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February 8, 2021

Jeff Walker
Executive Administrator
Texas Water Development Board
P. O. Box 13231
Austin, TX 78711-3231

Re: Submission of Evergreen Underground Water Conservation District's Adopted Management Plan

Dear Mr. Walker:

I am the attorney for the Evergreen Underground Water Conservation District, the Texas local government that regulates water wells drilled in Atascosa, Wilson, Frio and Karnes counties.

Please find enclosed the District's newly adopted Management Plan. The District worked closely with the Texas Water Development Board staff to finalize its Management Plan and greatly appreciates the support.

Please let me know if the District needs to submit further information or can ever be of assistance to the Texas Water Development Board.

Thanks so much,

Monique M. Norman

Evergreen Underground Water Conservation District

Groundwater Management Plan

Adopted on January 29, 2021

EVERGREEN UNDERGROUND WATER

CONSERVATION DISTRICT

GROUNDWATER MANAGEMENT PLAN

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1. MISSION STATEMENT:

The Evergreen Underground Water Conservation District (EUWCD or District) was created by the Texas Legislature to protect and conserve the groundwater resources of Atascosa, Frio, Karnes, and Wilson counties, through local management in coordination with Groundwater Management Areas 13 and 15 (GMA 13 and GMA 15). The District directs its efforts for the conservation, preservation, protection, recharging, and prevention of waste of groundwater in groundwater reservoirs or their subdivisions. The District's rules and management plan are based on the best available science, within the laws and rules in effect.

2. TIME PERIOD FOR THIS PLAN:

This plan becomes effective upon adoption by the EUWCD Board of Directors and subsequent approval by the Texas Water Development Board (TWDB). The management plan is based on a five-year planning period; however, the plan may be revised at any time to ensure that it is consistent with the District's Rules, practices, and adopted desired future conditions. The District's Board of Directors shall re-adopt the management plan, with or without revisions, at least every five years.

3. STATEMENT OF GUIDING PRINCIPLES:

Atascosa, Frio, Karnes, and Wilson counties rely on the local groundwater supplies to meet their drinking water, industrial, agricultural, domestic, and livestock needs. Therefore, the local groundwater resources are vital to the area's health, economy, and environment. The District believes this valuable resource can be managed in a reasonable manner through conservation, education, and regulation. The overall management goal will be a sustainable supply of water from local groundwater resources, while recognizing the need to balance protection of rights of private landowners with the responsibility of managing the area's groundwater resources for future generations. A basic understanding of local aquifers and their hydrogeological properties, as well as quantification of available water supplies, is the foundation for development of prudent management strategies. The Carrizo-Wilcox Aquifer, as well as the minor aquifers in the area, must be conserved and preserved for future generations, to the extent allowed by law and made possible through implementation of scientific data and information collected by the District. This Management plan is intended as a tool for the District to provide continuity and consistency in decision making and to develop an understanding of local aquifer conditions for implementation of proper groundwater management policies.

The District has a responsibility to continually monitor aquifer conditions. As conditions warrant, this document may be modified to best serve the District in meeting its goals. The District will review and re-adopt this plan every five years.

4. DISTRICT INFORMATION

A. Creation

The Evergreen Underground Water Conservation District was created by the Texas Legislature under Section 59 of Article XVI of the Texas Constitution and Acts of May, 1965, 59th Leg. R.S., ch. 197, 1965 Tex. Gen. Laws 398; as amended by Acts of May 25, 1967, 60th Leg., R.S. ch. 1272, 1967 Tex. Gen. Laws 1676; Acts of May 30, 1983, 68th Leg., R.S., ch. 484, 1983 Tex. Gen. Laws 2852; and Acts of May 17, 1985, 69th Leg., R.S., ch. 438, 1985 Tex. Gen. Laws 2984and the non-conflicting provisions of Chapter 36, Texas Water Code.

B. Location and Extent

The District encompasses Atascosa, Frio, Wilson, and Karnes Counties. The boundaries of the District are coterminous with the counties' boundaries. This includes 3,917 square miles.

C. Background

The District's Board of Directors consists of nine (9) members. Each county elects two directors to the Board and one director is appointed by the Governor.

D. Authority/Regulatory Framework

In the preparation of its management plan, the District followed all procedures and satisfied all requirements of Chapter 36 of the Texas Water Code (TWC) and Chapter 356 of the TWDB rules contained in Title 30 of the Texas Administrative Code (TAC). The District exercises the powers it was granted and authorized to use by and through the special and general laws that govern it.

E. Groundwater Resources of the Evergreen Underground Water Conservation District

There are major and minor aquifers within the EUWCD, with all of the aquifers composed principally of unconsolidated sediments of sand, silt, clay and shale.

The major aquifers in EUWCD are:

- the Carrizo-Wilcox Aquifer spanning from the northern boundaries of Frio, Atascosa, and Wilson counties to the southern boundaries of the same counties. The Carrizo-Wilcox Aquifer also occurs in the north part of Karnes County and extends to the south boundary of the county but is not pumped with wells in the south part of the county; and
- the Gulf Coast Aquifer System in Karnes County.

The minor aquifers in EUWCD are:

- the Queen City Aquifer in Frio, Atascosa, and Wilson Counties;

- the Sparta Aquifer in Frio, Atascosa, and Wilson Counties; and
- the Yegua Jackson Aquifer in southern Atascosa and Wilson counties and Karnes County.

The general locations of the aquifers are shown on Figures 1 and 2. The vertical sequence of the aquifers is provided in Table 1, with the age of the aquifers increasing from Holocene to Paleocene. The Carrizo is the most prolific water-yielding unit and is part of the Carrizo-Wilcox Aquifer. The Queen City, Sparta and Yegua-Jackson aquifers provide small to large quantities of water to wells. A large pumping rate is defined as 200 gallons per minute or more. The Gulf Coast Aquifer System, located in most of Karnes County, can provide small to large quantities of water to properly constructed and thoroughly developed wells.

Table 1. Generalized Stratigraphic Section

EPOCH	Hydrogeologic Unit	
Holocene	Chicot Aquifer	Gulf Coast Aquifer
Pleistocene		
Pliocene		
Miocene	Evangeline Aquifer	
	Burkeville Confining Unit	
	Jasper Aquifer	
Oligocene	aquitard	
Eocene	Yegua-Jackson Aquifer	
	Sparta Aquifer	
	Queen City Aquifer	
	aquitard	
Paleocene	Carrizo-Wilcox Aquifer	

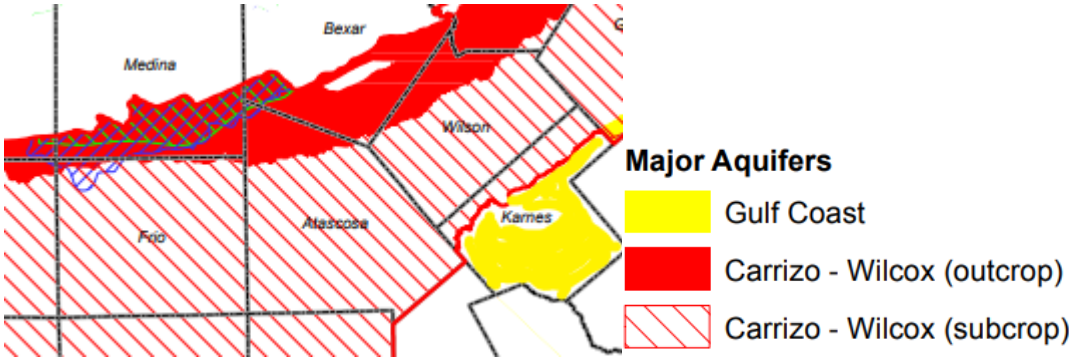


Figure 1. General Areal Extent of Major Aquifers.

