* For special events sponsored by Customers, Upper Trinity makes available water conservation promotional items such as Texas Smartscape CD's, toilet-leak test kits, Upper Trinity water bottles, water conservation booklets, etc. Upper Trinity also hosts special events focused on conserving water in the landscape and on protecting water quality.
- *Website.* Upper Trinity has included a section on its website dedicated to water conservation. Conservation publications are also available online.
- *Speaking Engagements.* Speakers and presentations are available from Upper Trinity, which promote water conservation ideas to environmental groups, garden clubs, senior citizen centers, youth groups, civic groups, and other citizen and professional groups.
- *Public Awareness Campaign.* Upper Trinity will promote the importance of conservation by placing public service announcements on radio or television or by promoting newspaper articles in newspapers with general circulation in the service area. In accomplishing this strategy, Upper Trinity will partner with other entities to promote a regional conservation message on radio, television and other media.
- *Regional Cooperation.* Upper Trinity will coordinate with other North Texas water suppliers and Customers to benefit all entities in promoting water conservation.

5.3 Water Conserving Landscaping

As part of its public education program, Upper Trinity has a Water Wise Demonstration Garden employing **Texas SmartScape**[®] principles. **Texas Smartscape** was developed in cooperation with cities, utilities and other agencies, including Upper Trinity, to educate citizens on the ecological, economic and aesthetic benefit of using landscape plants, shrubs, grasses and trees that are native or adapted to the regional climate and local conditions.

The goal of the Water Wise Garden is to demonstrate that outdoor landscapes can be both practical and beautiful, using earth-friendly techniques that conserve water resources and protect water quality. Upper Trinity encourages each Customer to use the Water Wise Garden

to demonstrate how to conserve water in landscape practice. Further, the Water Wise Garden is available to garden clubs, developers, and customers throughout the North Texas region to advance public knowledge of water conservation in home and business landscapes. Throughout the year, the Water Wise Garden is used to help train Master Gardeners in Denton County, and as the venue for various public education programs - - all promoting water conservation.

5.4 Landscape Water Management

To promote the efficient use and stewardship of water and to provide a consistent message throughout Upper Trinity's service area, Upper Trinity urges each Customer to include the following landscape water management strategy into their respective water conservation plans:

- *Watering Maximum of Two Times per Week.* Limit outdoor watering (automatic systems or hose-end sprinklers) to no more than two (2) times per week. Watering with hand-held hoses, soaker hoses or drip irrigation is allowed any time.
- *Time of Day Watering.* No outdoor watering with automatic irrigation systems or hose-end sprinklers from 10:00 am to 6:00 pm each day beginning June 1 and ending September 30 of each year. Watering with hand-held hoses, soaker hoses, or drip irrigation systems is allowed anytime.

Each Customer will be responsible for implementing, communicating and enforcing these landscape water management strategies within its respective jurisdictions

Recognizing that the goal of these strategies is to help instill good habits for conservation of water - - not to be punitive - - each Customer shall have maximum flexibility in administering same. Unless a drought contingency stage is in effect, Customers will be encouraged to allow each retail customer to select the two most convenient days of each week for outdoor watering.

These strategies are intended to be actively promoted by the Customers through public information programs for voluntary or mandatory compliance by their respective retail customers. Upper Trinity will include these strategies as part of its regional public information program and within its model water conservation plan for use by Customers.

During any period that a drought contingency stage is in effect, these strategies would become mandatory and are required to be enforced by all Customers.

5.5 Pressure Control to Maintain System Integrity

Upper Trinity installs all necessary pressure control stations to deliver water into each Customer's storage tank. Whenever feasible, Upper Trinity conserves energy by minimizing surplus pressure (head) available at the delivery point to the Customer. Upper Trinity encourages each Customer to determine a reasonable system pressure for each pressure zone in its retail distribution system, install internal pressure control stations where necessary, or install customer service pressure regulators where needed.

5.6 Watershed Protection

Protecting our watershed is a priority need for every citizen and every community. As a double benefit, strategies that promote water conservation also tend to protect the quality of water resources. Using earth-friendly techniques, such as native and adaptive plant materials and organic techniques for landscaped areas, requires less water and less use of fertilizers, pesticides and other chemicals. Overuse or improper use of fertilizer, pesticides and other chemicals from landscape activities is also a major source of pollutants that find their way into water resources. Upper Trinity has developed a coordinated program for watershed protection

aimed at educating the public about protecting local watersheds and water quality. To help communicate the important role that watersheds have in the water supply for this region, Upper Trinity has created a watershed logo and sign. These signs are being placed along roadways in Upper Trinity's service area as a constant reminder that we need to keep the watersheds clean.

5.7 Enhanced Contract Provisions

All basic contract provisions identified in Section 4.4 will be incorporated into future wholesale water supply contracts. Amendments to wholesale water supply contracts entered into after the adoption of this Plan, including any contract extension or renewal, will require Customers to include strategies included within this Plan into their own water conservation plans. These provisions, coupled with Upper Trinity's prohibition on the subsequent resale of water on a wholesale basis without prior written approval of Upper Trinity, will enable Upper Trinity to achieve the objectives of this Plan.

