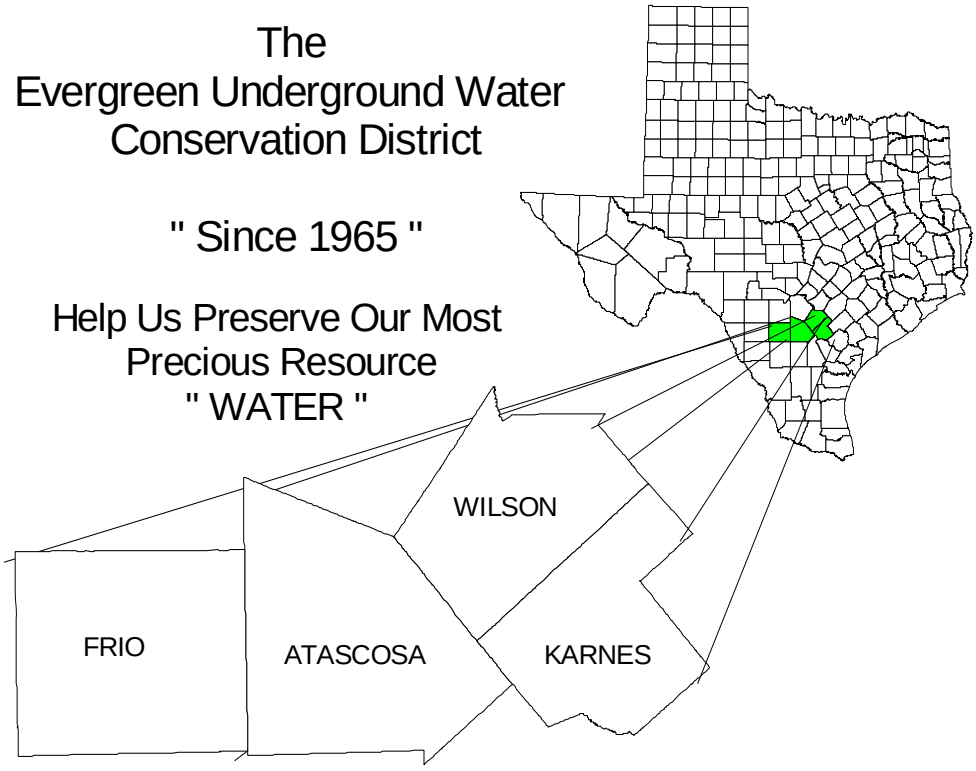
Evergreen Underground Water Conservation District



Groundwater Management Plan

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Purpose And Intent

It is the purpose and intent of this plan to establish policy in the areas of technical research and studies, water conservation, public information, regulation, permits and enforcement, equity and discretion, and cooperation and coordination. The goal of this plan is to establish a Regulatory Action Plan that will conserve, preserve, protect, and prevent the waste of the groundwater within the District. Due to the present mining of groundwater in the Carrizo aquifer in some areas of the District, the Regulatory Action Plan will also address reducing the mining of groundwater. The regulations and policies in this plan have been established so that the goals, needs and obligations of the District may be accomplished as set forth by the 59th Legislature, Regular Session, 1965, Article 8280-297, and Chapter 36 of the Texas Water Code (TWC).

Time Period Of This Plan

This plan was adopted by resolution of the District Board of Directors after notice and hearing in a public meeting on February 25, 2010. The plan must be readopted with or without changes by the District Board and submitted to the Texas Water Development Board (TWDB) for approval at least once every five years [TWC §36.1072(e)].

Background

The Evergreen Underground Water Conservation District (District) was created in 1965 in accordance with Section 59, Article 16 of the Constitution of the State of Texas, and in accordance with Acts of the 59th Legislature (1965), page 398, Chapter 197, H.B. 116, as amended by Acts of the 60th Legislature (1967), page 1676, Chapter 647, H.B. 1272, Acts of the 68th Legislature (1983), page 2852, Chapter 484, S.B. 194, and Acts of the 69th Legislature (1985), page 2984, Chapter 438, S.B. 1253, hereforth to be referred to as the act. The organizational meeting of the Board of Directors was held on September 3, 1965. The Board held two elections in 1967 seeking ratification of a tax rate from which operational funds could be generated. The tax referendum did not pass, and the Board operated on support from counties, cities, organizations, and individuals until 1973, when the Board was forced to discontinue their quarterly meetings as they had no funds to conduct their Directors' election as required by law.

On September 3, 1984, members of the Board, alarmed by groundwater level declines, met to discuss reactivation of the District. At this time representatives of Frio County expressed an interest in adding Frio County to the District. On April 6, 1985, an election was held to ratify the incorporation of Frio County, elect representatives to the Board of Directors, and set a tax rate for the District. The election was successful and a tax rate of $0.005 per $100 valuation was set. In September of 1997, the Karnes County Commissioners Court petitioned the District with a request to be annexed into the District. On January 17, 1998 the District held an election in Karnes County to ratify the petition, and the election passed by an eighty-nine percent margin.

The District encompasses all of Atascosa, Frio, Wilson, and Karnes Counties. This includes 2,461,000 acres or 3,845 square miles. The District's economy is heavily dependent upon agriculture and agriculture related business. Rainfall in the District averages from 24 inches per year in Frio County, to 32 inches per year in Wilson County. Rainfall usually peaks in the late spring, with a secondary peak in early fall. Due to this trend and high summer temperatures, irrigation is required for consistent crop production and yield. Approximately 80% of the total groundwater pumpage in the District is used in Agriculture. Since 1985 the District has engaged in extensive data collection on water well locations, well conditions, static water levels, chemical analysis, and pumpage and use. This data has been instrumental in understanding the dynamics of the underground water resources within the District. The District has worked extensively to promote water conservation through education, and technical assistance in all sectors of the District.

Policy

It is the Policy of the District to continue technical research and studies, promote water conservation, provide public information, maintain and sustain regulation, permits, enforcement, equity and discretion, cooperation and coordination. These policies are designed to support the regulation of groundwater withdrawals to reduce the mining of groundwater resources within the District. The implementation of this plan can only be achieved through a concerted effort by all parties that use groundwater within the District. The District shall maintain an office with regular office hours

Technical Research And Studies

The District conducts technical studies in cooperation with other entities including the TWDB and the Texas Commission on Environmental Quality (TCEQ) in order to identify methods to conserve and protect groundwater resources. Results from the studies have aided in the implementation of more efficient irrigation practices, education, and well head protection. Grants from the TWDB have provided funds for the District to purchase lab equipment for water analysis, and well mapping equipment. The District collects data on water levels, groundwater production, and water quality on a monthly and annual basis from wells throughout the District. The District will continue to gather data and improve the data gathering methods to ensure all future District Plans are based on the best information available.

Water Conservation

Water conservation has become a strong initiative throughout the State of Texas. New buildings are required to use certain water conserving plumbing fixtures as a result of legislation passed by the Texas Legislature in 1991. It has been recognized that fresh water is a vital commodity that can only last through preservation. The District may require a conservation plan for certain well permits in order to be sure that the groundwater produced is put to a beneficial use, and not wasted. The District continues

to work with water utilities, industry and agriculture users to promote the most efficient use of water so that we may preserve one of our most valuable natural resources. The District will continue to explore other conservation methods and options and will adopt new requirements as they become necessary.

Public Information

The District will take the necessary steps to ensure the public is informed and will cooperate with the media and all interested parties. The dissemination of information to the public is vital to create awareness, and the public support that is needed to control and reduce the mining of the groundwater.

The District will also continue to pursue water conservation through a public information and educational program. If used properly, voluntary conservation measures can significantly extend the life of the groundwater, thereby preventing the need for mandatory programs by this District or the State. Voluntary programs are entirely a function of providing the necessary education on conservation methods and habits along with the means to implement those methods. The District will continue to provide information to school districts and the general public in an effort to create voluntary conservation.

Regulation

The primary objective of this Plan is to control groundwater withdrawals to reduce aquifer mining within the District. Groundwater withdrawals can be reduced through conservation of groundwater. In regulating groundwater withdrawals, the District shall take into account several factors, including:

- Economic impact of conservation measures;
- The degree and effect of aquifer mining in the area; and
- Differing hydrological characteristics of the aquifer(s) within the District.

The District will utilize the data and information obtained to evaluate the effectiveness of its regulatory policies and to determine what future action may be needed to achieve the mandate of the act, the District Rules, and the objectives and requirements of this plan.

Management Of Groundwater Supplies

The District will manage the supply of groundwater within the District in order to conserve the resource while seeking to maintain the economic viability of all resource user groups, public and private. In consideration of the economic and cultural activities occurring within the District, the District will identify and promote best management practices of all groundwater resources within the District. An observation network has been established and maintained in order to monitor changing storage conditions of groundwater supplies within the District. The District will make a regular assessment of water supply and groundwater storage conditions and will report those conditions to the

Board and to the public. The District will undertake, as necessary and cooperate with investigations of the groundwater resources within the District and will make the results of investigations available to the public upon adoption by the Board.

The District has adopted rules to regulate groundwater withdrawals by means of spacing and production limits. A copy of the rules may be downloaded at the following link http://www.evergreenuwcd.org/rules.php. The District may deny a well construction permit or limit groundwater withdrawals in accordance with the guidelines stated in the rules of the District. In making a determination to deny a permit or limit groundwater withdrawals, the District will consider the public benefit against individual hardship after considering all appropriate testimony.

The relevant factors to be considered in making a determination to deny a permit or limit groundwater withdrawals will include:

- The purposes of the Act;
- The District Rules;
- The objectives and requirements of this Plan;
- The economic impact on the applicant from grant or denial of the permit or terms prescribed by the permit; and
- An equitable distribution of available groundwater.

In pursuit of the District's mission of protecting the resource, the District may require reduction of groundwater withdrawals to amounts, which will not cause harm to the aquifer. To achieve this purpose, the District may, at the Board's discretion, amend or revoke any permits after notice and hearing. The determination to seek the amendment or revocation of a permit by the Board will be based on aquifer conditions observed by the Board. The Board will enforce the terms and conditions of permits and the rules of the District by enjoining the permit holder in a court of competent jurisdiction as provided for in Section 36.102 of the Texas Water Code (TWC).

The District will employ all technical resources at its disposal to evaluate the resources available within the District and to determine the effectiveness of regulatory or conservation measures. A public or private user may appeal to the Board for discretion in enforcement of the provisions of the water supply deficit contingency plan on grounds of adverse economic hardship or unique local conditions. The exercise of said discretion by the Board shall not be construed as limiting the power of the Board.

Equity And Discretion

The District recognizes that the burden of reducing the mining of an aquifer should be borne by all users of groundwater. Although a single entity's groundwater withdrawal may not be capable of causing severe problems, the total actions by all users can cause significant mining of groundwater. Therefore, every entity must be regulated.

To achieve the objective, the District must have discretion in permitting groundwater withdrawals. Therefore, temporary exceptions to the general rule for a specific area may be necessary if an economic hardship will be created that is significantly greater for one person than for others in the District, or if required due to hydrological, physical, or geophysical characteristics.

This Plan prescribes a production ratio of groundwater withdrawal based upon the number of acres of land owned by a property owner. Nothing in this Plan, however, should be interpreted to mean that a person is entitled to use groundwater in any amount merely because the Plan prescribes a ratio for production. The number of acres of land that are within the Certificate of Convenience and Need (CCN) of a public or private water utility may be taken into consideration to meet a production ratio, if the well is or will be located within the boundaries of the water utilities CCN, and the utility's number of connections within the CCN justifies the amount of water requested.