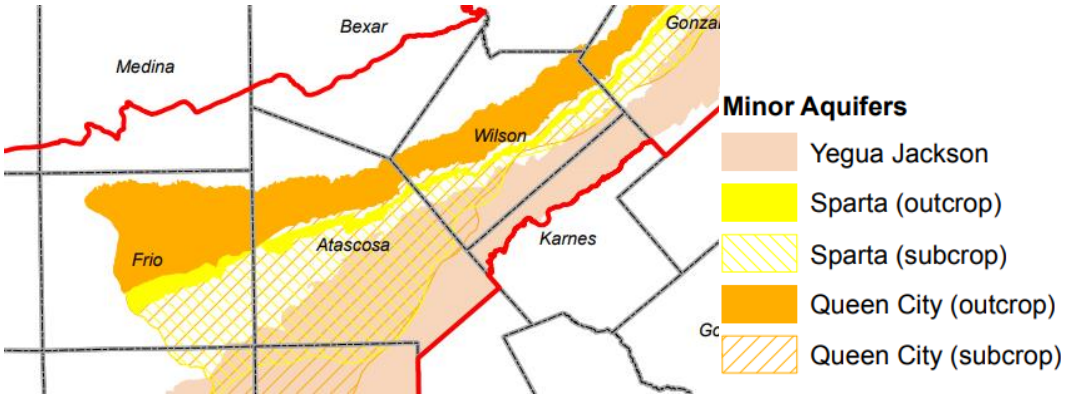


Figure 2. General Areal Extent of Minor Aquifers

The primary freshwater aquifers in the Carrizo-Wilcox toYegua Jackson sequence consist of sandy fluvial and deltaic sediments, while marine silts and clays act as aquitards separating the water-yielding zones. Within the District, the Wilcox Group is subdivided into a lower, middle and upper unit. The lower Wilcox is composed of sands and clays and the middle Wilcox, and can be composed of interbedded sediments that are predominated by clay and silt and not sand. The upper Wilcox is composed of a greater percentage sand than the middle Wilcox and is located just below the Carrizo Aquifer. Just below the Wilcox Group is the Midway Formation, a marine clay confining unit. Each of the aquifers dip downward toward the Gulf Coast at rates of up to about 100 feet per mile. (Deeds and Kelley, 2003:Fisher and McGowen, 1967).

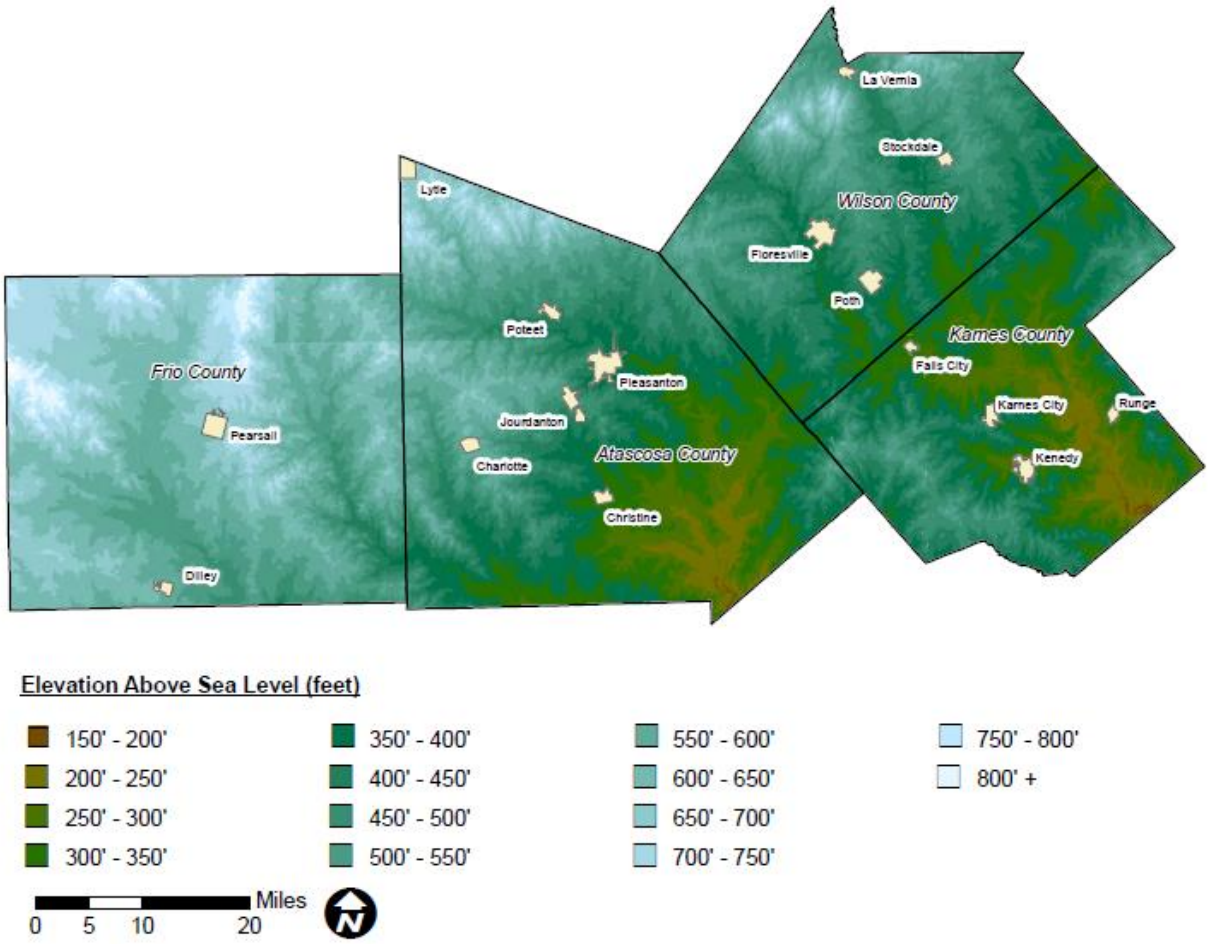
The sediments of the Gulf Coast Aquifer system were deposited under fluvial-deltaic to shallow-marine environments. The sediments are composed of sand, silt, clay, shale and gravel. The aquifer system can provide small to large quantities of water to properly constructed and thoroughly developed wells. Hydrostratigraphic units in the system, from oldest to youngest include: the Catahoula confining system, the Jasper Aquifer, the Burkeville confining system, the Evangeline Aquifer, and the Chicot Aquifer. Each of the aquifer units dip downward to the southeast toward the Gulf Coast. A detailed discussion of the geology of the aquifer system is given in (Mace and others, 2006).

Topography and Drainage

Natural topography in the District ranges from gently hilly terrain in portions of the north parts of Atascosa, Frio, and Wilson counties, to relatively flat terrain along a substantial amount of the Cibolo Creek, San Antonio, Atascosa, and Frio rivers corridors. Land surface elevations above sea level for the District area are shown on Figure 3. Land surface elevations range from about 750 feet above sea level, near the City of Lytle and in the north part of Frio County, to about 200 feet above sea level along the Atascosa River in the very south part of Atascosa County. Thus, the higher land surface elevations occur in the north parts of the District, with land surface elevation generally decreasing toward the Gulf Coast.

The Frio and Atascosa rivers have stream gradients of about five to six feet per mile indicative of the gently sloping terrain that they drain in the District. The San Antonio River and Cibolo Creek have stream gradients of from three to five feet per mile, also indicative of the flat to gently sloping terrain that the streams drain.

Figure 3. Land Surface Elevations above Sea Level for the District



F. Surface Water Supplies of Atascosa, Frio, Karnes and Wilson Counties

Atascosa, Frio, Karnes, and Wilson counties are within the Region L Regional Water Planning Group (RLWPG) sometimes referred to as South Central Texas L. Each regional water group supplies their specific assessments to the TWDB for incorporation into the 2017 Texas State Water Plan.

Projected surface water supplies are the maximum amount of surface water available from existing sources for use during drought of record conditions that is physically and legally available for use. These are the existing surface water supply volumes that, without implementing any recommended water management strategies, could be used during a drought by water user groups located within the specified geographic area. For the District, the projected surface water supplies in the 2017 Texas State Water Plan are estimated to

be about 3,117 acre-feet per in the year 2070. These are essentially run-of-river rights and lake or pond supplies.

Surface water sources include any water resources where water is obtained directly from a surface water body. This would include rivers, streams, creeks, lakes, ponds, and tanks. In the state of Texas, all waters contained in a watercourse (rivers, natural streams and lakes, and storm water, flood water, and rainwater of every river, natural stream, canyon, ravine, depression, and watershed) are waters of the State and thus belong to the State. The State grants individuals, municipalities, water suppliers and industries the right to divert and use this water through water rights permits. Water rights are considered property rights and can be bought, sold, or transferred with State approval. These permits are issued based on the concept of prior appropriation, or "first-in-time, first-in-right." Water rights issued by the State generally fall into two major categories: run-of-river rights and stored water rights. Within the District, almost all of the water rights are run-of-river rights.