5.8 Irrigation System Evaluations / Technical Assistance

To improve water conservation and efficiency in landscape watering practices, Upper Trinity will, if requested, provide technical assistance and training to Customers and their retail customers (residential, industrial, commercial and institutional). The assistance provided to the Customers could include actual evaluation of the retail customers irrigation system; or, as an alternative, Upper Trinity could offer a training program to its Customers to enable them to perform said irrigation system evaluations. A typical evaluation would include identification of potential system leaks, diagnosis of equipment malfunctions, and recommendations for equipment upgrades to enhance water efficiency. During the evaluation, education about good landscape watering practices and the use of earth-friendly materials could be shared with the retail customer.

5.9 Industrial, Commercial and Institutional (ICI) Audits

Upper Trinity, in coordination with its Customers, will offer an outreach program to assist large water users in finding ways to operate more efficiently, save water and energy, and lower their costs. Water savings are realized as the ICI customers implement audit recommendations. In addition to these audits, Upper Trinity would publicly recognize those ICI customers who have implemented said recommendations and have taken proactive steps in using water more wisely and efficiently.

5.10 Annual Reports

An important element of Upper Trinity's model water conservation plan is for Customers to provide a copy of its annual conservation report to Upper Trinity at the same time it submits the report to TCEQ. Upper Trinity will compile these reports and use the information to help generate its own annual water conservation report. Upper Trinity's report will be used to review the effectiveness of its water conservation program and will be shared with Upper Trinity's Board and the Water Conservation Committee.

5.11 Means for Measuring Success

Upper Trinity will make every effort to measure and quantify water savings achieved through its programs and will encourage Customers to measure and quantify savings from their respective programs. The water saving results from Upper Trinity and its Customers will be regularly reported to the Region C Water Planning Group to incorporate in the State Water Plan.

5.12 Water Rate Surcharge

Upper Trinity has a conservation-oriented water rate surcharge as part of its rate structure for Customers. The rate structure for wholesale treated water service is two-part, based on demand and volume. The conservation-oriented surcharge takes effect when the actual volume of water sold during the months of June through September exceed the volume of water

budgeted for the same time period by more than 5%. The surcharge rate is established annually by Upper Trinity's Board of Directors.

5.13 Recycle Water from Water Treatment Plants

The wash water from filter washing and sludge from Upper Trinity's water treatment process are pumped into lagoons for recycling. After settling of solids, suitable water is decanted from the lagoons and recycled to the head of the water treatment plant for treatment. This saves water and contributes to Upper Trinity's control of unaccounted water in treatment and transmission.

5.14 In-House Water Conservation Efforts

Upper Trinity has implemented an in-house water conservation program, including the following elements:

- Upper Trinity uses native or adapted drought tolerant plants, trees, and shrubs in the majority of its landscapes;
- Irrigation at Upper Trinity facilities occurs during off-peak times at night and early morning to avoid evaporation losses;
- Irrigation will be limited to the amount needed to promote survival and health of plants and lawns, including limitation on frequency and time-of-day watering (see Section 5.4);
- Irrigation will be avoided on Saturday and Sunday if possible, since these are periods of high water use by the public;
- Irrigation will be accomplished with treated wastewater effluent wherever feasible and practicable.

5.15 Model Water Conservation Plan for Upper Trinity Customers

Upper Trinity has developed two key documents as part of its water conservation strategies: (1) a *Model Water Conservation Plan*; and, (2) a *Model Drought Contingency Plan*. These model plans are valuable aids to Customers in developing their own water conservation and drought contingency plans, providing for consistency and clarity throughout Upper Trinity's service area.

A. The *Model Water Conservation Plan* addresses TCEQ Ch. 288 requirements for water conservation for municipal use by Public Water Suppliers. Upper Trinity will work with its Customers in developing or updating their individual water conservation plans using the following requirements:

- *Utility Profile*: Information regarding population and customer data, water use data, water supply system data, and wastewater system data.
- *Goals*: Specific quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use, in gallons per capita per day (GPCD). The goals established by a Public Water Supplier are not enforceable under this subparagraph.
- *Accurate Metering Devices*: TCEQ requires that metering devices have an accuracy of plus or minus five percent (5%) for measuring water diverted from the source of supply.
- *Universal Metering, Testing, Repair and Replacement*: A program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement.
- *Determination and Control of Unaccounted-for Water*: Specific measures to determine and control unaccounted-for water. The measures may include periodic visual

inspections along distribution pipelines, periodic audits of the water system for illegal connections or abandoned services.

- *Public Education Program:* A public education and information program regarding water conservation is required as part of the water conservation plan.
- *Non-Promotional Water Rate Structure:* Chapter 288 requires a water rate structure that is not “promotional”; that is, rates that discourage waste and excessive use of water, such as increasing block rate instead of volume discounts.
- *Landscape Water Management Strategy:* A strategy for implementing and enforcing the efficient use and stewardship of water in landscape irrigation, including watering a maximum of two times per week; and, including a time-of-day watering provision.
- *Reservoir Systems Operational Plan:* If applicable, this requirement is to provide a coordinated operational structure for operation of reservoirs owned by the water supply entity within a common watershed or river basin in order to optimize available water supplies.
- *Coordination with Regional Water Planning Group:* To document that the water conservation plan has been coordinated with the Regional Water Planning Group to insure consistency with the appropriate approved regional water plan.
- *Means of Implementation and Enforcement:* A strategy for implementing and enforcing the provisions of a water conservation plan, as evidenced by an ordinance, resolution, or tariff, and a description of the authority by which the plan is enforced.