Cooperation And Coordination

The District will continue to work with the public, the regulated community, and state local governments to achieve the District's goals. The District will work with all water suppliers, industrial, and agricultural users to help them to preserve groundwater. The TCEQ is the agency charged with protecting the state's water resources, and the Texas Water Development Board is the agency responsible for water resources planning and promotion of water conservation practices. The District will continue to work with both of these agencies throughout the life of this plan.

Actions, Procedures, Performance And Avoidance For Plan Implementation

The District will implement the provisions of this plan and will utilize the provisions of this plan as a guidepost for determining the direction or priority for all District activities. All operations of the District, all agreements entered into by the District and any additional planning efforts in which the District may participate will be consistent with the provisions of this plan.

The District has adopted rules related to the permitting of wells and the production of groundwater. The rules adopted by the District are pursuant to TWC Chapter 36 and the provisions of this plan. All rules will be adhered to and enforced. The promulgation and enforcement of the rules is based on the best technical evidence available.

The District shall treat all citizens with equality. Citizens may apply to the District for discretion in enforcement of the rules on grounds of adverse economic effect or unique local conditions. In granting of discretion to any rule, the Board shall consider the potential for adverse effect on adjacent landowners. The exercise of said discretion by the Board shall not be construed as limiting the power of the Board.

The District will seek the cooperation in the implementation of this plan and the management of groundwater supplies within the District. All activities of the District will be undertaken in cooperation and coordinated with the appropriate state, regional or local water management entity.

Joint Planning And Desired Future Conditions

The State of Texas has established Groundwater Management Areas (GMA) throughout the State to facilitate regionalized planning for the State's groundwater resources. The District is located in Groundwater Management Areas (GMA) 13 and 15. Chapter 36 Texas Water Code obligates the District to meet annually with the other groundwater conservation districts in its assigned GMAs to conduct joint planning, review management plans, and coordinate management of groundwater resources with other GCDs in GMA 13 and 15.

GMA 13 Districts include:

- Edwards Aquifer Authority
- Evergreen Underground Water Conservation District
- Gonzales County Underground Water Conservation District
- Guadalupe County Groundwater Conservation District
- McMullen Groundwater Conservation District
- Medina County Groundwater Conservation District
- Plum Creek Conservation District
- Uvalde County Underground Water Conservation District
- Wintergarden Groundwater Conservation District

GMA 15 Districts include:

- Bee GCD
- Coastal Bend GCD
- Coastal Plains GCD
- Colorado County GCD
- Corpus Christi ASR CD
- Evergreen UWCD
- Fayette County GCD
- Goliad County GCD
- Lavaca County GCD
- Pecan Valley GCD
- Refugio GCD
- Texana GCD
- Victoria County GCD

Managed Available Groundwater In The District Based On The Desired Future Condition Established In Joint Planning (Estimates And Projections)

One of the key coordination goals within each GMA is the development of desired future conditions (DFC) for the aquifers within each GMA, as required by the Texas Administrative Code :

> *"The desired, quantified condition of groundwater resources (such as water levels, water quality, spring flows, or volumes) at a specified time or times in the future or in perpetuity, as defined by participating groundwater conservation districts within a groundwater management area as part of the joint planning process." Desired future conditions have to be physically possible, individually and collectively, if different desired future conditions are stated for different geographic areas overlying an aquifer or subdivision of an aquifer."* [TAC§356.2(8)]

In establishing the desired future condition, the GCDs in a GMA are required to consider uses or condition of an aquifer within the management area that differ substantially from one geographic area to another. The districts may establish different desired future conditions for each aquifer, subdivision of an aquifer, or geologic strata, or each geographic area overlying an aquifer in whole or in part or subdivision of an aquifer within the boundaries of the GMA. The State of Texas has established a September 2010 deadline for GMAs to establish DFCs for each aquifer. Based on these DFCs, the TWDB will use the appropriate groundwater availability model (GAM) to develop Managed Available Groundwater (MAG) quantities to determine the annual availability from regional aquifers based on submitted DFCs.

The desired future conditions for some of the aquifers located within the District boundaries and within Groundwater Management Area 13 and 15 have just recently been adopted. Therefore, an estimate of the managed available groundwater (MAG) for these aquifers is not yet available, so the requirement to present MAG data in the groundwater management plan is not applicable at this time. Once MAG estimates become available the District will amend the management plan.

Groundwater Availability Model Data (Gam Run 10-015)

The data summarized in this section was obtained from the TWDB GAM Run 10-015 (TWDB, 2010) which discusses the methods, assumptions, and results from model runs using the groundwater availability models for the southern parts of the Carrizo-Wilcox, Queen City, and Sparta aquifers, the central part of the Gulf Coast Aquifer, and the San Antonio segment of the Edwards Balcones Fault Zone (BFZ) Aquifer. This section provides estimates of annual amounts of recharge from precipitation to the district aquifers, discharge from the aquifers to springs and any surface bodies, annual volume of flow into and out of the district and annual volume of flow between aquifers in the

district. All values in the tables are in acre-feet per year and numbers rounded to the nearest 1 acre-foot.

A groundwater budget summarizes the amount of water entering and leaving the aquifer according to the groundwater availability model. Selected components were extracted from the groundwater budget for the aquifers located within the district and averaged over the duration of the respective calibration and verification portion of each model run, as shown in tables 1 to 6. The components of the modified budgets shown in the tables include:

• Precipitation recharge—This is the areally distributed recharge sourced from precipitation falling on the outcrop areas of the aquifers (where the aquifer is exposed at land surface) within the district.
• Surface water outflow—This is the total water exiting the aquifer (outflow) to surface water features such as streams, reservoirs, and drains (springs).
• Flow into and out of district—This component describes lateral flow within the aquifer between the district and adjacent counties.
• Flow between aquifers—This describes the vertical flow, or leakage, between aquifers or confining units. This flow is controlled by the relative water levels in each aquifer or confining unit and aquifer properties of each aquifer or confining unit that define the amount of leakage that occurs. “Inflow” to an aquifer from an overlying or underlying aquifer will always equal the “Outflow” from the other aquifer. The information needed for the district’s management plan is summarized in tables 1 to 6. It is important to note that sub-regional water budgets are not exact. This is due to the size of the model cells and the approach used to extract data from the model. To avoid double accounting, a model cell that straddles a political boundary, such as district or county boundaries, is assigned to one side of the boundary based on the location of the centroid of the model cell. For example, if a cell contains two counties, the cell is assigned to the county where the centroid of the cell is located (See Figures 1 to 6)

Table 1: Summarized information for the Edwards (Balcones Fault Zone) Aquifer that is needed for Evergreen Underground Water Conservation District's groundwater management plan. All values are reported in acre-feet per year and rounded to the nearest 1 acre-foot.

Management Plan requirement	Aquifer	Results
Estimated annual amount of recharge from precipitation to the district	Edwards (Balcones Fault Zone) Aquifer	0
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Edwards (Balcones Fault Zone) Aquifer	0
Estimated annual volume of flow into the district within each aquifer in the district.	Edwards (Balcones Fault Zone) Aquifer	70
Estimated annual volume of flow out of the district within each aquifer in the district	Edwards (Balcones Fault Zone) Aquifer	0
Estimated net annual volume of flow between each aquifer in the district	Not applicable	Not applicable

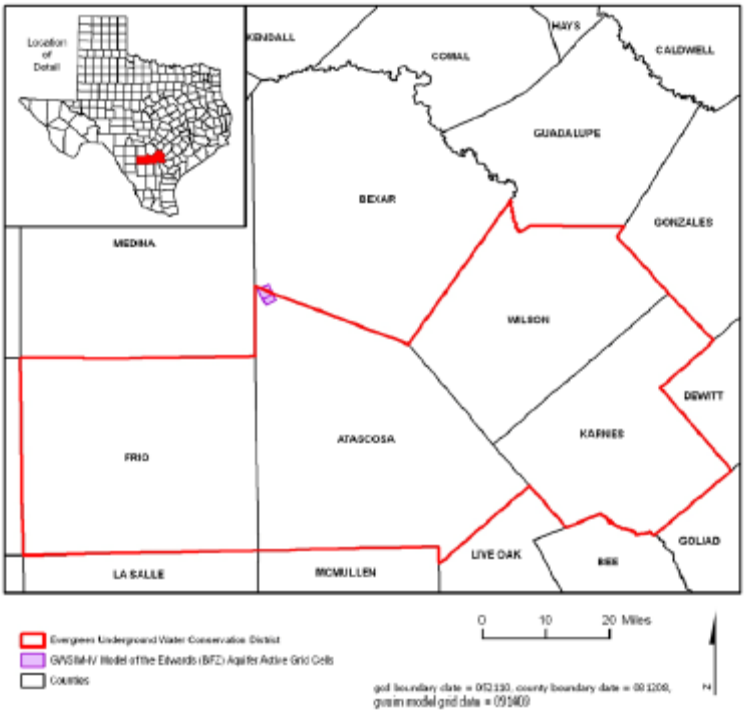

Figure 1: Area of the groundwater availability model for the San Antonio segment of the Edwards (Balcones Fault Zone) Aquifer from which the information in Table 1 was extracted (the aquifer within the district boundary).

Table 2: Summarized information for the Sparta Aquifer that is needed for Evergreen Underground Water Conservation District's groundwater management plan. All values are reported in acre-feet per year and rounded to the nearest 1 acre-foot. Flows may include fresh and brackish waters.

Management Plan requirement	Aquifer or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Sparta Aquifer	9,286
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Sparta Aquifer	4,912
Estimated annual volume of flow into the district within each aquifer in the district.	Sparta Aquifer	438
Estimated annual volume of flow out of the district within each aquifer in the district	Sparta Aquifer	2,380
Estimated net annual volume of flow between each aquifer in the district	Sparta Aquifer into the Weches Confining Unit	6,081

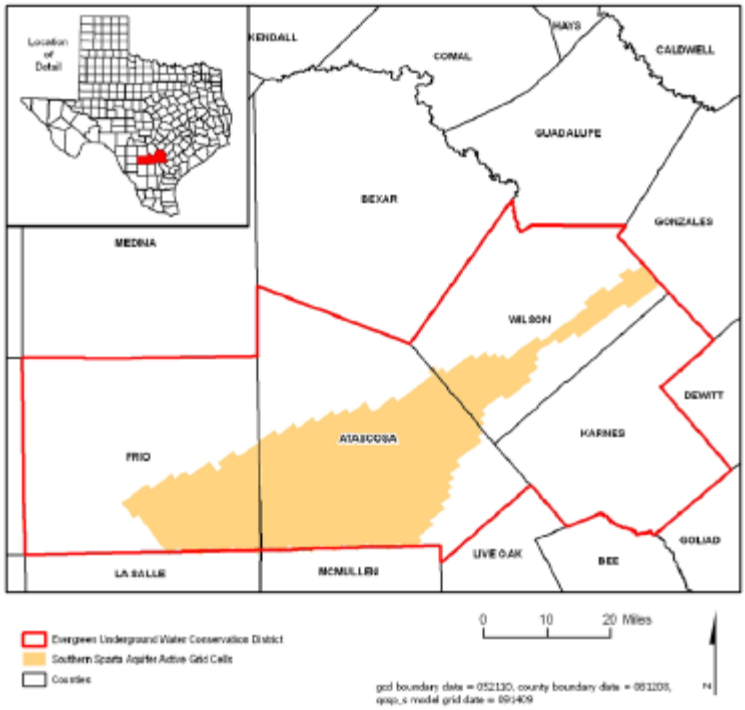

Figure 2: Area of the groundwater availability model for the southern part of the Sparta Aquifer from which the information in Table 2 was extracted (the aquifer extent within the district boundary).