In addition to the water rights permits issued by the State, individual landowners may use State waters without a specific permit for certain types of uses. The most common of these uses is domestic and livestock use. These types of water sources are generally referred to as "Local Supply Sources." Many individuals with land along a river or stream that still have an old riparian right can also divert a reasonable amount of water for domestic and livestock uses without a permit.

5. REQUIRED ESTIMATES: 31 TAC 356.5(a)(5)(A)-(G)

A. Modeled Available Groundwater

Section 36.001 of the TWC defines modeled available groundwater (MAG) as "the amount of water that the Executive Administrator [of the TWDB] determines may be produced on an average annual basis to achieve a desired future condition established under §36.108." Desired future condition (DFC) is defined in §36.001 of the TWC as "a quantitative description, adopted in accordance with §36.108 of the Texas Water Code, of the desired condition of the groundwater resources in a management area at one or more specified future times." The District participates in the joint planning process in GMAs 13 and 15, as defined per TWC §36.108, and established DFCs for aquifers within the District. GMA 13 encompasses most of the District, except for the south part of Karnes County, which is in GMA 15.

DFCs Adopted by GMAs 13 and 15.

GMA 13 chose to adopt a GMA-wide DFC for the Carrizo-Wilcox, Queen City, and Sparta aquifers, to be applicable for the period from the end of 2012 to the year 2070. The DFC for the Yegua-Jackson Aquifer is applicable for Karnes County and is for the period from 2010 to 2070. GMA 15 adopted a DFC for the Gulf Coast Aquifer that is applicable to Karnes County and spans from 2010 to 2069. For each of the aquifers in the counties, the areas covered are as defined by the stratigraphy used in the TWDB Groundwater

Availability Model for the Southern Carrizo-Wilcox Aquifer GAM and the TWDB Central Gulf Coast GAM.

GMA 13

Adopted DFCs and MAGs for the counties in the District within GMA 13 are provided in Table 2 and on succeeding pages, as provided by the GAM Run 17-027 MAG report.

Table 2. Adopted Aquifer DFCs based on the Average Threshold that occurs between January 2012 and 2070. Yegua Jackson (2010-2070)	**Artesian Head Reduction (ft)**
Carrizo-Wilcox, Queen City, and Sparta combined for all of GMA 13	48
Yegua-Jackson in Karnes County	1

A. Resolution to Adopt Desired Future Conditions, November 21,2016, letter from William R Hutchison, P.E. consultant to GMA 13 to Jeff Walker, Executive Administrator, Texas Water Development Board (Carrizo-Wilcox, Queen City, Sparta and Yegua-Jackson aquifers).

The TWDB's **MAG Estimates** based on GMA 13 adopted DFCs include the following:

Carrizo -Wilcox Aquifer

MAG for the Carrizo-Wilcox Aquifer is summarized by county in GMA 13 for each decade between 2012 and 2070. Results are in acre feet per year (ac-ft/yr).

County	**2012**	**2020**	**2030**	**2040**	**2050**	**2060**	**2070**
Atascosa	67,668	67,668	70,286	71,066	72,718	74,298	75,874
Frio	111,920	111,920	85,036	82,999	81,083	79,197	77,353
Karnes	1,042	1,042	1,085	1,146	1,212	1,264	1,296
Wilson	108,465	108,465	104,918	106,196	107,653	109,358	111,093

Queen City

MAG for the Queen City Aquifer is summarized by county in GMA 13 for each decade between 2012 and 2070. Results are in ac-ft/yr.

County	**2012**	**2020**	**2030**	**2040**	**2050**	**2060**	**2070**
Atascosa	4,075	4,075	4,543	4,543	4,513	4,407	4,302
Frio	6,759	6,759	4,745	4,573	4,429	4,257	4,113
Wilson	2,780	2,780	1,508	1,339	1,191	1,059	945

Sparta

MAG for the Sparta Aquifer is summarized by county in GMA 13 for each decade between 2012 and 2070. Results are in ac-ft/yr.

County	2012	2020	2030	2040	2050	2060	2070
Atascosa	1,219	1,215	1,188	1,129	1,083	1,044	1,013
Frio	1,045	1,045	728	702	674	651	624
Wilson	462	462	251	224	198	176	156

Yegua-Jackson

MAG for the Yegua-Jackson Aquifer is summarized by county in GMA 13 for each decade between 2010 and 2070. Results are in ac-ft/yr.

County	2010	2020	2030	2040	2050	2060	2070
Karnes	2,059	2,059	2,059	2,059	2,059	2,059	2,059

GMA 15

As provided by the GAM Run 16-025 MAG report:

Table 3. Adopted Aquifer DFC for Karnes County based on the Average Threshold that occurs between January 2010 and December 2069.	**Artesian Head Reduction (ft)**
Gulf Coast Aquifer	22

B. Resolution to Adopt Desired Future Conditions, June 23, 2016, letter from Tim Andruss Chair/Administrator of GMA 15 and manager of the Victoria County Groundwater Conservation District to Jeff Walker, Executive Administrator, Texas Water Development Board (Gulf Coast Aquifer)

Gulf Coast Aquifer System

MAG for the Gulf Coast Aquifer System is summarized for Karnes County for each decade between 2010 and 2070. Results are in ac-ft/yr.

County	2010	2020	2030	2040	2050	2060	2070
Karnes	10,196	10,196	10,196	3,015	2,917	2,751	2,751

B. Historical Water Use Data

Data from the TWDB Estimated Historical Water Use Datasets are included in *Appendix A*, provide annual historical water use estimates from 2010 to 2017, the most recent years of record availability. The table includes groundwater and surface water accounting for municipal, manufacturing, steam electric, irrigation, mining, and livestock usage. Within the District, irrigation is the largest water use category.

C. Annual Recharge from Precipitation

Scope: This is the recharge to aquifers from precipitation falling on outcrop areas of the aquifers within the District. Additional recharge to aquifers occurs in areas outside the District.

Methodology: Using data from the TWDB GAM Run 19-013, the average annual estimated recharge from all of the aquifers with outcrops in the District is 93,366 acre-feet per year (ac-ft/yr) with a breakdown by aquifer given in *Table 4*.

D. Annual Volume of Water Discharging to Surface Water

Scope: This includes groundwater discharging from each aquifer within the District to springs and surface water bodies including lakes, streams, and rivers.

Methodology: Using data from the TWDB GAM Run 19-013, *Table 4* summarizes the flow from each aquifer to surface water springs, lakes, streams, and rivers.

Table 4. GAM Recharge and Discharge Estimates

Management Plan Requirements	Aquifer or Confining Unit	Results ac-ft/yr
Estimated annual amount of recharge from precipitation to the District	Gulf Coast Aquifer System	1,196
	Yegua-Jackson Aquifer	42,086
	Sparta Aquifer	6,150
	Queen City Aquifer	23,084
	Carrizo-Wilcox Aquifer	20,850
	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	Gulf Coast Aquifer System	1,496
	Yegua-Jackson Aquifer	46,062
	Sparta Aquifer	4,407
	Queen City Aquifer	7,097
	Carrizo-Wilcox Aquifer	3,621
	Edwards (Balcones Fault Zone) Aquifer	0

Source: TWDB GAM Run 19-013

E. Annual Flow Into/Out and Between Aquifers

Scope: Flow into and out of the District is described as lateral flow within the aquifers between the District and adjacent counties. Flow between aquifers describes the vertical flow, or leakage, between aquifers. Estimates of flow into the District from each aquifer are provided in the *Table 5*.

Methodology: Using data from the TWDB GAM Run 19-013, annual flow into/out and between aquifers was estimated. Groundwater flow estimate results are provided in *Table 5*.