B. The *Model Water Conservation Plan* covering municipal uses by Public Water Suppliers that: (1) currently serve a population of 5,000 or more; or (2) a projected population of 5,000 or more within ten (10) years from the effective date of the plan; or (3) provide potable water service to 3,300 or more connections, are required to include the following additional strategies.

- *Program for Leak Detection & Repair, and Water Loss Accounting:* A program of leak detection and repair, and water loss accounting for the water transmission, delivery, and distribution system.
- *Record Management System:* A system to record water pumped, water deliveries, water sales and water losses which allows for the desegregation of water sales and uses into user classes (residential, commercial, public and institutional, and industrial).
- *Wholesale Customer Requirements:* If applicable, include a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement water conservation strategies similar to this Plan, including applicable elements of Title 30 TAC Chapter 288.

C. Upper Trinity will work with each Customer to evaluate and incorporate, as appropriate, enhanced conservation strategies identified throughout Section 5 herein to achieve Upper Trinity’s conservation goals.

5.16 Conservation Support for Customers

Upper Trinity has an appointed staff conservation coordinator to lead its regional water conservation program and to assist Customers with implementation of their respective conservation plans and strategies. Upper Trinity will create a work group within the Customer Advisory Council for the Regional Treated Water System to coordinate and communicate consistent conservation strategies to Customers, to better focus on water conservation matters and to encourage Customers to designate staff with responsibility for implementing and reporting on their water conservation programs.

SECTION 6

Implementation and Enforcement of the Plan

Appendix D contains a copy of the resolution of Upper Trinity's Board of Directors adopting this updated Plan (and Upper Trinity's drought contingency plan). The Executive Director of Upper Trinity is authorized to implement and enforce the Plan and the drought contingency plan. Upper Trinity will prepare a water conservation report every year, incorporating the reports required from Customers as appropriate. This report will be used to review the effectiveness of Upper Trinity's water conservation program, and results will be reported to the Water Conservation Committee and to the Board of Directors.

The Plan is also referenced in Upper Trinity's wholesale water supply contracts, as noted in Sections 4.4 and 5.7 herein, and there is a prohibition on the resale of water on a wholesale basis without prior written approval by Upper Trinity. As such, Upper Trinity's contractual relationships with its Customers provide for a reasonable means for enforcing the Plan.

APPENDIX A

TCEQ Minimum Requirements for a Water Conservation Plan
(Title 30, Part 1, Chapter 288, Subchapter A, and Rule 228.5 of TAC)

[<<Prev Rule](#)

Texas Administrative Code

[Next Rule>>](#)**TITLE 30**

ENVIRONMENTAL QUALITY

PART 1

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CHAPTER 288WATER CONSERVATION PLANS, DROUGHT
CONTINGENCY PLANS, GUIDELINES AND
REQUIREMENTS**SUBCHAPTER A**

WATER CONSERVATION PLANS

RULE §288.5**Water Conservation Plans for Wholesale Water Suppliers**

A water conservation plan for a wholesale water supplier must provide information in response to each of the following paragraphs. If the plan does not provide information for each requirement, the wholesale water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for wholesale water suppliers must include the following elements:

(A) a description of the wholesaler's service area, including population and customer data, water use data, water supply system data, and wastewater data;

(B) until May 1, 2005, specification of conservation goals including, where appropriate, target per capita water use goals for the wholesaler's service area, maximum acceptable unaccounted-for water, the basis for the development of these goals, and a time frame for achieving these goals;

(C) beginning May 1, 2005, specific, quantified five-year and ten-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable unaccounted-for water, and the basis for the development of these goals. The goals established by wholesale water suppliers under this subparagraph are not enforceable;

(D) a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply;

(E) a monitoring and record management program for determining water deliveries, sales, and losses;

(F) a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system;

(G) a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of this chapter. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this chapter;

(H) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin. The reservoir systems operations plans shall include optimization of water supplies as one of the significant goals of the plan;

(I) a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(J) documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional conservation strategies. Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of paragraph (1) of this section, if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

(B) a program to assist agricultural customers in the development of conservation pollution prevention and abatement plans;

(C) a program for reuse and/or recycling of wastewater and/or graywater; and

(D) any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(3) Review and update requirements. Beginning May 1, 2005, the wholesale water supplier shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group.

Source Note: The provisions of this §288.5 adopted to be effective May 3, 1993, 18 TexReg 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384

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APPENDIX B

Upper Trinity Regional Water District's Water Utility Profile

Texas Commission on Environmental Quality



PROFILE & WATER CONSERVATION PLAN
REQUIREMENTS FOR WHOLESALE PUBLIC
WATER SUPPLIERS

This form is provided to assist wholesale public water suppliers in water conservation plan development. Information from this form should be included within a wholesale public water supplier water conservation plan. If you need assistance in completing this form or in developing your plan, please contact the conservation staff of the Resource Protection Team in the Water Supply Division at (512) 239-4691.