Table 3: Summarized information for the Queen City Aquifer that is needed for Evergreen Underground Water Conservation District's groundwater management plan. All values are reported in acre-feet per year and rounded to the nearest 1 acre-foot. Flows may include fresh and brackish waters.

Management Plan requirement	Aquifer or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Queen City Aquifer	27,417
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Queen City Aquifer	7,095
Estimated annual volume of flow into the district within each aquifer in the district.	Queen City Aquifer	736
Estimated annual volume of flow out of the district within each aquifer in the district	Queen City Aquifer	2,911
Estimated net annual volume of flow between each aquifer in the district	Weches Confining Unit into the Queen City Aquifer	8,714
	Queen City Aquifer into the Reklaw Confining Unit	11,935

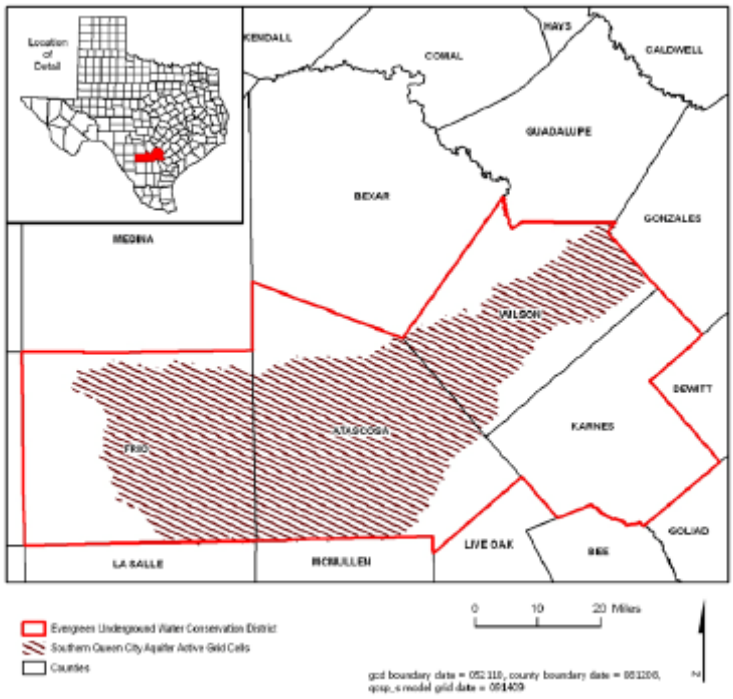

Figure 3: Area of the groundwater availability model for the southern part of the Queen City Aquifer from which the information in Table 3 was extracted (the aquifer extent within the district boundary).

Table 4: Summarized information for the Carrizo-Wilcox Aquifer that is needed for Evergreen Underground Water Conservation District's groundwater management plan. All values are reported in acre-feet per year and rounded to the nearest 1 acre-foot. Flows may include fresh and brackish waters.

Management Plan requirement	Aquifer or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Carrizo-Wilcox Aquifer	21,025
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Carrizo-Wilcox Aquifer	3,624
Estimated annual volume of flow into the district within each aquifer in the district.	Carrizo-Wilcox Aquifer	72,459
Estimated annual volume of flow out of the district within each aquifer in the district	Carrizo-Wilcox Aquifer	17,935
Estimated net annual volume of flow between each aquifer in the district	Reklaw Confining Unit into the Carrizo-Wilcox Aquifer	18,691

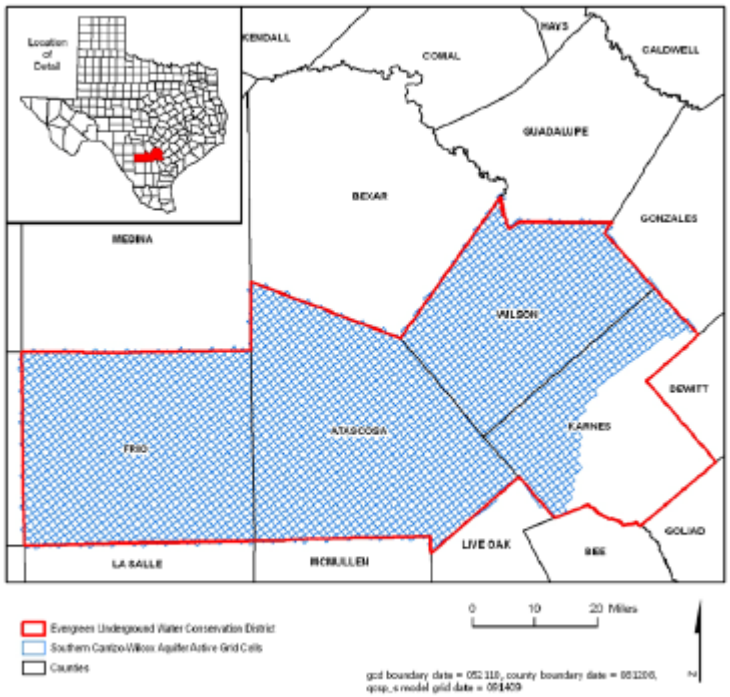

Figure 4: Area of the groundwater availability model for the southern part of the Carrizo-Wilcox Aquifer from which the information in Table 4 was extracted (the aquifer extent within the district boundary).

Table 5: Summarized information for the Yegua-Jackson Aquifer that is needed for Evergreen Underground Water Conservation District's groundwater management plan. All values are reported in acre-feet per year and rounded to the nearest 1 acre-foot. Flows may include fresh and brackish waters.

Management Plan requirement	Aquifer	Results
Estimated annual amount of recharge from precipitation to the district	Yegua-Jackson Aquifer	41,827
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Yegua-Jackson Aquifer	46,061
Estimated annual volume of flow into the district within each aquifer in the district.	Yegua-Jackson Aquifer	3,030
Estimated annual volume of flow out of the district within each aquifer in the district	Yegua-Jackson Aquifer	4,942
Estimated net annual volume of flow between each aquifer in the district	Not applicable	Not applicable

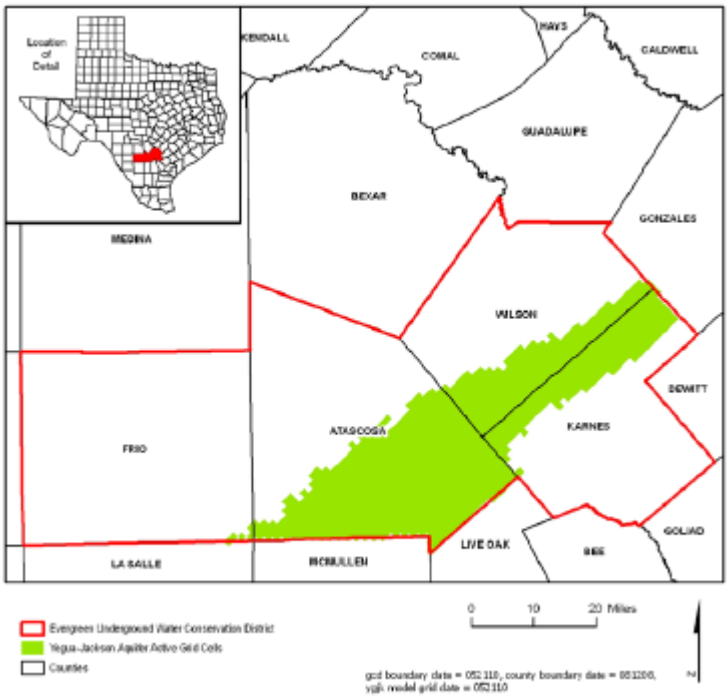

Figure 5: Area of the groundwater availability model for the Yegua-Jackson Aquifer from which the information in Table 5 was extracted (the aquifer extent within the district boundary).

Table 6: Summarized information for the Gulf Coast Aquifer that is needed for Evergreen Underground Water Conservation District's groundwater management plan. All values are reported in acre-feet per year and rounded to the nearest 1 acre-foot.

Management Plan requirement	Aquifer	Results
Estimated annual amount of recharge from precipitation to the district	Gulf Coast Aquifer	384
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Gulf Coast Aquifer	1,579
Estimated annual volume of flow into the district within each aquifer in the district.	Gulf Coast Aquifer	553
Estimated annual volume of flow out of the district within each aquifer in the district	Gulf Coast Aquifer	670
Estimated net annual volume of flow between each aquifer in the district	Not applicable	Not applicable

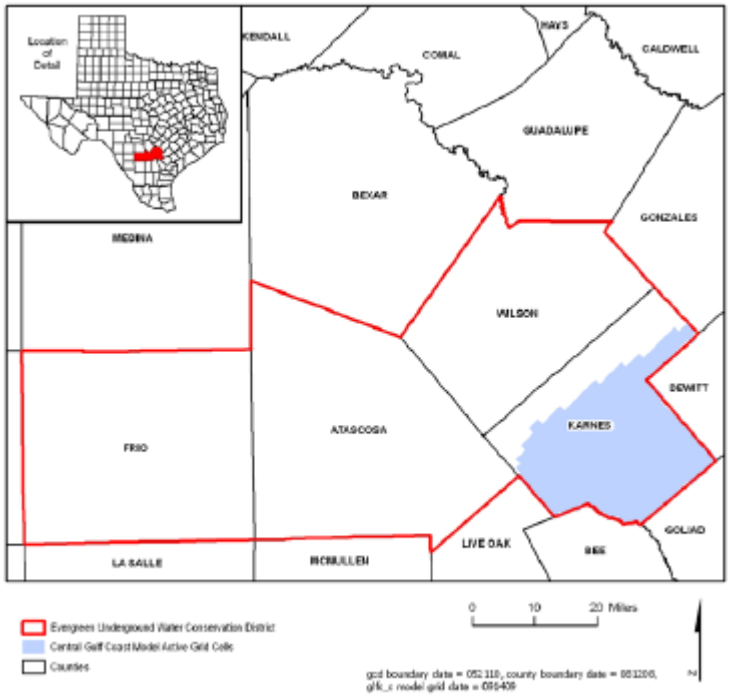

Figure 6: Area of the groundwater availability model for the central part of the Gulf Coast Aquifer from which the information in Table 6 was extracted (the aquifer extent within the district boundary).

Details On How Natural Or Artificial Recharge In The District Might Be Increased

The natural or artificial recharge in the District might be feasibly increased by airborne seeding of cumuliform clouds with either glaciogenic, or hygroscopic material. Based on data from the North Dakota Atmospheric Resource Board the District estimates that airborne cloud seeding may increase the rainfall in the District by approximately 10-15 percent.

Annual Amount Of Groundwater Used In The District

The District estimates that the amount of groundwater being used within the District on an annual basis for Atascosa, Frio, Karnes and Wilson Counties in the Year 2003 was 142,984 ac-ft per year (Table 7). This estimate is taken from the TWDB Annual Water Use Survey data. The data for the Year 2003 is the most recent year for which survey data has been released.