Table 5. GAM Flow Estimates

Management Plan Requirements	Aquifer or Confining Unit	Results ac-ft/yr
Estimated annual volume of flow into the District within each aquifer in the District	Gulf Coast Aquifer System	746
	Yegua-Jackson Aquifer	2,679
	Sparta Aquifer	73
	Queen City Aquifer	79
	Carrizo-Wilcox Aquifer	72,094
	Edwards (Balcones Fault Zone) Aquifer	70
Estimated annual volume of flow out of the District within each aquifer in the District	Gulf Coast Aquifer System	1,198
	Yegua-Jackson Aquifer	4,578
	Sparta Aquifer	864
	Queen City Aquifer	1,716
	Carrizo-Wilcox Aquifer	15,081
	Edwards (Balcones Fault Zone) Aquifer	0
Estimated net annual volume of flow between each aquifer in the District	Flow from the Catahoula Formation[1] into underlying Yegua-Jackson units	627
	Flow from the Yegua-Jackson Aquifer into the Catahoula Formation	41
	Flow from the Yegua-Jackson Aquifer into downdip Yegua-Jackson units	228

[1] In and near the outcrop the Catahoula Formation is considered part of the Gulf Coast Aquifer System. Extracted from the groundwater availability model for the Yegua-Jackson Aquifer. GAM Run 19-013 report.

	Flow from the Sparta Aquifer into overlying younger units	970
	Flow from the Sparta Aquifer System into the Weches confining unit	4,486
	Flow from the Sparta Aquifer into downdip units	1,096
	Flow into the Queen City Aquifer from the Weches confining unit	6,259
	Flow into the Reklaw confining unit from the Queen City Aquifer	7,282
	Flow from the Queen City Aquifer into downdip units	527
	Flow into the Carrizo-Wilcox Aquifer from the overlying Reklaw confining unit	18,695
	Flow from the Carrizo-Wilcox Aquifer into downdip units	2,313
	Flow between Edwards (Balcones Fault Zone) Aquifer and other aquifers	NA[2]

Source: TWDB GAM Run 19-013

The same GAMs were used to develop the estimates of recharge from precipitation and other components of the aquifer water flow budgets, as were used to develop the DFCs for the aquifers in the 2016 planning cycle. References regarding the GAMs used to develop the flow budgets are also given at the conclusion of TWDB report GAM Run 19-013, included as Appendix B.

F. Projected Surface Water Supply

Surface water is currently allocated by the Texas Commission on Environmental Quality (TCEQ) for the use and benefit of all people of the State. Anyone seeking a new water right must submit an application to the TCEQ. The TCEQ then determines whether or not the permit will be issued and permit conditions. The water right grants a certain quantity of water to be diverted and/or stored, a priority date, and other conditions, which may include a maximum diversion rate and in stream flow restrictions to protect existing water rights and environmental flows.

The San Antonio River Authority is the largest surface water right holder within the District. The use of surface water from a river or stream in the District is limited to run-of -river rights or riparian rights mainly for irrigation. Water also is used from surface water ponds and reservoirs in the District, mainly for livestock and the irrigation of small tracts

[2] Not applicable. Model assumes a no-flow boundary at the base. GAM Run 19-013 report.

of land.

Water use data obtained from the TWDB for 2016 show that surface water usage in the District was about 3,700 ac-ft, comprising about three percent of overall District-wide water use.

Projected surface water supplies are described in the 2017 Texas State Water Plan and are referenced in a table provided by the TWDB on June 29, 2020, included in *Appendix A*. The projected surface water supplies include run-of-river and local (surface water pond or reservoir) supplies and a small surface water supply for the City of La Vernia backed by stored water in Canyon Lake.

G. Projected Water Demands

The Region L Water Planning Group (RLWPG) and local water use data indicate that total water demands for the District could be 152,117 and 142,935 ac-ft/yr respectively, by 2030 and 2070. These numbers include use from all available groundwater and surface water sources within the District.

Current and projected water demands by user group within each county in the District through the year 2070 are described in *Appendix A*. These estimates are in the current 2017 Texas State Water Plan. Projected water demands were adjusted in the 2017 Texas State Water Plan, compared to the 2012 Texas State Water Plan as believed appropriate by the water planners. The District will continue to work to collect accurate data about current groundwater production, as well as projected demands for water. This information will be provided to the TWDB for inclusion in future regional and state water plans. As indicated in the regional water plan, the water demand projections take into account population growth, rainfall, and conservation measures to be taken by each user group.

H. Projected Water Supply Needs

The projected need for additional water supplies stated in the 2017 Texas State Water Plan clearly indicates two primary areas of limited need: domestic/municipal use and potentially mining. The total amount of the additional water supply needs within the District are 3,370 ac-ft/yr by 2070 or about 2.4 percent of projected demand in 2070. The 2017 Texas State Water Plan does not project a need for additional water for irrigation.

Municipalities and rural water suppliers face very modest needs for additional water supply in future decades. The water supply needs associated with the growth will likely be met using conservation methods, including lowered gallons per day use per customer and further development of groundwater.

The District has considered the future needs projects in the 2017 Texas State Water Plan and believes that further development of groundwater, along with conservation practices,

will meet the projected needs.

Projected water supply needs, based on projections in the 2017 Texas State Water Plan, are included in *Appendix A*. Negative values (listed in red) indicate a projected water supply need. The plan identifies recommended water strategies for these needs.

I. Projected Water Management Strategies to Meet Future Supply Needs

Demand and supply data developed as part of the RLWPG planning process in 2017, District records, and GMA 13 planning efforts indicate that groundwater and a minor amount of seawater desalination, coupled with water conservation (demand reduction), should be adequate to meet the recommended strategies. There will be a need for infrastructure improvements to provide water at higher rates, as water demands increase. While there seems to be sufficient water resources today to meet the 50-year planning horizon, large scale groundwater development projects, both within the District and in neighboring areas, could alter available water supplies. Such projects include San Antonio Water System's (SAWS) Vista Ridge Project exportation of groundwater supplies from Burleson County for integration into SAWS distribution system. As part of its long-range management strategy, the District will review changes in aquifer utilization and well water level changes to help estimate possible need for a change in the water management strategies in the Carrizo-Wilcox and Yegua-Jackson aquifers. Some water management strategies, as given in the 2017 Texas State Water Plan, are included in *Appendix A.*

J. Natural or Artificial Recharge of Groundwater Resources

1. Estimate of Average Recharge to the Groundwater Resources within the District.

Aquifers within the District receive recharge from infiltration of precipitation and water from streams that cross aquifer outcrops. Estimated general locations of aquifer outcrops within the District are shown on *Figure*s 1 and 2. Recharge to aquifers within the District can occur outside District boundaries, as an aquifer outcrop extends to the north into an adjoining county, or to the east and west of the District.

An estimate of recharge to the Edwards (Balcones Fault Zone) Aquifer in the very north part of the District is zero, based on the results of TWDB GAM Run 19-013.

Estimates of average recharge for the Carrizo-Wilcox Aquifer have been less than one inch per year based on water flow budgets developed by the TWDB. TWDB GAM Run 19-013 provides estimates of recharge for the aquifer systems and they are given in Table 4 along with estimates of recharge for the other aquifers discussed in the following paragraphs. Based on areas of the aquifer outcrops within the District, the resulting estimate of recharge to the Carrizo-Wilcox Aquifer is

about 20,850 ac-ft/yr. With a higher amount of precipitation in the east part of the District recharge rates in that area could be higher than in the west part of the District. Additional recharge occurs outside the District, which contributes to the total recharge to the aquifer system.

The Queen City Aquifer is composed of fine-grained sands with interbedded clay. The outcrop area also can contain alternating areas of sands and other areas of lower permeability silt or clay. The TWDB GAM Run 19-013, estimates that the recharge to the Queen City Aquifer within the District is about 23,084 ac-ft/yr.

The Sparta Aquifer is composed of quartz sand with a small amount of interbedded clay within the aquifer thickness. Recharge to the aquifer via infiltrated precipitation and stream flow is estimated at about 6,150 ac-ft/yr in the TWDB GAM Run 19-013.

The Yegua-Jackson Aquifer is composed of sandstone, clay, and lignite beds in some areas. The outcrop area is extensive in the District as shown on Figure 3. Estimated recharge to the Yegua-Jackson aquifer is about 42,086 ac-ft/yr, based on the TWDB GAM Run 19-013.

The outcrop for the Gulf Coast Aquifer System occurs in Karnes County. It is estimated, based on the TWDB GAM Run 19-013, that recharge to the Gulf Coast Aquifer System is about 1,196 ac-ft/yr.