Name of Entity: Upper Trinity Regional Water District

Address & Zip: PO Box 305 Lewisville, TX 75067

Telephone Number: (972) 219-1228 Fax: (972) 219-7521

Form Completed by: Larry N. Patterson, P.E.

Title: Director of Operations & Water Resources

Signature: *Larry N. Patterson* Date: 9/18/12

Name and Phone Number of Person/Department responsible for implementing a water conservation program: Jason Pierce 972-219-1228

PROFILE

I. WHOLESALE SERVICE AREA POPULATION AND CUSTOMER DATA

A. Population and Service Area Data

1. Service area size in square miles: (attach a copy of service-area map)

Upper Trinity Regional Water District ("Upper Trinity") is a wholesale water utility created by the Legislature of the State of Texas. Upper Trinity's service area (see Figure 1 below) is defined in its enabling legislation as the service area of its retail customers:

"The boundaries of Upper Trinity are coterminous with the boundaries of the county (Denton) plus the entire area in the boundaries of any contract member or participating member, a portion of whose incorporated limits is partially in the boundaries of the county (Denton) as those boundaries existed on the effective date of the Act." (H.B. 3112, 1989)

In addition, there is no limitation on other customers being service by Upper Trinity outside such boundaries; for example, a portion of Wise County and Cooke County are shown in the

Region C Plan to be served by Upper Trinity.

Figure 1. Service and Planning Area Map



2. Current population of service area (2012): 244,613 (excludes cities of Lewisville, Denton and Irving)
3. Current population served for (2012):
 - a. water 195,319
 - b. wastewater 74,301

4. Population (water) served for previous five years:

| Year | Population |
|-------------|-------------------|
| 2007 | 165,739 |
| 2008 | 172,726 |
| 2009 | 179,483 |
| 2010 | 186,891 |
| 2011 | 191,126 |

5. Projected population for service area in following decades:

| Year | Population |
|-------------|-------------------|
| 2020 | 337,283 |
| 2030 | 450,401 |
| 2040 | 576,490 |
| 2050 | 702,370 |
| 2060 | 793,974 |

6. List source(s) or method(s) for the calculation of current and projected population:
- a. Texas Water Development Board - - 2011 Region C Water Plan
 - b. North Central Texas Council of Governments
 - c. Texas State Data Center
 - d. United States Census Bureau – 2010 Census
 - e. Information from existing Upper Trinity Customers, including CCN service area limits

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B. Customers Data

List (or attach) the names of all wholesale customers, amount of annual contract, and amount of the annual use for each for the previous year:

| Wholesale Customer | Contracted Amount (acre-feet) | Previous Year Amount of Water Delivered (acre-feet) |
|--------------------------------|--|--|
| Argyle Water Supply Corp. | 2,240 | 728 |
| Bartonville Water Supply Corp. | 2,800 | 749 |
| City of Celina | 2,800 | 953 |
| City of Corinth | 8,401 | 3,694 |
| Denton County FWSD No. 1A | 3,360 | 1,850 |
| Denton County FWSD No. 7 | 3,360 | 1,749 |
| Denton County FWSD No. 8A | 2,431 | 402 |
| Denton County FWSD No. 10 | 2,688 | 756 |
| Denton County FWSD No. 11A | 3,360 | 489 |
| Town of Flower Mound | 33,604 | 9,198 |
| City of Highland Village | 3,360 | 2,607 |
| City of Justin | 840 | 370 |
| City of Krum | 448 | 110 |
| Lake Cities MUA | 4,256 | 1,841 |
| Town of Lincoln Park | 112 | 43 |
| Mustang SUD | 3,136 | 1,096 |
| Town of Northlake | 560 | 0 |
| Providence Village WCID | 2,688 | 706 |
| City of Sanger | 560 | 241 |

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II. WATER USE DATA FOR SERVICE AREA

A. Water Delivery

Indicate if the water provided under wholesale contracts is treated or raw water and the annual amount for each for previous year:

Total amount sold for previous year (acre-feet) (2011)

Treated: 27,583
Raw: 0

B. Water Accounting Data

- Total amount of water diverted at point of diversion(s) for previous five years (in acre-feet) for all water uses:

| Year | 2007 | 2008 | 2009 | 2010 | 2011 |
|--------------|--------|--------|--------|--------|--------|
| January | 1,046 | 1,263 | 1,302 | 1,209 | 1,210 |
| February | 965 | 1,241 | 1,217 | 991 | 1,203 |
| March | 1,402 | 1,196 | 1,441 | 1,171 | 1,744 |
| April | 1,390 | 1,401 | 1,626 | 1,585 | 1,951 |
| May | 1,358 | 1,887 | 1,534 | 2,213 | 1,880 |
| June | 1,352 | 2,905 | 2,608 | 3,228 | 3,356 |
| July | 1,766 | 3,818 | 3,389 | 2,687 | 4,457 |
| August | 2,765 | 3,097 | 3,265 | 3,979 | 4,637 |
| September | 2,222 | 2,360 | 2,097 | 2,190 | 3,589 |
| October | 1,978 | 1,980 | 1,405 | 2,199 | 2,386 |
| November | 1,641 | 1,596 | 1,452 | 1,557 | 1,698 |
| December | 1,146 | 1,331 | 1,369 | 1,445 | 1,158 |
| TOTAL | 19,033 | 24,076 | 22,705 | 24,453 | 29,270 |