The TWDB Annual Water Use Survey data is available for the Years 1980, 1984 – 2003. The TWDB estimates groundwater use in the District for the entire period of record are presented as supporting documentation. (Appendix C)

Table 7 - Annual Amount of Groundwater Used in the District from TWDB Annual Water Use Survey (acre-feet per year)

Aquifer	2003	2002	2001	2000	1999	1998
Atascosa						
Carrizo-Wilcox	33,692	61,348	47,310	45,408	48,496	59,498
Queen City	720	1,010	887	733	769	973
Sparta	86	69	87	66	65	64
Edwards (BFZ)	1,092	1,974	1,538	1,525	1,580	1,900
Frio						
Carrizo-Wilcox	85,807	91,180	106,978	120,018	83,296	87,106
Queen City	149	71	64	99	95	85
Sparta	16	10	10	10	9	8
Karnes						
Carrizo-Wilcox	653	535	342	394	387	387
Gulf Coast	3,453	3,190	3,031	3,790	3,879	3,857
Wilson						
Carrizo-Wilcox	17,316	14,521	14,984	21,621	16,715	14,363
Annual Total	**142,984**	**173,908**	**175,231**	**193,664**	**155,291**	**168,241**

Carrizo-Wilcox = Carrizo-Wilcox aquifer, Queen City = Queen City aquifer, Sparta = Sparta aquifer, Edwards (BFZ) = Edwards Balcones Fault Zone aquifer, Gulf Coast = Gulf Coast aquifer

Estimate Of Projected Water Supplies In The District

The estimate of total projected water supplies in the District for the year 2010 is 181,752 ac-ft per year (Table 8). This estimate represents both ground and surface water supplies. The estimate is taken from the data in Tables C-1, C-8 and C-13 and C-20 of the 2006 South Central Texas Regional Water Plan and the 2007 State Water Plan (SWP). The complete set of projected water supply estimates is presented as supporting documentation. (Appendix D)

Table 8 - County Totals for Estimates of Projected Water Supplies (acre-feet per year)

County	2010	2020	2030	2040	2050	2060
Atascosa	57,331	57,313	57,294	57,277	57,182	56,609
Frio	89,817	86,896	84,101	81,427	78,866	76,392
Karnes	8,377	8,295	8,223	8,156	8,097	8,043
Wilson	26,227	25,080	24,148	23,326	22,601	21,976
Total	**181,752**	**177,584**	**173,766**	**170,186**	**166,746**	**163,020**

Estimate Of Projected Water Demand In The District

The estimate of total projected water demand in the District for the year 2010 is 169,075 ac-ft per year (Table 9). This estimate represents water demands that may be met by either ground or surface water and is taken from the 2007 SWP. The complete set of projected water demand estimates by county is presented as supporting documentation. (Appendix E).

Table 9 - County Totals for Estimates of Projected Water Demand (acre-feet per year)

County	2010	2020	2030	2040	2050	2060
Atascosa	56,759	56,280	56,638	57,099	57,882	58,938
Frio	86,844	84,164	81,603	79,114	76,713	74,349
Karnes	5,718	5,850	6,008	6,116	6,163	6,167
Wilson	19,754	20,195	20,936	21,771	22,873	24,193
Total	**169,075**	**166,489**	**165,185**	**164,100**	**163,631**	**163,647**

Comparison Of Water Supply And Demand Projections

A comparison of the estimates of the total projected water supplies (Table 8) and projected water demand (Table 9) in the District indicates a water surplus of 12,677 acre-feet per year for the year 2010 (Table 10). Positive values represent projected water surpluses and negative values represent projected water needs as shown in the year 2050.

Table 10 - Estimates of Identified Water Surplus and Needs (acre-feet per year)

County	2010	2020	2030	2040	2050	2060
Atascosa	572	1,033	656	178	**-700**	**-2,329**
Frio	2,973	2,732	2,498	2,313	2,153	2,043
Karnes	2,659	2,445	2,215	2,040	1,934	1,876
Wilson	6,472	4,885	3,212	1,555	**-272**	**-2,216**
Total Surplus(+) / Need(-)	12,677	11,095	8,581	6,086	3,115	**-627**

Water Management Strategies To Meet Needs Of Water User Groups

The SCTRWPG (Region L) developed a water supply plan for the identified water user groups with a projected shortage, or need. The SCTRWPG prepared a diverse set of resource management strategies to meet the water related resource management needs of the region. Management strategies can be integrated in various ways to fit the water management objectives and values of different regions and to achieve multiple resource benefits. A majority of these strategies are conservation based measures intended to serve a larger amount of people with the same or similar amount of water. These additional resource estimates are summarized in Table 11. The estimate is taken from the SWP 2007. The complete set of recommended strategies is presented as supporting documentation. (Appendix F).

Table 11 - County and District Totals by Decade of Additional Resources from Recommended Water Management Strategies (acre-feet per year)

County	2010	2020	2030	2040	2050	2060
Atascosa	4184	4,417	3,843	5,064	7,102	10,367
Frio	220	452	634	782	946	1,114
Karnes	580	750	866	946	1,029	1,516
Wilson	1,038	2,093	3,822	4,862	6,841	9,723
District Totals	6,022	7,712	9,165	11,654	15,918	22,720

Management Goals, Objectives And Performance Standards

GOAL 1.0 – ADDRESSING THE EFFICIENT USE OF GROUNDWATER

Management Objective

1.1 - Each month the District will monitor the volume of water produced from nine irrigation wells and make note of the crops irrigated by the wells to promote water conservation in irrigation practices.

Performance Standard
1.1 - A table of the monthly meter readings from the nine irrigation wells and a discussion of the irrigation application rates for each type of crop irrigated by the nine wells monitored by the District will be included in the Annual Report on District Activities made to the Board of Directors each year.

Management Objective
1.2 - Each month the District will monitor the volume of water produced from 35 municipal and Rural water suppliers in the District.

Performance Standard
1.2 - A table showing the monthly production volumes reported to the District by the Municipal and Rural water suppliers in the District will be included in the Annual Report on District Activities made to the Board of Directors each year.

Management Objective
1.3 - Each year the District will request production reports from the operators of 800 agricultural irrigation wells in the District.

Performance Standard
1.3a - A copy of the request for production reports sent to the operators of agricultural irrigation wells will be included in the Annual Report on District Activities made to the Board of Directors each year.

1.3b – A table showing the production volumes reported to the District from the agricultural irrigation well operators in the District will be included in the Annual Report on District Activities made to the Board of Directors each year.

Management Objective
1.4 - Each month the District will measure the water levels in 45 water wells and will measure the water level of an additional126 wells on an annual basis each year.

Performance Standard
1.4 - A table showing the monthly and a table showing the annual water level measurements made by the District will be included in the Annual Report on District Activities made to the Board of Directors each year.

GOAL 2.0 - ADDRESSING THE CONTROL AND PREVENTION OF THE WASTE OF GROUNDWATER

Management Objective
2.1 - Each year the District will conduct an on-site investigation of all reports of waste of groundwater within two working days of the time of the receipt of the report to the District.

Performance Standard

2.1 – A discussion of the waste of groundwater observed by the District each year, including the number of reports of the waste of groundwater received by the District and the District response to the report will be included in the Annual Report on District Activities made to the Board of Directors each year.

GOAL 3.0 - ADDRESSING THE CONJUNCTIVE USE OF SURFACE AND GROUNDWATER

Management Objective

3.1 – Each year the District will use the Southern Carrizo-Wilcox Groundwater Availability Model to predict the potential effects of different groundwater pumping scenarios on both groundwater and surface water. In addition, each year the District will arrange to meet with the appropriate surface water management entities.

Performance Standard

3.1a – A discussion of the groundwater pumping scenario simulated in the Southern Carrizo-Wilcox Groundwater Availability Model run made by or for the District and a summary of the simulation results will be included in the Annual Report on District Activities made to the Board of Directors each year.

3.1b – A summary of the discussion(s) with the surface water management entities for status on surface water conditions will be relayed in a memorandum to the Board of Directors each year.

GOAL 4.0 - ADDRESSING NATURAL RESOURCE ISSUES WHICH IMPACT THE USE AND AVAILABILITY OF GROUNDWATER, AND WHICH ARE IMPACTED BY THE USE OF GROUNDWATER.

Management Objective

4.1 – Each year the District will sample at least 40 water wells in the District for chemical analysis of water quality.

Performance Standard

4.1a - A table giving the results of the chemical analyses of the water quality samples taken by the District each year will be included in the Annual Report on District Activities made to the Board of Directors.

4.1b – A discussion of whether any instances of groundwater contamination or issues of concern were noted in the water quality sample analyses will be included in the Annual Report on District Activities made to the Board of Directors.

GOAL 5.0 ADDRESSING CONSERVATION

Management Objective

5.1 – Each year, the District will submit an article for publication regarding water conservation to one newspaper of general circulation in the District.

Performance Standard
5.1 - A copy of the article regarding water conservation submitted by the District for publication to a newspaper of general circulation in the District will be included in the Annual Report to the Board of Directors.

Management Objective
5.2 – Each year, the District will include an informative flier on water conservation with at least one mail-out distributed in the normal course of business to groundwater use permit holders in the District.

Performance Standard
5.2 - The Annual Report to the Board of Directors will include a copy of the informative flier regarding water conservation that was distributed to groundwater use permit holders in the District and the number of fliers distributed.

GOAL 6.0 ADDRESSING DROUGHT CONDITIONS

Management Objective
6.1 – Each month, the District will download at least one updated Palmer Drought Severity Index (PDSI) map posted on the National Weather Service - Climate Prediction Center website (http://www.cpc.ncep.noaa.gov/products/monitoring_and_data/drought.shtml) and check for the periodic updates to the Drought Preparedness Council Situation Report (Situation Report) posted on the Texas Department of Public Safety website (http://www.txdps.state.tx.us/dem/sitrepindex.htm).

Performance Standard
6.1 - Quarterly, the District will make an assessment of the status of drought in the District and prepare a quarterly briefing to the Board of Directors. The downloaded PDSI maps and Situation Reports will be included with copies of the quarterly briefing in the District Annual Report to the Board of Directors.

GOAL 7.0 ADDRESSING IN A QUANTITATIVE MANNER THE DESIRED FUTURE CONDITION (DFC)

The desired future conditions and managed available groundwater numbers of the groundwater within the District have not yet been fully established in accordance with Chapter 36.108 of the Texas Water Code. The District is actively participating in the joint planning process and the development of a desired future condition for the portion of the aquifers within the District and GMAs 13 and 15. Therefore, this goal is not applicable to the District at this time.

At this time, the District has determined that the following goals and objectives are not appropriate or cost-effective and therefore the District has determined them to be not applicable at this time:

Rainwater Harvesting

Precipitation Enhancement

Recharge Enhancement

Brush Control.

Controlling and Preventing Subsidence (31 TAC 356.5 (a)(1))

Methodology For Tracking District Progress In Achieving Management Goals

The District Manager will prepare and present an annual report to the Board of Directors on District performance in regards to achieving management goals and objectives. The presentation of the report will occur during the last monthly Board meeting each fiscal year. The report will include the number of instances in which each of the activities specified in the District's management objectives was engaged in during the fiscal year. Each activity will be referenced to the estimated expenditure of staff time and budget in accomplishment of the activity. The notations of activity frequency, staff time and budget will be referenced to the appropriate performance standard for each management objective describing the activity, so that the effectiveness and efficiency of the District's operations may be evaluated. The Board will maintain the report on file for public inspection at the District's office upon adoption. This methodology will apply to all management goals contained within this plan.

Regulatory Action Plan

The objective of the District Rules are to translate the legislative mandate of the District and Chapter 36 of the Texas Water Code into policy and specific objectives and requirements that are needed to effectively manage and preserve the groundwater resources within the District. The Rules set forth the requirements necessary to receive a water well drilling and production permit, and the associated responsibilities of conservation and preservation of the resource. The requirements are written as general guidelines, and each permit will be evaluated based upon the best scientific data available. The current demand on the aquifer and trend of the water levels in the area may be determining factors in the evaluation of a permit application.