2. How Natural or Artificial Recharge of Groundwater Within the District Might Be Increased.

Recharge enhancement may increase the amount of groundwater available from the aquifers within the District. Increasing recharge can be difficult in geologic environments that occur within the District because of the modest level of precipitation that occurs in the District. Recharge might be enhanced by the construction of rainfall runoff retention structures on ephemeral streams in outcrop areas with higher permeability sediments such as the Carrizo Aquifer outcrop. Further study of the surface geology and soil characteristics in the District may result in the identification of areas with porous soils that could provide sites for enhanced recharge or test sites for recharge investigations.

The District encourages and supports the use of Aquifer Storage and Recovery projects as a means of water conservation. This most likely would occur in the form of reuse of effluent produced by municipalities or industry.

6. MANAGEMENT OF GROUNDWATER SUPPLIES – 31 TAC 356.52(a)(4)

Groundwater conservation districts have statutorily been designated as Texas' preferred method of groundwater management through the rules developed, adopted, and promulgated by individual groundwater districts, as authorized by Chapter 36 of the TWC and the individual district's enabling act (TWC §36.0015). The EUWCD may manage groundwater supplies, in part, by adopting rules that regulate the spacing and production of wells, to minimize drawdown of the water table or reduction of artesian pressure, to control subsidence, to prevent interference between wells, to prevent degradation of water quality, or to prevent waste (TWC §36.116).

The EUWCD, as authorized by law, has adopted the following groundwater management strategies in its rules (**http://www.evergreenuwcd.org/rules.html**):

A. Registration of Exempt Wells

All exempt wells, as defined in EUWCD, shall be registered with the District. New exempt wells shall be registered with the District prior to drilling.

B. Permitting of Non-Exempt Wells

All non-exempt wells in the District shall be permitted. No person shall construct or drill a new non-exempt well without first obtaining a production permit from the District.

C. Well Spacing

Well spacing must comply with TDLR rules. Additionally, all new permitted wells and registered oil and gas wells shall be spaced a minimum of one foot for each gallon per minute of production capability from all existing permitted and registered wells producing from the same aquifer.

D. Groundwater Production Limits

(1) Subject to limitations imposed upon withdrawals as specified under the District's rules, a person may be permitted to produce wells on their property, or property for which person can show possession of groundwater rights, up to a maximum production of 652,000 gallons per acre per year (approximately 2 ac-ft/yr).

(2) The allowance shall not exceed 75 percent of the annual production capability of the well, or the annual production allowance based upon the acres of groundwater rights owned or leased by the applicant, at the time the application is filed.

(3) The maximum production rate may be further limited in the Production Permit based on the evaluation of the studies that may be required to be submitted with the application to prevent waste and achieve water conservation, minimize as far as practicable the drawdown of the water table or the reduction of artesian pressure, including but not limited to enforce the adopted DFCs for the aquifer(s), and lessen interference between wells.

(4) Retail public water utilities may only claim acreage within their CCN or service area if:

(A) the well is located or to be located within their CCN or service area;

(B) the well meets the District's spacing rules; and

(C) the production limit shall not exceed 600 gallons/service connection/day.

E. Large Scale Groundwater Production Pumping Projects

An entity with permitted groundwater pumping wells located within the District capable of yielding greater than 5,000 acre-feet of groundwater annually from 2,500 acres or more of contiguous property shall, prior to the production of groundwater, install monitoring wells.

F. Permits for Production of Brackish Groundwater

A person may be permitted to produce brackish groundwater from a well(s) on their property, or property for which person can show possession of groundwater rights, up to a maximum production of 3 acre-feet/acre/year.

G. Actions Based on Aquifer Response to Pumping

(1) The District shall use its well monitoring program to assess aquifer levels in the District and the effects caused by groundwater production to enforce the District's adopted desired future conditions for the aquifers and to conserve and preserve groundwater availability and protect groundwater users and groundwater ownership and rights.

(2) The District shall adopt threshold average aquifer drawdown amounts that will be used to initiate groundwater management responses that will be implemented to enforce the District's adopted DFCs of the aquifers and to conserve and preserve groundwater availability and protect groundwater users and groundwater ownership and rights.

The District will incorporate these management strategies into its rules and will register, permit, and monitor wells accordingly.

7. METHODOLOGY TO TRACK DISTRICT PROGRESS IN ACHIEVING MANAGEMENT GOALS 31 TAC 356.52 (a)(4)

An annual report will be developed by the General Manager and District staff and provided to the District's Board of Directors. The Annual Report will cover activities of the District including information on the District's performance regarding achieving the District's management goals and objectives. The Annual Report will be delivered to the District Board within 60 days following the completion of the District's calendar year, beginning with the calendar year that starts on January 1, 2020. A copy of the Annual Report, upon adoption, will be kept on file and available for public inspection at the District's office.

8. ACTIONS, PROCEDURES, PERFORMANCE, AND AVOIDANCE FOR DISTRICT IMPLEMENTATION OF MANAGEMENT PLAN 31 TAC 356.52 (a)(4)

The District will act on goals and directives established in this District Management plan. The District will use the objectives and provisions of the Management plan as a guideline in its policy implementation and decision-making. In both its daily operations and long-term planning efforts, the District will continuously strive to comply with the initiatives and standards created by the Management plan.

The District will amend rules in accordance with Chapter 36 of the TWC and rules will be followed and enforced. The District may amend the District rules as necessary to comply with changes to Chapter 36 of the TWC and to ensure the best management of the groundwater within the District. Development and enforcement of the rules of the District will be based on the best scientific and technical evidence available to the District.

The District will encourage public cooperation and coordination in implementation of the District Management plan. All operations and activities of the District will be performed in a manner that best encourages cooperation with appropriate state, regional, and local water entities, as well as landowners and the general public. Meetings of the District's Board of Directors will be noticed and conducted in accordance with the Texas Open Meetings Act. The District will also make available for public inspection all official documents, reports, records, and minutes of the District, in compliance with the Texas Public Information Act.

For information concerning rules of the District, visit the District's website:
www.evergreenuwcd.org/rules.html

9. MANAGEMENT GOALS AND OBJECTIVES 31 TAC 356.52(a)(1)

Unless indicated otherwise, performance on goals will be measured annually. The Management plan will be subject to review at least every five years, and modification will be made as deemed appropriate. Information describing programs, policies, and actions taken by the District to meet goals and objectives established by the District will be included in the Annual Report prepared by the General Manager and presented to the District's Board of Directors.

A. Management Goals:

1. Providing for the Most Efficient Use of Groundwater:

1a. **Objective –** Require existing and new non-exempt wells constructed within the boundaries of the District to be permitted by the District and operated in accordance with District Rules. In addition, the District will require all

exempt wells constructed within the District boundaries to be registered with the District.

- **Performance Standard** – The number of exempt and permitted wells registered within the District will be reported annually in the District's Annual Report submitted to the District's Board of Directors.

1b. **Objective –** Each month the District will monitor the volume of water produced from all municipal and Rural water supply entities in the District.

- **Performance Standard –** A table showing the annual production volumes reported to the District by the Municipal and Rural water supply entities in the District will be included in the Annual Report of District Activities made to the Board of Directors each year.

1c. **Objective –** Each year the District will request production reports from the operators of 600 agricultural irrigation wells in the District.

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

1d. **Objective –** Each month the District will measure the water levels in 20 water wells.

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

2. **<u>Controlling and Preventing Waste of Groundwater</u>:**

2a. **Objective –** 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 report to the District.

- **Performance Standard –** 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 of District Activities made to the Board of Directors each year.

3. Addressing Conjunctive Surface Water Management Issues:

3a. Objective- Encourage the use of surface water supplies where available to meet the needs of specific user groups within the District.

- **Performance Standard-** The District will participate in the Region L Regional Water Planning process by attending at least two Region L meetings annually and will encourage the development of surface supplies where appropriate. This activity and involvement will be discussed in the Annual Report presented to the District Board of Directors.

4. Addressing Natural Resource Issues that Impact the Use and Availability of groundwater and which are Impacted by the Use of Groundwater

4a. Objective – Each year the District will sample at least eight water wells in the District, two per county, for chemical analysis of water quality for chemical constituents of concern.

- **Performance Standard –** 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 of District Activities made to the Board of Directors each year.

- **Performance Standard –** 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 of District Activities made to the Board of Directors each year.