- Wholesale population served and total amount of water diverted for **municipal use** for previous five years:

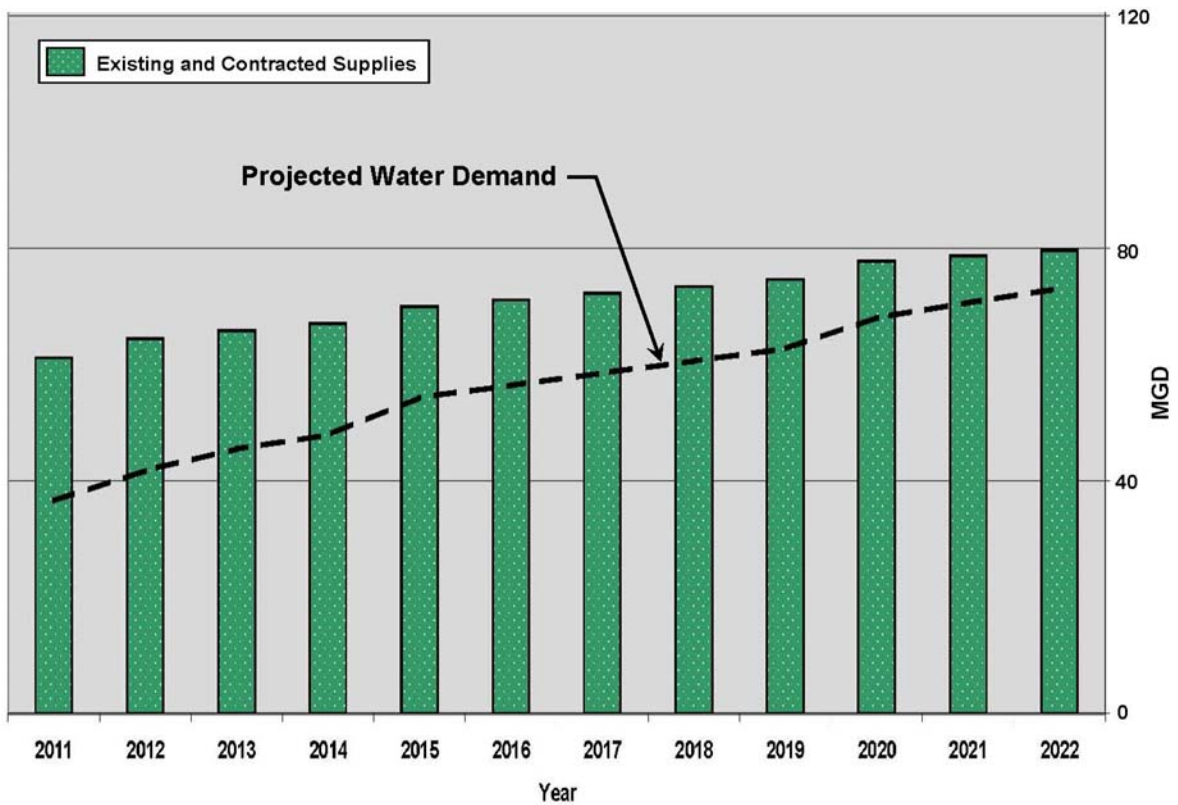
| Year | Total Population Served | Total Annual Water Diverted for Municipal Use (acre feet) |
|------|-------------------------|--|
| 2007 | 165,739 | 19,033 |
| 2008 | 172,726 | 24,076 |
| 2009 | 179,483 | 22,705 |
| 2010 | 186,891 | 24,453 |
| 2011 | 191,126 | 29,270 |

C. Projected Water Demands

If applicable, project and attach water supply demands for the next ten years using information such as population trends, historical water use, and economic growth in the service area over the next ten years and any additional water supply requirement from such growth.



Water Demand – Area Served



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III. WATER SUPPLY SYSTEM DATA

A. Water Supply Sources

List all current water supply sources and the amounts authorized (acre-feet) with each:

| | Source | Amount Available |
|---------------|-------------------------------|---------------------|
| Surface Water | Jim Chapman Lake ¹ | 16,106 ² |
| Contract | City of Dallas ³ | 31,121 |
| Contract | City of Denton ⁴ | 7,400 |
| Reuse | Jim Chapman Lake ⁵ | 9,664 |

¹ Certificate of Adjudication No. 03-4797 and a contract with the City of Commerce allows the District to divert water from Jim Chapman Lake.

² Amount shown is the maximum diversion amount.

³ A contract with the City of Dallas allows the District to divert water from Lewisville Lake and Ray Roberts Lake. The amount of supply will increase over time as population of certain “named” cities increases.

⁴ A contract with the City of Denton allows the District to divert water from Lewisville Lake and Ray Roberts Lake on an interim basis. The amount of supply available is determined annually by Denton and will decline over time as Denton’s own needs increase.

⁵ TCEQ Water Use Permit No. 5778, and supporting contracts with the cities of Dallas and Denton, allows the District to reuse an amount equal to 60% of the water it imports from Jim Chapman Lake.