Groundwater Protection

Groundwater contamination may result from many sources, including current and past oil and gas production, agricultural activities, industrial and manufacturing processes, commercial and business endeavors, domestic activities, and natural sources that may be influenced or may result from human activities.

The District shall take appropriate measures to discontinue activities that are either causing, or are a potential threat to cause groundwater contamination. Due to permeability of aquifer outcrops and recharge zones, there is a greater threat for groundwater contamination from surface pollution in recharge and outcrop regions, and the District will impose more stringent restrictions on those areas.

Address And Office Hours

The Evergreen Underground Water Conservation District Office is located at:
110 Wyoming Blvd.
Pleasanton, TX 78064
Office Hours: Monday - Friday 8:00 a.m.-12:00 p.m. - 1:00 p.m.-5:00 p.m.

Telephone: (830) 569-4186
Fax: (830) 569-4238
E-mail: mmahoney@karnesec.net

Fees

Copies of the District Rules and Management Plan are $5.00.

Water Well Drilling Permit fee is $175.00, of which $75.00 is refundable to the applicant upon receipt of the driller's log and well registration to the District.

Water Well Production Permit fee is $25.00.

Well Registration fee for exempt wells is $10.00.

Transportation Permit fee is $2,000.00

Photocopies of District Documents are $0.10 each.

Sending or receiving Facsimiles is $2.00 for first page and $1.00 there after, including cover sheet.

Document research by a District Employee is $15.00 /hr.

The cost of postage will be added when applicable.

Definitions

“Act” means the legislative Act that created the District and governs its operations.

(Act of 1965, 59th Legislature, Ch. 197, H.B. 116, Pg. 398 (amended 1967, 1983, 1985)).

“Area” means a geographical area designated by the Board in which regulatory policy will be applied.

“Beneficial Use” means agricultural, gardening, domestic, stock raising, municipal, mining, manufacturing, industrial, commercial, recreational or pleasure purposes, or any other use that is beneficial and not considered waste.

“Board” means the Board of Directors of the Evergreen Underground Water Conservation District.

“Certificate Of Convenience And Need (CCN)” means the designation of geographical boundaries of the service area of a water utility.

“Groundwater” means water located beneath the earth’s surface but does not include water produced with oil in the production of oil and gas.

“Mining of an Aquifer or Aquifer Mining” means to extract groundwater from an aquifer at an annual rate which exceeds the normal annual recharge to the aquifer.

“Outcrop” means an area where an underground stratum or geologic formation is found at the surface of the ground.

“Person” includes corporation, individual, organization, political subdivision or agency, business trust, estate trust, partnership, association, or any other legal entity.

“Plan” means this District Plan.

“Transportation Facility” means any facility constructed for the purpose of transporting groundwater out of the District.

“Water Utility” means any corporation, company, entity, political subdivision, public or private, that sells water to any person within its service area.

“Well” means any excavation, facility, device, or method that could be used to withdraw groundwater.

“Withdraw” means the act of extracting groundwater by any method.

Appendix A - Evidence of the Administrative Processes Required for the Certification of the Groundwater Management Plan as Administratively Complete

Resolution No. R11001

RESOLUTION ADOPTING MANAGEMENT PLAN OF THE

EVERGREEN UNDERGROUND WATER CONSERVATION DISTRICT

WHEREAS, The Management Plan of the Evergreen Underground Water Conservation District, attached hereto as Attachment A, has been developed for the purpose of conserving, preserving, protecting and recharging the underground water in the District, and this action is taken under the District's statutory authority to prevent waste and protect rights of owners of interest in groundwater;

WHEREAS, The Management Plan meets the requirements of Senate Bill 1;

WHEREAS, Under no circumstances, and in no particular case will this Management Plan, or any part of it, be construed as a limitation or restriction upon the exercise of any discretion, where such exists; nor will it in any event be construed to deprive the Board of an exercise of powers, duties and jurisdiction conferred by law, nor to limit or restrict the amount and character of data or information which may be required for the proper administration of the law.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE EVERGREEN UNDERGROUND WATER CONSERVATION DISTRICT THAT:

1) The "Management Plan of the Evergreen Underground Water Conservation District" contained in attachment A is hereby adopted.

2) This Management Plan will take effect upon certification by the Texas Water Development Board, and shall be in effect for a period of ten (10) years from said date.

AND IT IS SO ORDERED

PASSED AND ADOPTED ON THIS 25TH DAY OF FEBRUARY 2011.

SIGNED Paul Bordovsky
Paul Bordovsky – President

ATTEST Steve Snider
Steve Snider – Vice-President

Appendix B - District Rules

EVERGREEN UNDERGROUND WATER
CONSERVATION DISTRICT
DISTRICT RULES

District Rules are available at: **http://www.evergreenuwcd.org/rules.php.**

Appendix C - TWDB Annual Water Use Survey Groundwater Use Estimates for Atascosa, Frio, Karnes and Wilson Counties 1980, 1984 – 2003

Atascosa County Estimated Groundwater use (acre-feet per year)

Aquifer	Year	Municipal	Mfg	Power	Mining	Irrigation	Livestock	Total
Carrizo-Wilcox	1980	3596	0	0	1171	68496	142	73405
Edwards-BFZ	1980	433	0	0	0	0	0	433
Queen City	1980	113	0	0	0	4382	49	4544
Sparta	1980	26	0	0	0	730	20	776
Carrizo-Wilcox	1984	6262	3	5792	949	34344	149	47499
Edwards-BFZ	1984	693	0	0	0	0	0	693
Queen City	1984	197	0	0	0	695	38	930
Sparta	1984	72	0	0	0	0	4	76
Carrizo-Wilcox	1985	2394	3	3950	1752	30947	157	39203
Edwards-BFZ	1985	510	0	0	0	0	0	510
Queen City	1985	3326	0	0	0	624	40	3990
Sparta	1985	32	0	0	0	0	4	36
Carrizo-Wilcox	1986	4604	3	5550	1002	42738	137	54034
Edwards-BFZ	1986	495	0	0	0	0	0	495
Queen City	1986	26	0	0	0	862	35	923
Sparta	1986	0	0	0	0	0	4	4
Carrizo-Wilcox	1987	4635	0	5626	1373	26254	118	38006
Edwards-BFZ	1987	471	0	0	0	0	0	471
Queen City	1987	27	0	0	0	529	30	586
Sparta	1987	39	0	0	0	0	3	42
Carrizo-Wilcox	1988	5683	0	6352	1313	34749	122	48219
Edwards-BFZ	1988	582	0	0	0	0	0	582
Queen City	1988	28	0	0	0	701	31	760
Sparta	1988	46	0	0	0	0	3	49
Carrizo-Wilcox	1989	5980	0	5532	597	49894	120	62123
Edwards-BFZ	1989	670	0	0	0	0	0	670
Queen City	1989	34	0	0	0	1020	31	1085
Sparta	1989	51	0	0	0	0	3	54
Carrizo-Wilcox	1990	4982	0	6036	664	46275	125	58082
Edwards-BFZ	1990	552	0	0	0	0	0	552
Queen City	1990	157	0	0	0	933	32	1122
Sparta	1990	56	0	0	0	0	3	59
Carrizo-Wilcox	1991	2917	0	6637	1428	48684	128	59794
Edwards-BFZ	1991	497	0	0	0	0	0	497
Queen City	1991	166	0	0	0	982	33	1181
Sparta	1991	57	0	0	0	0	3	60
Carrizo-Wilcox	1992	4232	0	5987	1412	36339	141	48111
Edwards-BFZ	1992	483	0	0	0	0	0	483
Queen City	1992	165	0	0	0	733	36	934
Sparta	1992	56	0	0	0	0	3	59

Atascosa County Estimated Groundwater use, Continued (acre-feet per year)

Aquifer	Year	Municipal	Mfg	Power	Mining	Irrigation	Livestock	Total
Carrizo-Wilcox	1993	4,625	0	6,474	1,344	42,847	150	55,440
Edwards-BFZ	1993	515	0	0	0	0	0	515
Queen City	1993	160	0	0	0	882	38	1,080
Sparta	1993	57	0	0	0	0	3	60
Carrizo-Wilcox	1994	4,698	0	6,146	1,264	42,518	168	54,794
Edwards-BFZ	1994	494	0	0	0	1,464	0	1,958
Queen City	1994	158	0	0	0	809	43	1,010
Sparta	1994	53	0	0	0	0	3	56
Carrizo-Wilcox	1995	4,785	0	5,980	1,377	45,182	154	57,478
Edwards-BFZ	1995	536	0	0	0	1,372	0	1,908
Queen City	1995	155	0	0	0	860	39	1,054
Sparta	1995	52	0	0	0	0	3	55
Carrizo-Wilcox	1996	5,213	0	5,848	1,377	46,529	144	59,111
Edwards-BFZ	1996	605	0	0	0	1,413	0	2,018
Queen City	1996	153	0	0	0	886	36	1,075
Sparta	1996	70	0	0	0	0	3	73
Carrizo-Wilcox	1997	4,759	0	6,839	1,256	35,172	131	48,157
Edwards-BFZ	1997	493	0	0	0	1,068	0	1,561
Queen City	1997	61	0	0	0	670	33	764
Sparta	1997	61	0	0	0	0	3	64
Carrizo-Wilcox	1998	4,788	0	7,209	1,125	46,254	122	59,498
Edwards-BFZ	1998	496	0	0	0	1,404	0	1,900
Queen City	1998	61	0	0	0	881	31	973
Sparta	1998	61	0	0	0	0	3	64
Carrizo-Wilcox	1999	4,871	0	6,839	1,256	35,398	132	48,496
Edwards-BFZ	1999	505	0	0	0	1,075	0	1,580
Queen City	1999	62	0	0	0	674	33	769
Sparta	1999	62	0	0	0	0	3	65
Carrizo-Wilcox	2000	4,931	0	5,814	1,125	33,402	136	45,408
Edwards-BFZ	2000	511	0	0	0	1,014	0	1,525
Queen City	2000	63	0	0	0	636	34	733
Sparta	2000	63	0	0	0	0	3	66
Carrizo-Wilcox	2001	4,980	0	7,378	991	33,207	754	47,310
Edwards-BFZ	2001	530	0	0	0	1,008	0	1,538
Queen City	2001	64	0	0	0	633	190	887
Sparta	2001	70	0	0	0	0	17	87
Carrizo-Wilcox	2002	4,598	0	7,362	1,163	48,104	121	61,348
Edwards-BFZ	2002	513	0	0	0	1,461	0	1,974
Queen City	2002	64	0	0	0	916	30	1,010
Sparta	2002	66	0	0	0	0	3	69
Carrizo-Wilcox	2003	4,534	0	7,362	1,113	19,568	1,115	33,692
Edwards-BFZ	2003	503	0	0	0	589	0	1,092
Queen City	2003	66	0	0	0	373	281	720
Sparta	2003	60	0	0	0	0	26	86

Frio County Estimated Groundwater use (acre-feet per year)