5. Addressing Drought Conditions:

5a. Objective – At least each quarter, the District will download at least one updated U.S. Drought Monitor map posted on The National Drought Mitigation Center at the University of Nebraska Lincoln website (https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?TX) and check for periodic updates to drought conditions as posted on the Texas Water Development Board website.

- **Performance Standard** – at least quarterly, the District will assess the status of drought in the District and prepare a quarterly briefing to the Board of Directors. The downloaded U.S. Drought Monitoring maps and drought report will be included with copies of the quarterly briefing in the Annual Report of District Activities made to the Board of Directors each year.

- **Performance Standard** –the District will put the following link to the TWDB drought page as a resource https://www.waterdatafortexas.org/drought

6. Addressing Water Conservation:

6a. Objective - Each year the District will provide several conservation website links on Districts websites and provide conservation fliers in the District office foyer.

- **Performance Standard** – Each year the District will brief the Board of Directors with the conservation links provided on the website and provide them with fliers that are in the office foyer.

7. Addressing Desired Future Conditions

7a. Objective - The District monitors groundwater levels and evaluates whether the average change in groundwater levels is in conformance with the DFCs. The District will estimate the total annual groundwater production based on water use reports and other relevant information and compare these production estimates to the MAGs.

- **Performance Standard** – Each year the District will summarize the monitoring activities in the annual report including average change in groundwater levels and estimated annual groundwater production.

8. **Addressing Precipitation Enhancement**

8a. **Objective** – The District participates in a cloudseeding program and plans on continuing this effort. Rainfall enhancement is conducted using cloud seeding techniques where aircraft release microscopic particles of silver iodide and calcium chloride into thunderstorms to increase rainfall efficiency. Any positive results from the cloudseeding program are estimated to be gauged over years of the collection and evaluation of precipitation data.

- **Performance Standard** – Each year the District will brief the Board of Directors with a report of its cloudseeding program and the collection and evaluation of precipitation data.

B. Management Goals Determined Not to be Applicable to the Evergreen Underground Water Conservation District

1. **Controlling and Preventing Subsidence**:
The Carrizo-Wilcox Aquifer in the District is composed of the Carrizo Sand and the immediately below Wilcox units. The Carrizo has and will continue to provide substantial amounts of water whereas the Wilcox has and is estimated to continue to provide small amounts of water. The Carrizo Sand is composed principally of moderate to high permeability sand with minor amounts of clay. The Wilcox is composed of interbedded layers of fine sand and clay. With the minor amounts of clay in the Carrizo Sand and small amount of pumping from the Wilcox Aquifer, there is not a significant risk of subsidence occurring due to groundwater pumping. The report "Identification of the Vulnerability of the Major and Minor Aquifers of Texas to Subsidence with Regard to Groundwater Pumping" prepared by the Texas Water Development Board in 2017 was reviewed while considering the potential for significant subsidence occurring due to groundwater pumping. There is acknowledgement in the report that the risk of subsidence is less in the southern part of the Carrizo-Wilcox Aquifer than where it occurs in the central and northern parts of the Texas.
http://www.twdb.texas.gov/groundwater/models/research/subsidence/subsidence.asp

The report also was reviewed regarding the potential for significant subsidence resulting from pumping of the Yegua-Jackson Aquifer. Based on the limited pumping from the aquifer, its limited capacity for producing substantial amounts of water and information presented in the report, there is not believed to be a significant risk of subsidence occurring due to future groundwater pumping from the aquifer. A management goal addressing controlling and preventing subsidence is not appropriate at this time.

2. **Addressing Rainwater Harvesting:**
The District is supportive of activities related to rainwater harvesting, however, the District does not currently have a rainwater harvesting financial incentive program. A management goal addressing rainwater harvesting is not appropriate at this time.

3. **Addressing Recharge Enhancement:**
Increasing recharge can be difficult in geologic environments that occur within the District because of the modest level of precipitation that occurs in the District. Recharge might be enhanced by the construction of rainfall runoff retention structures on ephemeral streams in outcrop areas with higher permeability sediments such as the Carrizo Aquifer outcrop. Further

study of the surface geology and soil characteristics in the District is needed to determine the identification of areas with porous soils that could provide sites for enhanced recharge or test sites for recharge investigations. The District encourages and supports the use of Aquifer Storage and Recovery projects as a means of water conservation in the future. Until further studies are conducted for future projects, a management goal addressing recharge enhancement is not appropriate at this time.

4. **Addressing Brush Control:**

In the west part of the District mesquite and thorny brush occur and cover a substantial amount of the land. Some mesquite and thorny brush also occur in the east part of the District along with more hardwood trees. Over the District in general, there are areas of improved pasture and cultivated land. Brush control is currently left to the individual land owners to manage their land and practice brush control for water conservation. A management goal addressing brush control is not appropriate at this time.

References

Deeds, N., Kelley, V., Fryar, D., Whallon, A.J., and Dean, K.E., 2003, Groundwater Availability Model for the Southern Carrizo-Wilcox Aquifer: Contract report to the Texas Water Development Board, 452 p., http://www.twdb.texas.gov/groundwater/models/gam/czwxs/CZWX S Full Report.pdf.

Fisher, W.L., and McGowen, J. H., 1967, Depositional systems in the Wilcox Group of Texas and their relationship to the occurrence of oil and gas: Gulf Coast Association of Geological Societies Transactions, v. 17, p. 105-125

Mace and others, Aquifers of the Gulf Coast of Texas, 2006, Texas Water Development Board Report 365, 312 p.

APPENDIX A

Estimated Historical Water Use and

2017 Texas State Water Plan Datasets:

Evergreen Underground Water Conservation District

TWDB December 11, 2020

Estimated Historical Water Use And 2017 State Water Plan Datasets:

Evergreen Underground Water Conservation District

by Stephen Allen
Texas Water Development Board
Groundwater Division
Groundwater Technical Assistance Section
stephen.allen@twdb.texas.gov
(512) 463-7317
December 11, 2020

GROUNDWATER MANAGEMENT PLAN DATA:

This package of water data reports (part 1 of a 2-part package of information) is being provided to groundwater conservation districts to help them meet the requirements for approval of their five-year groundwater management plan. Each report in the package addresses a specific numbered requirement in the Texas Water Development Board's groundwater management plan checklist. The checklist can be viewed and downloaded from this web address:

http://www.twdb.texas.gov/groundwater/docs/GCD/GMPChecklist0113.pdf

The five reports included in this part are:

1. Estimated Historical Water Use (checklist item 2)

   from the TWDB Historical Water Use Survey (WUS)
2. Projected Surface Water Supplies (checklist item 6)
3. Projected Water Demands (checklist item 7)
4. Projected Water Supply Needs (checklist item 8)
5. Projected Water Management Strategies (checklist item 9)

   from the 2017 Texas State Water Plan (SWP)

Part 2 of the 2-part package is the groundwater availability model (GAM) report for the District (checklist items 3 through 5). The District should have received, or will receive, this report from the Groundwater Availability Modeling Section. Questions about the GAM can be directed to Dr. Shirley Wade, shirley.wade@twdb.texas.gov, (512) 936-0883.

DISCLAIMER:

The data presented in this report represents the most up-to-date WUS and 2017 SWP data available as of 12/11/2020. Although it does not happen frequently, either of these datasets are subject to change pending the availability of more accurate WUS data or an amendment to the 2017 SWP. District personnel must review these datasets and correct any discrepancies in order to ensure approval of their groundwater management plan.

The WUS dataset can be verified at this web address:

http://www.twdb.texas.gov/waterplanning/waterusesurvey/estimates/

The 2017 SWP dataset can be verified by contacting Sabrina Anderson (sabrina.anderson@twdb.texas.gov or 512-936-0886).

For additional questions regarding this data, please contact Stephen Allen (stephen.allen@twdb.texas.gov or 512-463-7317).

Estimated Historical Water Use

TWDB Historical Water Use Survey (WUS) Data

Groundwater and surface water historical use estimates are currently unavailable for calendar year 2019. TWDB staff anticipates the calculation and posting of these estimates at a later date.