B. Treatment and Distribution System (if provide treated water)

- Design daily capacity of system: 90.0 MGD
- Storage Capacity: Elevated 0.5 MGD
Ground 18.0 MGD
- Please describe the water system. Include the number of treatment plants, wells, and storage tanks. If possible, attach a sketch of the system layout.

See Attachment 1.

IV. WASTEWATER SYSTEM DATA

A. Wastewater System Data (if applicable)

- Design capacity of wastewater treatment plant(s):

| | Permitted Capacity |
|--|--------------------|
| Lakeview Regional Water Reclamation System | 7.5 MGD |
| Riverbend Water Reclamation Plant | 5.7 MGD |
| Peninsula Water Reclamation Plant | 2.0 MGD |
| Doe Branch Water Reclamation Plant | 5.225 MGD |

2. Briefly describe the wastewater system(s) of the area serviced by the wholesale public water supplier. Describe how treated wastewater is disposed of. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and, if wastewater is discharged, the receiving stream. If possible, attach a sketch or map which locates the plant(s) and discharge points or disposal sites.

a. Lakeview Regional Water Reclamation System

| | |
|-------------------------------|--|
| Irrigation On-site | Yes |
| Irrigation Off-site | No |
| Chlorination / dechlorination | N/A |
| Approximate usage per month | 0.010 MGD |
| TCEQ number | TX0020354, TPDES 10698-001 |
| Operator / Owner | Upper Trinity |
| Disposal Type | Activated Sludge |
| | Discharge 4.12 MGD (avg. daily flow) |
| Discharge receiving stream | Lewisville Lake Segment #0.0823 Trinity River Basin |

See Attachment 1 for location of Lakeview Water Reclamation Plant.

b. Riverbend Water Reclamation Plant

| | |
|-------------------------------|---|
| Irrigation On-site | No |
| Irrigation Off-site | No |
| Chlorination / dechlorination | N/A |
| Approximate usage per month | 0 MGD |
| TCEQ number | TX0123781, TPDES 10698-002 |
| Operator / Owner | Upper Trinity |
| Disposal Type | Sequential / Batch Reactor |
| | Discharge 0.965 MGD (avg. daily flow) |
| Discharge receiving stream | Lewisville Lake Segment #0.0823 Little Elm Creek, Trinity River Basin |

See Attachment 1 for location of Riverbend Water Reclamation Plant.

c. Peninsula Water Reclamation Plant

| | |
|-------------------------------|----------------------------|
| Irrigation On-site | No |
| Irrigation Off-site | No |
| Chlorination / dechlorination | N/A |
| Approximate usage per month | 0 MGD |
| TCEQ number | TX0124745, TPDES 14323-001 |
| Operator / Owner | Upper Trinity |

Disposal Type Activated Sludge Extended Aeration
 Discharge 0.196 MGD (avg. daily flow)
 Discharge receiving stream Lewisville Lake Segment #0.0823
 Cantrell Slough, Trinity River Basin
 See Attachment 1 for location of Peninsula Water Reclamation Plant.

d. Doe Branch Water Reclamation Plant

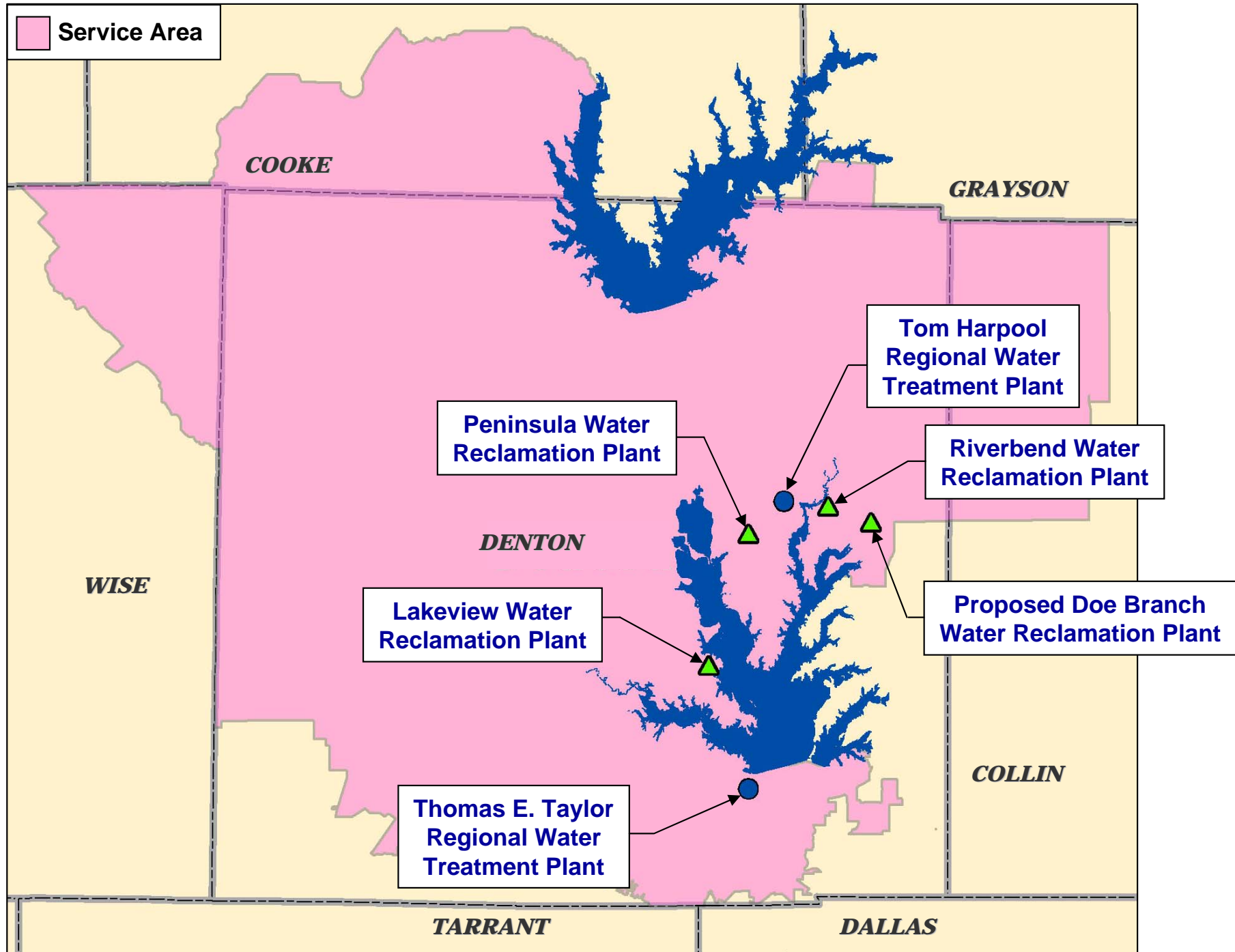
Irrigation On-site No
 Irrigation Off-site No
 Chlorination / dechlorination N/A
 Approximate usage per month 0 MGD
 TCEQ number TX0125172, TPDES 10698-003
 Operator / Owner Upper Trinity
 Disposal Type Activated Sludge Extended Aeration
 Plant permitted, but not constructed
 Discharge receiving stream Lewisville Lake Segment #0.0823
 Unnamed Tributary, Trinity River Basin
 See Attachment 1 for the location of proposed Doe Branch Water
 Reclamation Plant.