Aquifer	Year	Municipal	Mfg	Power	Mining	Irrigation	Livestock	Total
Carrizo-Wilcox	1980	2,878	12	682	341	74,015	177	78,105
Queen City	1980	60	0	0	0	748	34	842
Sparta	1980	8	0	0	0	0	4	12
Carrizo-Wilcox	1984	2,858	12	348	323	88,390	110	92,041
Queen City	1984	41	0	0	0	893	21	955
Sparta	1984	5	0	0	0	0	3	8
Carrizo-Wilcox	1985	2,673	12	289	438	47,975	98	51,485
Queen City	1985	36	0	0	0	485	19	540
Sparta	1985	5	0	0	0	0	2	7
Carrizo-Wilcox	1986	2,636	12	73	7	66,545	88	69,361
Queen City	1986	48	0	0	0	672	17	737
Sparta	1986	6	0	0	0	0	2	8
Carrizo-Wilcox	1987	2,436	0	92	388	65,310	91	68,317
Queen City	1987	48	0	0	0	660	18	726
Sparta	1987	6	0	0	0	0	2	8
Carrizo-Wilcox	1988	2,969	0	794	339	85,207	89	89,398
Queen City	1988	51	0	0	0	861	18	930
Sparta	1988	6	0	0	0	0	2	8
Carrizo-Wilcox	1989	3,280	0	7	313	95,405	88	99,093
Queen City	1989	51	0	0	0	964	17	1,032
Sparta	1989	6	0	0	0	0	2	8
Carrizo-Wilcox	1990	2,992	0	1	313	80,752	89	84,147
Queen City	1990	47	0	0	0	816	18	881
Sparta	1990	6	0	0	0	0	2	8
Carrizo-Wilcox	1991	3,001	0	51	222	88,548	92	91,914
Queen City	1991	52	0	0	0	804	18	874
Sparta	1991	6	0	0	0	0	2	8
Carrizo-Wilcox	1992	2,552	0	50	222	85,424	98	88,346
Queen City	1992	41	0	0	0	776	19	836
Sparta	1992	5	0	0	0	0	2	7

Frio County Estimated Groundwater use, Continued (acre-feet per year)

Aquifer	Year	Municipal	Mfg	Power	Mining	Irrigation	Livestock	Total
Carrizo-Wilcox	1993	2,991	0	111	215	96,683	108	100,108
Queen City	1993	38	0	0	0	878	21	937
Sparta	1993	4	0	0	0	0	2	6
Carrizo-Wilcox	1994	2,904	0	185	214	106,657	122	110,082
Queen City	1994	42	0	0	0	0	24	66
Sparta	1994	5	0	0	0	0	2	7
Carrizo-Wilcox	1995	2,486	0	192	139	101,885	123	104,825
Queen City	1995	50	0	0	0	0	24	74
Sparta	1995	6	0	0	0	0	2	8
Carrizo-Wilcox	1996	3,004	0	227	139	92,487	75	95,932
Queen City	1996	53	0	0	0	0	15	68
Sparta	1996	6	0	0	0	0	1	7
Carrizo-Wilcox	1997	2,545	0	125	139	58,877	74	61,760
Queen City	1997	65	0	0	0	0	15	80
Sparta	1997	7	0	0	0	0	1	8
Carrizo-Wilcox	1998	2,515	0	134	139	84,215	103	87,106
Queen City	1998	64	0	0	0	0	21	85
Sparta	1998	7	0	0	0	0	1	8
Carrizo-Wilcox	1999	2,875	0	134	139	80,040	108	83,296
Queen City	1999	73	0	0	0	0	22	95
Sparta	1999	8	0	0	0	0	1	9
Carrizo-Wilcox	2000	3,112	0	129	139	116,538	100	120,018
Queen City	2000	79	0	0	0	0	20	99
Sparta	2000	9	0	0	0	0	1	10
Carrizo-Wilcox	2001	3,340	0	203	139	103,228	68	106,978
Queen City	2001	50	0	0	0	0	14	64
Sparta	2001	9	0	0	0	0	1	10
Carrizo-Wilcox	2002	2,630	0	216	139	88,091	104	91,180
Queen City	2002	50	0	0	0	0	21	71
Sparta	2002	9	0	0	0	0	1	10
Carrizo-Wilcox	2003	2,445	0	188	139	82,548	487	85,807
Queen City	2003	50	0	0	0	0	99	149
Sparta	2003	9	0	0	0	0	7	16

Karnes County Estimated Groundwater use (acre-feet per year)

Aquifer	Year	Municipal	Mfg	Power	Mining	Irrigation	Livestock	Total
Carrizo-Wilcox	1980	192	0	0	1,102	0	57	1,351
Gulf Coast	1980	2,074	8	0	44	500	105	2,731
Carrizo-Wilcox	1984	228	297	0	233	0	57	815
Gulf Coast	1984	2,728	4	0	43	1,668	105	4,548
Carrizo-Wilcox	1985	194	96	0	255	0	46	591
Gulf Coast	1985	2,375	5	0	23	1,270	87	3,760
Carrizo-Wilcox	1986	213	90	0	257	0	45	605
Gulf Coast	1986	2,222	2	0	8	1,800	82	4,114
Carrizo-Wilcox	1987	211	122	0	266	0	46	645
Gulf Coast	1987	2,319	0	0	72	1,922	85	4,398
Carrizo-Wilcox	1988	209	105	0	334	0	46	694
Gulf Coast	1988	2,017	0	0	79	2,030	87	4,213
Carrizo-Wilcox	1989	225	211	0	149	0	45	630
Gulf Coast	1989	2,431	0	0	38	282	86	2,837
Carrizo-Wilcox	1990	326	176	0	162	0	46	710
Gulf Coast	1990	2,337	0	0	25	1,831	89	4,282
Carrizo-Wilcox	1991	197	213	0	102	0	25	537
Gulf Coast	1991	2,110	0	0	10	1,440	115	3,675
Carrizo-Wilcox	1992	207	107	0	132	0	24	470
Gulf Coast	1992	2,183	0	0	4	1,185	110	3,482
Carrizo-Wilcox	1993	216	85	0	132	0	23	456
Gulf Coast	1993	2,199	0	0	4	966	108	3,277
Carrizo-Wilcox	1994	212	190	0	132	0	21	555
Gulf Coast	1994	2,181	0	0	4	956	101	3,242
Carrizo-Wilcox	1995	231	127	0	133	0	22	513
Gulf Coast	1995	2,375	0	0	4	1,054	102	3,535
Carrizo-Wilcox	1996	237	10	0	133	0	31	411
Gulf Coast	1996	2,561	0	0	4	1,488	142	4,195
Carrizo-Wilcox	1997	198	1	0	128	0	21	348
Gulf Coast	1997	2,556	0	0	4	642	94	3,296
Carrizo-Wilcox	1998	251	0	0	115	0	21	387
Gulf Coast	1998	3,237	0	0	4	518	98	3,857
Carrizo-Wilcox	1999	251	0	0	115	0	21	387
Gulf Coast	1999	3,241	0	0	4	538	96	3,879
Carrizo-Wilcox	2000	258	0	0	115	0	21	394
Gulf Coast	2000	3,333	0	0	4	356	97	3,790
Carrizo-Wilcox	2001	215	0	0	106	0	21	342
Gulf Coast	2001	2,586	64	0	4	282	95	3,031
Carrizo-Wilcox	2002	408	0	0	106	0	21	535
Gulf Coast	2002	2,650	61	0	4	378	97	3,190
Carrizo-Wilcox	2003	412	0	0	106	0	135	653
Gulf Coast	2003	2,668	59	0	4	117	605	3,453

Wilson County Estimated Groundwater use (acre-feet per year)

Aquifer	Year	Municipal	Mfg	Power	Mining	Irrigation	Livestock	Total
Carrizo-Wilcox	1980	2,504	175	0	228	6,499	255	9,661
Carrizo-Wilcox	1984	3,276	131	0	237	7,211	170	11,025
Carrizo-Wilcox	1985	2,944	167	0	309	6,174	162	9,756
Carrizo-Wilcox	1986	2,958	140	0	0	6,257	181	9,536
Carrizo-Wilcox	1987	3,389	93	0	277	6,734	167	10,660
Carrizo-Wilcox	1988	3,558	76	0	300	8,245	167	12,346
Carrizo-Wilcox	1989	3,971	43	0	281	9,139	165	13,599
Carrizo-Wilcox	1990	3,775	47	0	281	11,642	180	15,925
Carrizo-Wilcox	1991	3,384	0	0	285	10,818	183	14,670
Carrizo-Wilcox	1992	3,343	0	0	285	13,031	190	16,849
Carrizo-Wilcox	1993	3,601	0	0	277	8,677	218	12,773
Carrizo-Wilcox	1994	3,886	0	0	277	10,274	217	14,654
Carrizo-Wilcox	1995	4,084	0	0	277	9,300	207	13,868
Carrizo-Wilcox	1996	4,529	1	0	277	13,656	203	18,666
Carrizo-Wilcox	1997	4,205	0	0	277	11,919	194	16,595
Carrizo-Wilcox	1998	4,486	0	0	277	9,432	168	14,363
Carrizo-Wilcox	1999	4,823	1	0	277	11,424	190	16,715
Carrizo-Wilcox	2000	4,817	0	0	277	16,346	181	21,621
Carrizo-Wilcox	2201	4,457	5	0	277	10,076	169	14,984
Carrizo-Wilcox	2002	4,773	4	0	277	9,278	189	14,521
Carrizo-Wilcox	2003	4,603	4	0	277	11,232	1,200	17,316

Appendix D - Estimates of Projected Water Supplies for Atascosa, Frio, Karnes and Wilson Counties by Decade 2010 - 2060

Atascosa County Projected Water Supplies (acre-feet per year)

Water User Group	River Basin	Type	Source	2010	2020	2030	2040	2050	2060
Benton City WSC	Nueces	GW	Carrizo-Wilcox	831	831	831	831	831	831
Benton City WSC	San Antonio	GW	Carrizo-Wilcox	72	72	72	72	72	72
Bexar Met WD	Nueces	SW	San Antonio River ROR	186	186	186	186	186	186
Charlotte	Nueces	GW	Carrizo-Wilcox	1,004	1,027	1,050	1,073	1,097	1,109
Jourdanton	Nueces	GW	Carrizo-Wilcox	1,629	1,666	1,703	1,741	1,779	1,799
Lytle	Nueces	GW	Edwards-BFZ	243	243	243	243	243	243
McCoy WSC	Nueces	GW	Carrizo-Wilcox	572	585	598	612	625	632
Pleasanton	Nueces	GW	Carrizo-Wilcox	2,557	2,614	2,673	2,732	2,791	2,823
Poteet	Nueces	GW	Carrizo-Wilcox	877	896	917	937	957	968
Co.-Other	Nueces	GW	Carrizo-Wilcox	341	349	357	365	373	377
Co.-Other	San Antonio	GW	Carrizo-Wilcox	21	21	22	23	24	24
Co.-Other	Nueces	GW	Sparta	172	177	182	188	193	198
Industrial	Nueces	GW	Carrizo-Wilcox	7	7	7	8	8	8
Irrigation	Nueces	SW	Nueces River ROR	1	1	1	1	1	1
Irrigation	Nueces	GW	Carrizo-Wilcox	32,066	31,681	31,308	30,933	30,557	29,877
Irrigation	Nueces	GW	Edwards-BFZ	1,168	1,168	1,168	1,168	1,168	1,168
Irrigation	Nueces	GW	Queen City	3,684	3,638	3,604	3,569	3,472	3,357
Irrigation	Nueces	GW	Sparta	978	973	968	962	957	952
Irrigation	San Antonio	GW	Edwards-BFZ	547	547	547	547	547	547
Irrigation	San Antonio	GW	Carrizo-Wilcox	480	479	478	477	475	474
Livestock	Nueces	SW	Local Supply	913	897	879	861	846	838
Livestock	San Antonio	SW	Local Supply	53	53	52	52	51	50
Livestock	Nueces	GW	Carrizo-Wilcox	606	619	633	647	661	669
Livestock	Nueces	GW	Queen City	156	159	163	167	168	168
Livestock	San Antonio	GW	Carrizo-Wilcox	17	17	18	18	19	20
Mining	Nueces	GW	Carrizo-Wilcox	764	825	865	905	946	981
Mining	Nueces	GW	Queen City	541	583	613	644	662	679
Power	Nueces	GW	Carrizo-Wilcox	6,845	6,999	7,156	7,315	7,473	7,558
Projected Water Supplies (acre-feet per year) =				**57,331**	**57,313**	**57,294**	**57,277**	**57,182**	**56,609**