ATASCOSA COUNTY

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2018	GW	6,518	19	3,013	5,607	21,068	1,140	37,365
	SW	0	0	297	0	0	286	583
2017	GW	6,410	51	2,411	7,962	22,519	1,105	40,458
	SW	0	0	249	0	0	276	525
2016	GW	6,296	48	1,718	5,036	18,673	1,141	32,912
	SW	0	0	175	0	0	285	460
2015	GW	6,527	50	2,507	3,478	21,939	1,130	35,631
	SW	0	0	279	0	0	283	562
2014	GW	7,028	52	4,712	5,750	29,323	1,100	47,965
	SW	0	0	524	0	0	275	799
2013	GW	6,908	50	2,075	7,934	31,848	1,057	49,872
	SW	0	0	231	0	0	264	495
2012	GW	7,506	36	141	8,427	24,445	1,051	41,606
	SW	0	0	16	0	0	263	279
2011	GW	7,211	48	1,026	7,954	36,614	1,776	54,629
	SW	0	0	114	0	0	444	558
2010	GW	6,432	58	473	7,197	27,501	1,710	43,371
	SW	373	0	761	0	0	427	1,561
2009	GW	6,710	57	386	7,879	35,490	1,491	52,013
	SW	386	0	622	0	0	373	1,381
2008	GW	6,077	79	299	6,448	29,661	1,357	43,921
	SW	471	0	482	0	0	340	1,293
2007	GW	5,158	130	0	3,816	21,191	1,116	31,411
	SW	298	0	0	0	0	279	577
2006	GW	8,998	147	0	8,196	21,903	998	40,242
	SW	316	0	0	0	0	249	565
2005	GW	6,102	126	0	7,363	29,353	1,076	44,020
	SW	352	0	0	0	0	269	621
2004	GW	5,527	127	0	7,363	23,638	157	36,812
	SW	323	0	0	0	0	1,538	1,861
2003	GW	5,577	126	0	7,363	20,530	163	33,759
	SW	318	0	0	0	0	1,595	1,913

FRIO COUNTY

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2018	GW	2,547	0	1,003	43	63,689	572	67,854
	SW	0	0	111	0	0	381	492
2017	GW	3,446	0	1,671	43	63,570	554	69,284
	SW	0	0	186	0	0	369	555
2016	GW	3,274	0	660	40	60,913	817	65,704
	SW	0	0	73	0	0	544	617
2015	GW	3,295	0	644	54	57,809	777	62,579
	SW	0	0	72	0	0	518	590
2014	GW	3,540	0	985	88	70,601	717	75,931
	SW	0	0	109	0	0	478	587
2013	GW	3,470	0	474	88	80,348	535	84,915
	SW	0	0	53	0	0	357	410
2012	GW	3,455	0	97	64	76,210	420	80,246
	SW	0	0	11	0	0	280	291
2011	GW	3,493	0	419	124	104,755	491	109,282
	SW	0	0	47	0	0	328	375
2010	GW	2,771	0	20	50	59,000	484	62,325
	SW	0	0	4	0	0	322	326
2009	GW	3,459	0	21	169	79,212	674	83,535
	SW	0	0	4	0	0	450	454
2008	GW	2,573	0	22	189	83,725	533	87,042
	SW	0	0	4	0	0	356	360
2007	GW	2,636	0	0	121	48,495	522	51,774
	SW	0	0	0	0	0	348	348
2006	GW	3,154	0	0	214	72,151	619	76,138
	SW	0	0	0	0	0	413	413
2005	GW	2,961	0	0	153	83,641	632	87,387
	SW	0	0	0	0	0	422	422
2004	GW	2,576	0	0	62	84,080	101	86,819
	SW	0	0	0	0	0	916	916
2003	GW	2,424	0	0	188	82,548	98	85,258
	SW	0	0	0	0	837	886	1,723

KARNES COUNTY

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2018	GW	3,680	63	12,556	0	549	462	17,310
	SW	0	0	1,394	0	194	378	1,966
2017	GW	3,728	50	10,019	0	604	446	14,847
	SW	0	0	1,113	0	180	365	1,658
2016	GW	3,791	50	5,903	0	563	445	10,752
	SW	0	0	655	0	158	364	1,177
2015	GW	3,591	45	6,677	0	427	438	11,178
	SW	0	0	742	0	376	357	1,475
2014	GW	3,997	72	8,878	0	915	428	14,290
	SW	0	0	987	0	413	352	1,752
2013	GW	3,844	131	5,454	0	587	427	10,443
	SW	0	0	606	0	374	350	1,330
2012	GW	3,468	44	4,141	0	491	474	8,618
	SW	0	0	460	0	284	389	1,133
2011	GW	3,289	53	462	0	824	843	5,471
	SW	0	0	50	0	439	688	1,177
2010	GW	3,049	48	291	0	656	815	4,859
	SW	0	0	194	0	133	666	993
2009	GW	3,071	35	151	0	773	603	4,633
	SW	0	0	97	0	0	493	590
2008	GW	3,083	47	1	0	1,038	585	4,754
	SW	0	0	0	0	0	479	479
2007	GW	2,989	38	1	0	310	690	4,028
	SW	0	0	0	0	65	564	629
2006	GW	3,078	59	1	0	1,111	637	4,886
	SW	0	0	0	0	0	520	520
2005	GW	2,885	57	0	0	225	696	3,863
	SW	0	0	0	0	100	571	671
2004	GW	2,295	59	0	0	95	83	2,532
	SW	0	0	0	0	111	1,204	1,315
2003	GW	2,292	112	0	0	117	84	2,605
	SW	0	0	0	0	1,394	1,225	2,619

WILSON COUNTY

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2018	GW	6,403	9	104	0	10,358	952	17,826
	SW	0	0	12	0	401	634	1,047
2017	GW	6,470	50	0	0	11,986	921	19,427
	SW	0	0	0	0	400	614	1,014
2016	GW	5,856	57	82	0	10,387	894	17,276
	SW	222	0	9	0	627	597	1,455
2015	GW	6,039	50	0	0	9,550	882	16,521
	SW	222	0	0	0	923	588	1,733
2014	GW	6,080	39	440	0	12,568	860	19,987
	SW	226	0	49	0	756	573	1,604
2013	GW	6,184	39	391	0	11,387	830	18,831
	SW	290	0	43	0	1,423	554	2,310
2012	GW	6,261	38	231	0	13,159	789	20,478
	SW	368	0	26	0	1,730	525	2,649
2011	GW	6,892	40	183	0	18,507	1,609	27,231
	SW	350	0	20	0	2,726	1,073	4,169
2010	GW	5,488	40	18	0	13,699	1,579	20,824
	SW	119	0	4	0	1,133	1,053	2,309
2009	GW	6,347	22	9	0	13,344	997	20,719
	SW	235	0	2	0	2,153	665	3,055
2008	GW	6,052	9	1	0	12,343	1,038	19,443
	SW	226	0	0	0	1,989	692	2,907
2007	GW	4,836	9	0	0	4,346	1,114	10,305
	SW	194	0	0	0	539	743	1,476
2006	GW	6,082	10	0	0	19,478	988	26,558
	SW	194	0	0	0	0	658	852
2005	GW	5,778	10	0	0	13,876	1,073	20,737
	SW	104	0	0	0	500	715	1,319
2004	GW	4,532	10	0	0	13,834	144	18,520
	SW	145	0	0	0	470	1,688	2,303
2003	GW	4,856	11	0	0	11,232	144	16,243
	SW	23	0	0	0	1,243	1,686	2,952

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

ATASCOSA COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
L	LIVESTOCK, ATASCOSA	NUECES	NUECES LIVESTOCK LOCAL SUPPLY	754	754	754	754	754	754
L	SAN ANTONIO WATER SYSTEM	NUECES	GUADALUPE RUN-OF-RIVER	0	0	0	0	0	0
L	SAN ANTONIO WATER SYSTEM	NUECES	SAN ANTONIO RUN-OF-RIVER	94	96	96	96	96	96
	Sum of Projected Surface Water Supplies (acre-feet)			**848**	**850**	**850**	**850**	**850**	**850**

FRIO COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
L	LIVESTOCK, FRIO	NUECES	NUECES LIVESTOCK LOCAL SUPPLY	497	497	497	497	497	497
	Sum of Projected Surface Water Supplies (acre-feet)			**497**	**497**	**497**	**497**	**497**	**497**