B. Wastewater Data for Service Area (if applicable)

1. Percent of water service area served by wastewater system: 30%
2. Monthly volume treated for previous three years (in 1,000 gallons):

| Year | 2009 | 2010 | 2011 |
|------------------|-------------|-------------|-------------|
| January | 137,043 | 168,503 | 150,887 |
| February | 118,498 | 176,007 | 136,867 |
| March | 136,811 | 190,364 | 139,967 |
| April | 136,501 | 167,289 | 138,047 |
| May | 164,081 | 162,744 | 160,803 |
| June | 139,766 | 144,809 | 143,076 |
| July | 136,578 | 158,038 | 139,762 |
| August | 139,781 | 145,125 | 139,872 |
| September | 147,687 | 155,131 | 131,864 |
| October | 194,628 | 155,131 | 131,864 |
| November | 160,473 | 142,549 | 145,353 |
| December | 162,595 | 145,656 | 158,514 |
| TOTAL | 1,774,442 | 1,902,931 | 1,729,623 |

Upper Trinity Regional Water District



APPENDIX C

Letter to Chairman of Region C Water Planning Group



P.O. Drawer 305 • Lewisville, TX 75067

(972) 219-1228 • Fax (972) 221-9896

September 17, 2012

Mr. Jim Parks, Chairman
Region C Water Planning Group
c/o North Texas Municipal Water District
P. O. Box 2408
Wylie, TX 75098

RE: Water Conservation and Drought Contingency Plans

Dear Mr. Parks:

Water conservation is an important strategy in making sure this region has sufficient water to meet the growing demand. Recognizing the importance of this strategy, Upper Trinity Regional Water District recently updated its Water Conservation and Drought Contingency Plans to include new conservation strategies. In coordination with other utilities and cities in the Dallas/Fort Worth area, we have included a new strategy to limit outdoor landscape watering to no more than two times per week.

In addition, we wanted to update the Plans after the great drought of 2011. Accordingly, other strategies were added to enhance the Water Conservation Plan, following the recommendations of the Water Conservation Advisory Council and the Water Conservation and Implementation Task Force. Enclosed are copies of Upper Trinity's updated plans.

We are submitting copies of the plans to you, to Texas Water Development Board and to the Texas Commission on Environmental Quality in accordance with state requirements. Upper Trinity's Board of Directors approved the amended plans at its September 6 Board Meeting.

Thank you for your assistance in this matter. Should you have any questions or need further information, please feel free to contact me or Larry N. Patterson, Director of Operations and Water Resources, at 972-219-1228.

Sincerely,

A handwritten signature in black ink that reads "Thomas E. Taylor".

Thomas E. Taylor
Executive Director

TET/JP/nka

Encl: Updated Water Conservation and Drought Contingency Plans

C: Jody Puckett, Director of Dallas Water Utilities
Larry N. Patterson, Director of Operations and Water Resources, UTRWD
Jason Pierce, Manager of Watershed and Contract Services

APPENDIX D

Resolution from Upper Trinity Regional Water District's Board of Directors
Adopting the Water Conservation Plan



RESOLUTION

RESOLUTION # 2012- 07

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE UPPER TRINITY REGIONAL WATER DISTRICT ("DISTRICT") ADOPTING UPDATED WATER CONSERVATION AND DROUGHT CONTINGENCY PLANS FOR THE DISTRICT.