Bexar Met WD = Bexar Met Water District, SW = Surface Water, GW = Groundwater, ROR = Run-of-River, Carrizo-Wilcox = Carrizo-Wilcox aquifer, Edwards-BFZ = Edwards-BFZ aquifer, Gulf Coast = Gulf Coast aquifer, Queen City = Queen City aquifer, Sparta = Sparta aquifer

Frio County Projected Water Supplies (acre-feet per year)

WUG	River Basin	Type	Source	2010	2020	2030	2040	2050	2060
Benton City WSC	Nueces	GW	Carrizo-Wilcox	6	6	6	6	6	6
Dilley	Nueces	GW	Carrizo-Wilcox	2,380	2,380	2,380	2,380	2,380	2,380
Pearsall	Nueces	GW	Carrizo-Wilcox	2,880	2,880	2,880	2,880	2,880	2,880
Co.-Other	Nueces	GW	Carrizo-Wilcox	1,020	1,020	1,020	1,020	1,020	1,020
Irrigation	Nueces	SW	Nueces River ROR	110	110	110	110	110	110
Irrigation	Nueces	GW	Carrizo-Wilcox	76,522	73,798	71,190	68,694	66,304	63,996
Irrigation	Nueces	GW	Queen City	4,675	4,509	4,349	4,197	4,051	3,910
Irrigation	Nueces	GW	Sparta	738	712	687	663	640	617
Livestock	Nueces	SW	Local Supply	605	605	605	605	605	605
Livestock	Nueces	GW	Carrizo-Wilcox	503	503	503	503	503	503
Livestock	Nueces	GW	Queen City	101	101	101	101	101	101
Mining	Nueces	GW	Carrizo-Wilcox	109	104	102	100	98	96
Power	Nueces	GW	Carrizo-Wilcox	168	168	168	168	168	168
Projected Water Supplies (ac-ft/year) =				**89,817**	**86,896**	**84,101**	**81,427**	**78,866**	**76,392**

WUG = Water User Group, SW = Surface Water, GW = Groundwater, ROR = Run-of-River, Carrizo-Wilcox = Carrizo-Wilcox aquifer, Edwards-BFZ = Edwards-BFZ aquifer, Gulf Coast = Gulf Coast aquifer, Queen City = Queen City aquifer, Sparta = Sparta aquifer

Karnes County Projected Water Supplies (acre-feet per year)

WUG	River Basin	Type	Source	2010	2020	2030	2040	2050	2060
El Oso WSC	Nueces	GW	Carrizo-Wilcox	16	16	16	16	16	16
El Oso WSC	San Antonio	GW	Carrizo-Wilcox	573	573	573	573	573	573
El Oso WSC	San Antonio	GW	Gulf Coast	609	609	609	609	609	609
El Oso WSC	Guadalupe	GW	Carrizo-Wilcox	6	6	6	6	6	6
Falls City	San Antonio	GW	Carrizo-Wilcox	145	145	145	145	145	145
Karnes City	San Antonio	GW	Carrizo-Wilcox	512	512	512	512	512	512
Kenedy	San Antonio	GW	Gulf Coast	576	576	576	576	576	576
Runge	San Antonio	GW	Gulf Coast	492	492	492	492	492	492
Sunko WSC	San Antonio	GW	Carrizo-Wilcox	64	64	64	64	64	64
Co.-Other	San Antonio	GW	Carrizo-Wilcox	214	214	214	214	214	214
Co.-Other	Guadalupe	GW	Carrizo-Wilcox	35	35	35	35	35	35
Co.-Other	Nueces	GW	Carrizo-Wilcox	50	50	50	50	50	50
El Oso WSC	SA-Nueces	GW	Carrizo-Wilcox	3	3	3	3	3	3
Co.-Other	SA-Nueces	GW	Gulf Coast	20	20	20	20	20	20
Co.-Other	San Antonio	GW	Gulf Coast	880	880	880	880	880	880
Co.-Other	San Antonio	GW	Gulf Coast	500	500	500	500	500	500
Irrigation	San Antonio	SW	San Antonio River Comibined Run of River	1,418	1,418	1,418	1,418	1,418	1,418
Irrigation	Nueces	GW	Gulf Coast	829	750	679	614	555	502
Livestock	San Antonio	SW	Local Supply	468	468	468	468	468	468
Livestock	San Antonio	GW	Gulf Coast	468	468	468	468	468	468
Livestock	Guadalupe	SW	Local Supply	41	41	41	41	41	41
Livestock	Guadalupe	GW	Gulf Coast	34	34	34	34	34	34
Livestock	Guadalupe	GW	Carrizo-Wilcox	8	8	8	8	8	8
Livestock	SA-Nueces	SW	Local Supply	29	29	29	29	29	29
Livestock	SA-Nueces	GW	Carrizo-Wilcox	30	30	30	30	30	30
Livestock	Nueces	SW	Local Supply	53	53	53	53	53	53
Livestock	Nueces	GW	Carrizo-Wilcox	10	10	10	10	10	10
Livestock	Nueces	GW	Gulf Coast	44	44	44	44	44	44
Manufac'g	San Antonio	GW	Gulf Coast	139	139	139	139	139	139
Mining	Guadalupe	GW	Carrizo-Wilcox	7	7	7	7	7	7
Mining	San Antonio	GW	Carrizo-Wilcox	5	5	5	4	4	4
Mining	San Antonio	GW	Gulf Coast	94	91	90	89	89	88
Mining	SA-Nueces	GW	Gulf Coast	5	5	5	5	5	5
Projected Water Supplies (acre-feet per year) =				**8,377**	**8,295**	**8,223**	**8,156**	**8,097**	**8,043**

WUG = Water User Group, SW = Surface Water, GW = Groundwater, ROR = Run-of-River, Carrizo-Wilcox = Carrizo-Wilcox aquifer, Edwards-BFZ = Edwards-BFZ aquifer, Gulf Coast = Gulf Coast aquifer, Queen City = Queen City aquifer, Sparta = Sparta aquifer

Wilson County Projected Water Supplies (acre-feet per year)

WUG	River Basin	Type	Source	2010	2020	2030	2040	2050	2060
McCoy WSC	Nueces	GW	Carrizo-Wilcox	19	19	20	20	21	21
Co.-Other	Nueces	GW	Carrizo-Wilcox	120	120	120	120	120	120
East Central	San Antonio	GW	Various Suppliers	121	120	120	120	120	120
East Central	San Antonio	SW	Canyon Lake	106	23	23	23	23	23
El Oso WSC	San Antonio	GW	Carrizo-Wilcox	102	102	102	102	102	102
Floresville	San Antonio	GW	Carrizo-Wilcox	2,589	2,589	2,589	2,589	2,589	2,589
La Vernia	San Antonio	GW	Carrizo-Wilcox	250	250	250	250	250	250
La Vernia	San Antonio	GW	Supplier	400	400	400	400	400	400
Oak Hills WSC	San Antonio	GW	Carrizo-Wilcox	1,170	1,170	1,170	1,170	1,170	1,170
Poth	San Antonio	GW	Carrizo-Wilcox	1,613	1,613	1,613	1,613	1,613	1,613
SS WSC	San Antonio	GW	Carrizo-Wilcox	1,340	1,340	1,340	1,340	1,340	1,340
Stockdale	San Antonio	GW	Carrizo-Wilcox	1,533	1,533	1,533	1,533	1,533	1,533
Sunko WSC	San Antonio	GW	Carrizo-Wilcox	870	870	870	870	870	870
Co.-Other	San Antonio	GW	Carrizo-Wilcox	1,774	1,774	1,774	1,774	1,774	1,774
Co.-Other	San Antonio	SW	Run-of-River	33	33	33	33	33	33
Co.-Other	Guadalupe	GW	Carrizo-Wilcox	79	79	79	79	79	79
Industrial	San Antonio	GW	Carrizo-Wilcox	1	1	1	1	1	1
Irrigation	Nueces	GW	Carrizo-Wilcox	1,979	1,758	1,562	1,391	1,239	1,109
Irrigation	Nueces	GW	Queen City	772	685	609	542	483	432
Irrigation	Nueces	GW	Sparta	100	89	79	70	62	56
Irrigation	San Antonio	GW	Carrizo-Wilcox	5,608	4,981	4,429	3,942	3,514	3,143
Irrigation	San Antonio	GW	Queen City	737	654	582	518	462	413
Irrigation	San Antonio	GW	Sparta	151	134	119	106	94	84
Irrigation	San Antonio	SW	Run-of-River	2,631	2,631	2,631	2,631	2,631	2,631
Irrigation	Guadalupe	GW	Carrizo-Wilcox	79	70	63	56	49	44
Livestock	Nueces	GW	Carrizo-Wilcox	50	50	50	50	50	50
Livestock	Nueces	GW	Queen City	18	18	18	18	18	18
Livestock	Nueces	GW	Sparta	4	4	4	4	4	4
Livestock	Nueces	SW	Local	73	73	73	73	73	73
Livestock	San Antonio	GW	Carrizo-Wilcox	563	563	563	563	563	563
Livestock	San Antonio	GW	Queen City	201	201	201	201	201	201
Livestock	San Antonio	GW	Sparta	40	40	40	40	40	40
Livestock	San Antonio	SW	Local	805	805	805	805	805	805
Livestock	Guadalupe	GW	Carrizo-Wilcox	19	19	19	19	19	19
Livestock	Guadalupe	GW	Queen City	7	7	7	7	7	7
Livestock	Guadalupe	GW	Sparta	1	1	1	1	1	1
Livestock	Guadalupe	SW	Local	27	27	27	27	27	27
Mining	Guadalupe	GW	Carrizo-Wilcox	14	13	13	13	13	12
Mining	San Antonio	GW	Carrizo-Wilcox	228	221	216	212	208	206
Projected Water Supplies (acre-feet per year) =				**26,227**	**25,080**	**24,148**	**23,326**	**22,601**	**21,976**

Co.-Other = County Other, Power = Steam Electric Power, SA-Nueces = San Antonio-Nueces, GW = groundwater, SW = surface water, Carrizo-Wilcox = Carrizo-Wilcox aquifer, Edwards-BFZ = Edwards-BFZ aquifer, Gulf Coast = Gulf Coast aquifer, Queen City = Queen City aquifer, Sparta = Sparta aquifer

Appendix E - Estimates of Projected Water Demands for Atascosa, Frio, Karnes and Wilson Counties by Decade 2010 - 2060

Atascosa County Projected Water Demand (acre-feet per year)

Water User Group	River Basin	2010	2020	2030	2040	2050	2060
Charlotte	Nueces	296	312	324	332	342	350
Jourdanton	Nueces	801	861	914	955	994	1,026
Lytle	Nueces	412	423	433	439	448	456
Pleasanton	Nueces	1,906	1,969	2,027	2,063	2,109	2,151
Poteet	Nueces	735	741	740	740	745	752
County Other	San Antonio	17	13	9	6	4	3
County Other	Nueces	432	328	242	172	124	94
Steam Electric Power	Nueces	5,884	5,954	6,962	8,189	9,685	11,510
Mining	Nueces	1,298	1,370	1,405	1,439	1,472	1,509
Irrigation	San Antonio	1,103	1,066	1,031	996	963	931
Irrigation	Nueces	39,782	38,443	37,154	35,915	34,723	33,571
Livestock	San Antonio	70	70	70	70	70	70
Livestock	Nueces	1,675	1,675	1,675	1,675	1,675	1,675
Benton City WSC	Nueces	710	963	1,185	1,353	1,506	1,617
Benton City WSC	San Antonio	62	84	103	118	131	141
Bexar Met Water District	Nueces	505	621	715	780	843	895
McCoy WSC	Nueces	1,065	1,381	1,643	1,851	2,042	2,181
Manufacturing	Nueces	6	6	6	6	6	6
Total Projected Water Demands (acre-feet per year) =		**56,759**	**56,280**	**56,638**	**57,099**	**57,882**	**58,938**