WHEREAS, the District's Board of Directors adopted Water Conservation and Drought Contingency Plans in May 1993, later amended in March 2005 and in April 2009; and,

WHEREAS, the Texas Administrative Code Title 30, Part 12, Chapter 288, Subchapter A, Rule 288.5 and Subchapter B, Rule 288.22 governs the development of water conservation and drought contingency plans for wholesale water suppliers and requires wholesale public water suppliers, like the District, to include certain basic provisions in said plans; and,

WHEREAS, the Board of Directors recently expressed its support for a regional initiative that is intended to achieve uniform application of a new water conservation strategy limiting outdoor landscape irrigation to no more than two times per week; and,

WHEREAS, the Board directed staff to work with the Water Conservation Committee and the Customer Advisory Council to develop a flexible approach for implementing the twice weekly strategy for District Customers; and,

WHEREAS, Texas endured a record-breaking drought just last year, generating new experiences in water management and further evidence of the need for water conservation -- providing a sense of urgency to review and update the District's Water Conservation Plan; and,

WHEREAS, the District desires to update the 2009 Water Conservation Plan and Drought Contingency Plan based on current knowledge and practices, to add the new twice weekly strategy for outdoor landscape irrigation, as well as to enhance the District's Plan by incorporating recommendations from the Texas Water Conservation Advisory Council and the Texas Water Conservation Implementation Task Force; and,

WHEREAS, the updated Water Conservation Plan and Drought Contingency Plan shall hereinafter be referred to as the "2012 Plans"; and,

WHEREAS, the 2012 Plans must be approved by the governing body prior to submission to the Texas Commission on Environmental Quality ("TCEQ"); and,

WHEREAS, the Water Conservation Committee of the District has reviewed and hereby recommends the 2012 Plans, which plans include the new and updated conservation strategies; and,

WHEREAS, the Customer Advisory Council for the Water System has provided input on said strategies.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UPPER TRINITY REGIONAL WATER DISTRICT:

SECTION 1. That the 2012 Water Conservation Plan and Drought Contingency Plan as recommended by the Water Conservation Committee and reviewed by the Customer Advisory Council are hereby adopted.

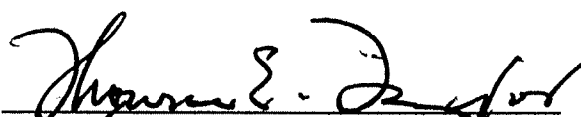
SECTION 2. That the Executive Director is hereby directed to administer and enforce the 2012 Plans as adopted.

SECTION 3. That the Executive Director is hereby directed to include provisions in any new contract for wholesale water services and any renewed or extended contract with a Customer after the adoption hereof requiring said Customer to adopt similar water conservation and drought contingency strategies as outlined in the 2012 Plans and providing for enforcement thereof.

SECTION 4. That the Executive Director is authorized to submit the 2012 Plans to TCEQ for review and approval and to make reasonable changes thereto if requested by TCEQ.

SECTION 5. That this Resolution shall become effective immediately upon its passage.

DULY PASSED AND APPROVED THIS 6th DAY OF SEPTEMBER 2012.

Recommended: 
Thomas E. Taylor, Executive Director

Executed: 
Todd Madison, Vice President


Attest: 
Chris Boyd, Secretary



EXHIBIT 8

NOTES SECTION
SWIFT Abridged Application

Excess Capacity Calculation
for Lake Ralph Hall

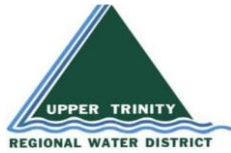


EXHIBIT 8

NOTES SECTION - SWIFT Abridged Application

Excess Capacity Calculation for Lake Ralph Hall

Texas Water Development Board

SWIFT Abridged Application

| <u>Projected Available Supply</u> | <u>Year - 2035</u> | |
|--|--------------------|-----------------|
| Chapman Lake (Firm Yield) | 12,885 | Ac-Ft/Yr |
| Chapman Lake Reuse | 6,442 | Ac-Ft/Yr |
| <u>Dallas Water Utilities</u> ¹ | <u>47,848</u> | <u>Ac-Ft/Yr</u> |
| Total Available Supplies | 67,175 | Ac-Ft/Yr |

| <u>Projected Demand</u> | <u>Year - 2035</u> | |
|---------------------------|--------------------|-----------------|
| UTRWD ¹ | 73,943 | Ac-Ft/Yr |

| <u>Shortfall to be provided by Lake Ralph Hall</u> ² | <u>Year - 2035</u> |
|---|--------------------|
| ((Demand-Avail. Supply) / Firm Yield of LRH)*100 | 19.88% |
| ((73,943-67,175) / 34,050)*100 | |

Excess Capacity in 2035 = 80.12%

Footnotes:

- 1) Projected DWU supply & UTRWD demand in 2035 -- per Table 4E.15 in the Draft 2016 Region C Water Plan
- 2) Firm yield of Lake Ralph Hall -- per Page 4E.44 in the 2011 Region C Water Plan