Frio County Projected Water Demand (acre-feet per year)

Water User Group	River Basin	2010	2020	2030	2040	2050	2060
Dilley	Nueces	1,229	1,409	1,555	1,683	1,774	1,825
Pearsall	Nueces	1,443	1,448	1,449	1,435	1,442	1,449
County Other	Nueces	727	807	881	937	980	1,007
Steam Electric Power	Nueces	107	85	100	117	139	165
Mining	Nueces	109	104	102	100	98	96
Irrigation	Nueces	82,017	79,098	76,302	73,627	71,065	68,592
Livestock	Nueces	1,209	1,209	1,209	1,209	1,209	1,209
Benton City WSC	Nueces	3	4	5	6	6	6
Total Projected Water Demands (acre-feet per year) =		**86,844**	**84,164**	**81,603**	**79,114**	**76,713**	**74,349**

Source: Volume 3, 2007 State Water Planning Database 1/21/2009

Karnes County Projected Water Demand (acre-feet per year)

Water User Group	River Basin	2010	2020	2030	2040	2050	2060
Karnes City	San Antonio	432	453	474	492	503	512
Kenedy	San Antonio	763	826	874	912	961	993
Runge	San Antonio	195	209	219	227	238	247
County Other	Guadalupe	16	20	24	27	30	31
County Other	San Antonio	824	933	1,069	1,172	1,214	1,232
County Other	San Antonio-Nueces	8	10	12	14	15	15
County Other	Nueces	24	29	35	39	42	44
Manufacturing	San Antonio	118	122	125	128	130	137
Mining	Guadalupe	7	7	7	7	7	7
Mining	San Antonio	94	91	90	89	89	88
Mining	San Antonio-Nueces	5	5	5	5	5	5
Irrigation	San Antonio	1,382	1,250	1,131	1,023	925	836
Livestock	Guadalupe	83	83	83	83	83	83
Livestock	San Antonio	936	936	936	936	936	936
Livestock	San Antonio-Nueces	59	59	59	59	59	59
Livestock	Nueces	107	107	107	107	107	107
Falls City	San Antonio	113	122	131	138	142	145
El Oso WSC	Guadalupe	5	5	6	6	6	6
El Oso WSC	Nueces	13	13	14	15	15	16
El Oso WSC	San Antonio	482	514	547	573	590	601
El Oso WSC	San Antonio-Nueces	3	3	3	3	3	3
Sunko WSC	San Antonio	49	53	57	61	63	64
Total Projected Water Demands (acre-feet per year) =		**5,718**	**5,850**	**6,008**	**6,116**	**6,163**	**6,167**

Source: Volume 3, 2007 State Water Planning Database 1/21/2009

Wilson County Projected Water Demand (acre-feet per year)

Water User Group	River Basin	2010	2020	2030	2040	2050	2060
Floresville	San Antonio	1,805	2,011	2,245	2,475	2,726	3,000
La Vernia	San Antonio	278	367	464	557	658	764
Poth	San Antonio	348	389	434	480	530	585
Stockdale	San Antonio	350	386	426	466	510	558
County Other	Guadalupe	28	37	47	57	68	79
County Other	San Antonio	539	770	1,027	1,269	1,533	1,807
County Other	Nueces	42	56	72	86	103	120
Manufacturing	San Antonio	1	1	1	1	1	1
Mining	Guadalupe	14	14	13	13	13	13
Mining	San Antonio	228	220	216	212	208	205
Irrigation	Guadalupe	79	70	63	56	49	45
Irrigation	San Antonio	8,370	7,435	6,610	5,883	5,244	4,690
Irrigation	Nueces	2,847	2,529	2,248	2,001	1,784	1,595
Livestock	Guadalupe	54	54	54	54	54	54
Livestock	San Antonio	1,609	1,609	1,609	1,609	1,609	1,609
Livestock	Nueces	145	145	145	145	145	145
East Central WSC	San Antonio	104	124	146	169	194	222
El Oso WSC	San Antonio	52	62	71	81	91	102
McCoy WSC	Nueces	41	61	82	102	124	147
Oak Hills WSC	San Antonio	693	960	1,251	1,536	1,843	2,160
SS WSC	San Antonio	1,563	2,204	2,886	3,554	4,279	5,030
Sunko WSC	San Antonio	564	691	826	965	1,107	1,262
Total Projected Water Demands (acre-feet per year) =		**19,754**	**20,195**	**20,936**	**21,771**	**22,873**	**24,193**

Source: Volume 3, 2007 State Water Planning Database 1/21/2009

Appendix F - Water Management Strategies Recommended in South Central Texas Regional Water Plan (SCTRWP) For Atascosa, Frio, Karnes and Wilson Counties By Decade 2010 - 2060

Atascosa County SCTRWP Water Management Strategies

WUG	River Basin	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
Benton City WSC	Nueces	Municipal Water	Conservation	Atascosa	0	0	0	18	63	113
Benton City WSC	Nueces	Local Groundwa	Carrizo-Wilcox Aquifer	Atascosa	597	597	597	597	1,194	1,194
Benton City WSC	San Antonio	Municipal Water	Conservation	Atascosa	0	0	0	2	6	11
Benton City WSC	San Antonio	Local Groundwa	Carrizo-Wilcox Aquifer	Atascosa	56	56	56	56	113	113
Charlotte	Nueces	Municipal Water	Conservation	Atascosa	20	23	25	26	34	43
Jourdanton	Nueces	Municipal Water	Conservation	Atascosa	60	123	156	173	195	222
Lytle	Nueces	Municipal Water	Conservation	Atascosa	33	63	72	76	84	95
Lytle	Nueces	Edwards Transfers	Edwards BFZ Aquifer	Medina	169	180	190	196	205	213
McCoy WSC	Nueces	Municipal Water	Conservation	Atascosa	0	0	0	12	63	119
McCoy WSC	Nueces	Local Groundwa	Carrizo-Wilcox Aquifer	Atascosa	742	1,485	1,485	1,485	1,485	2,227
Steam Electric	Nueces	Local Groundwa	Carrizo-Wilcox Aquifer	Atascosa	0	0	0	1,120	2,240	4,480
Irrigation	San Antonio	Water Conservat	Conservation	Atascosa	76	40	6	0	0	0
Irrigation	Nueces	Water Conservat	Conservation	Atascosa	1,885	982	105	0	0	0
Pleasanton	Nueces	Municipal Water	Conservation	Atascosa	156	300	448	523	565	615
Poteet	Nueces	Municipal Water	Conservation	Atascosa	60	116	163	185	198	213
County Other	Nueces	Municipal Water	Conservation	Atascosa	11	17	11	1	0	0
Bexar Met Water	Nueces	Edwards Transfers	Edwards BFZ Aquifer	Bexar	319	435	529	594	657	709
Total Projected Water Management Strategies (acre-feet per year) =					4184	4,417	3,843	5,064	7,102	10,367

Source: Volume 3, 2007 State Water Planning Database 1/21/2009

Frio County SCTRWP Water Management Strategies

WUG	River Basin	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
Dilley	Nueces	Municipal Water Conservation	Conservation	Frio	104	229	362	511	652	772
Pearsall	Nueces	Municipal Water Conservation	Conservation	Frio	116	223	272	271	294	324
County Other	Nueces	Municipal Water Conservation	Conservation	Frio	0	0	0	0	0	18
Total Projected Water Management Strategies (acre-feet per year) =					**220**	**452**	**634**	**782**	**946**	**1,114**

Source: Volume 3, 2007 State Water Planning Database 1/21/2009

Karnes County SCTRWP Water Management Strategies

WUG	WUG County	River Basin	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
Kenedy	Karnes	San Antonio	Local Groundwater	Gulf Coast Aquifer	Karnes	390	390	390	390	390	780
Kenedy	Karnes	San Antonio	Municipal Water	Conservation	Karnes	58	121	189	216	242	268
El Oso WSC	Karnes	San Antonio	Municipal Water	Conservation	Karnes	41	83	92	105	120	139
Falls City	Karnes	San Antonio	Municipal Water	Conservation	Karnes	8	13	14	16	19	23
Karnes City	Karnes	San Antonio	Municipal Water	Conservation	Karnes	0	0	0	0	0	11
Runge	Karnes	San Antonio	Municipal Water	Conservation	Karnes	15	22	24	26	31	37
County Other	Karnes	San Antonio	Municipal Water	Conservation	Karnes	68	121	157	193	227	258
Total Projected Water Management Strategies (acre-feet per year) =						**580**	**750**	**866**	**946**	**1,029**	**1,516**

Source: Volume 3, 2007 State Water Planning Database 1/21/2009

Wilson County SCTRWP Water Management Strategies

WUG	River Basin	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
McCoy WSC	Nueces	Municipal Water	Conservation	Wilson	0	0	0	1	5	10
McCoy WSC	Nueces	Local Groundwater	Carrizo-Wilcox Aquifer	Atascosa	65	129	129	129	129	194
Floresville	San Antonio	Municipal Water	Conservation	Wilson	136	291	433	504	596	714
Floresville	San Antonio	Local Groundwater	Carrizo-Wilcox Aquifer	Wilson	0	0	0	0	806	806
Oak Hills WSC	San Antonio	Municipal Water	Conservation	Wilson	0	0	0	26	76	136
Oak Hills WSC	San Antonio	Local Groundwater	Carrizo-Wilcox Aquifer	Wilson	0	0	726	726	726	1,452
Sunko WSC	San Antonio	Municipal Water	Conservation	Wilson	3	6	10	29	54	92
Sunko WSC	San Antonio	Local Groundwater	Carrizo-Wilcox Aquifer	Wilson	0	0	0	807	807	807
Poth	San Antonio	Municipal Water	Conservation	Wilson	20	22	25	28	46	64
Stockdale	San Antonio	Municipal Water	Conservation	Wilson	27	57	93	128	147	171
County Other	San Antonio	Municipal Water	Conservation	Wilson	0	0	0	14	58	116
East Central	San Antonio	CRWA SIESTA	Direct Reuse	Bexar	0	0	3	26	51	79
La Vernia	San Antonio	Municipal Water	Conservation	Wilson	21	56	105	146	184	227
SS WSC	San Antonio	Municipal Water	Conservation	Wilson	0	0	0	0	84	221
SS WSC	San Antonio	Local Groundwater	Carrizo-Wilcox Aquifer	Wilson	766	1,532	2,298	2,298	3,064	3,830
La Vernia	San Antonio	CRWA Dunlap Project -	Carrizo-Wilcox Aquifer	Gonzales	0	0	0	0	8	114
SS WSC	San Antonio	CRWA Dunlap Project -	Carrizo-Wilcox Aquifer	Gonzales	0	0	0	0	0	690
Total Projected Water Management Strategies (acre-feet per year) =					**1,038**	**2,093**	**3,822**	**4,862**	**6,841**	**9,723**

Source: Volume 3, 2007 State Water Planning Database 1/21/2009