KARNES COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
L	IRRIGATION, KARNES	SAN ANTONIO	SAN ANTONIO RUN-OF-RIVER	725	725	725	725	725	725
L	LIVESTOCK, KARNES	GUADALUPE	GUADALUPE LIVESTOCK LOCAL SUPPLY	20	20	20	20	20	20
L	LIVESTOCK, KARNES	SAN ANTONIO	SAN ANTONIO LIVESTOCK LOCAL SUPPLY	547	548	548	549	558	558
L	LIVESTOCK, KARNES	SAN ANTONIO-NUECES	SAN ANTONIO-NUECES LIVESTOCK LOCAL SUPPLY	10	10	10	10	10	10
	Sum of Projected Surface Water Supplies (acre-feet)			**1,302**	**1,303**	**1,303**	**1,304**	**1,313**	**1,313**

WILSON COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
L	COUNTY-OTHER, WILSON	SAN ANTONIO	SAN ANTONIO RUN-OF-RIVER	42	42	42	42	42	42
L	EAST CENTRAL SUD	SAN ANTONIO	CANYON LAKE/RESERVOIR	80	83	84	83	81	78
L	IRRIGATION, WILSON	SAN ANTONIO	SAN ANTONIO RUN-OF-RIVER	1,728	1,728	1,728	1,728	1,728	1,728
L	LA VERNIA	SAN ANTONIO	CANYON LAKE/RESERVOIR	270	270	270	270	270	270

L	LA VERNIA	SAN ANTONIO	GUADALUPE RUN-OF-RIVER	130	130	130	130	130	130
L	LIVESTOCK, WILSON	GUADALUPE	GUADALUPE LIVESTOCK LOCAL SUPPLY	54	54	54	54	54	54
L	LIVESTOCK, WILSON	NUECES	NUECES LIVESTOCK LOCAL SUPPLY	54	54	55	55	56	56
L	LIVESTOCK, WILSON	SAN ANTONIO	SAN ANTONIO LIVESTOCK LOCAL SUPPLY	759	759	759	759	759	759
	Sum of Projected Surface Water Supplies (acre-feet)			**3,117**	**3,120**	**3,122**	**3,121**	**3,120**	**3,117**

Projected Water Demands
TWDB 2017 State Water Plan Data

Please note that the demand numbers presented here include the plumbing code savings found in the Regional and State Water Plans.

ATASCOSA COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
L	BENTON CITY WSC	NUECES	882	993	1,099	1,207	1,313	1,413
L	BENTON CITY WSC	SAN ANTONIO	109	123	136	150	163	175
L	CHARLOTTE	NUECES	344	386	425	467	508	547
L	COUNTY-OTHER, ATASCOSA	NUECES	847	940	1,028	1,123	1,222	1,315
L	COUNTY-OTHER, ATASCOSA	SAN ANTONIO	75	84	91	100	109	117
L	IRRIGATION, ATASCOSA	NUECES	26,328	25,446	24,597	23,780	22,991	22,273
L	IRRIGATION, ATASCOSA	SAN ANTONIO	266	257	248	240	232	225
L	JOURDANTON	NUECES	959	1,083	1,198	1,317	1,434	1,544
L	LIVESTOCK, ATASCOSA	NUECES	1,509	1,509	1,509	1,509	1,509	1,509
L	LYTLE	NUECES	452	510	563	618	673	725
L	MANUFACTURING, ATASCOSA	NUECES	12	12	12	12	12	12
L	MCCOY WSC	NUECES	905	1,012	1,113	1,219	1,326	1,427
L	MINING, ATASCOSA	NUECES	4,081	4,043	3,935	3,212	2,478	2,043
L	PLEASANTON	NUECES	2,283	2,582	2,859	3,143	3,423	3,685
L	POTEET	NUECES	472	523	571	623	678	730
L	SAN ANTONIO WATER SYSTEM	NUECES	716	803	885	970	1,055	1,136
L	STEAM ELECTRIC POWER, ATASCOSA	NUECES	4,807	6,101	5,997	7,336	7,672	7,819
	Sum of Projected Water Demands (acre-feet)		**45,047**	**46,407**	**46,266**	**47,026**	**46,798**	**46,695**

FRIO COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
L	BENTON CITY WSC	NUECES	62	67	71	76	80	84
L	COUNTY-OTHER, FRIO	NUECES	528	559	602	643	680	715
L	DILLEY	NUECES	1,025	1,110	1,185	1,263	1,337	1,405
L	IRRIGATION, FRIO	NUECES	70,831	68,327	65,932	63,638	61,423	59,412
L	LIVESTOCK, FRIO	NUECES	994	994	994	994	994	994
L	MINING, FRIO	NUECES	1,217	1,250	1,178	986	620	390
L	PEARSALL	NUECES	2,021	2,181	2,323	2,472	2,616	2,750
L	STEAM ELECTRIC POWER, FRIO	NUECES	555	417	398	158	189	163
	Sum of Projected Water Demands (acre-feet)		**77,233**	**74,905**	**72,683**	**70,230**	**67,939**	**65,913**

KARNES COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
L	COUNTY-OTHER, KARNES	GUADALUPE	14	14	14	14	13	13
L	COUNTY-OTHER, KARNES	NUECES	11	11	11	11	11	11
L	COUNTY-OTHER, KARNES	SAN ANTONIO	591	598	592	588	557	557
L	COUNTY-OTHER, KARNES	SAN ANTONIO-NUECES	6	6	6	6	6	6
L	EL OSO WSC	GUADALUPE	7	7	7	7	7	7
L	EL OSO WSC	NUECES	20	20	19	19	18	18
L	EL OSO WSC	SAN ANTONIO	563	568	559	553	524	524
L	EL OSO WSC	SAN ANTONIO-NUECES	5	5	5	5	5	5
L	FALLS CITY	SAN ANTONIO	147	148	146	145	141	141
L	IRRIGATION, KARNES	GUADALUPE	27	25	22	20	18	17
L	IRRIGATION, KARNES	NUECES	42	38	35	31	28	26
L	IRRIGATION, KARNES	SAN ANTONIO	570	516	466	422	381	350
L	IRRIGATION, KARNES	SAN ANTONIO-NUECES	16	14	13	12	11	10
L	KARNES CITY	SAN ANTONIO	625	628	617	611	580	580
L	KENEDY	SAN ANTONIO	1,421	1,446	1,435	1,432	1,362	1,362
L	LIVESTOCK, KARNES	GUADALUPE	41	41	41	41	41	41
L	LIVESTOCK, KARNES	NUECES	64	64	64	64	64	64
L	LIVESTOCK, KARNES	SAN ANTONIO	1,039	1,039	1,039	1,039	1,039	1,039
L	LIVESTOCK, KARNES	SAN ANTONIO-NUECES	24	24	24	24	24	24
L	MANUFACTURING, KARNES	SAN ANTONIO	171	175	179	182	192	203
L	MINING, KARNES	GUADALUPE	152	115	77	40	2	0
L	MINING, KARNES	NUECES	253	192	129	66	4	0
L	MINING, KARNES	SAN ANTONIO	2,022	1,535	1,030	530	28	2
L	MINING, KARNES	SAN ANTONIO-NUECES	101	77	52	26	1	0
L	RUNGE	SAN ANTONIO	231	232	228	227	216	216
L	SUNKO WSC	SAN ANTONIO	34	35	35	33	31	31
	Sum of Projected Water Demands (acre-feet)		**8,197**	**7,573**	**6,845**	**6,148**	**5,304**	**5,247**

WILSON COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
L	COUNTY-OTHER, WILSON	GUADALUPE	40	49	57	64	71	78
L	COUNTY-OTHER, WILSON	NUECES	50	59	69	78	87	95
L	COUNTY-OTHER, WILSON	SAN ANTONIO	1,403	1,685	1,967	2,225	2,477	2,705
L	EAST CENTRAL SUD	SAN ANTONIO	157	187	215	242	270	295
L	EL OSO WSC	SAN ANTONIO	39	47	54	61	65	71
L	ELMENDORF	SAN ANTONIO	3	3	4	4	4	5
L	FLORESVILLE	SAN ANTONIO	1,940	2,344	2,741	3,106	3,460	3,781
L	IRRIGATION, WILSON	NUECES	4,884	4,343	3,865	3,445	3,081	2,810
L	IRRIGATION, WILSON	SAN ANTONIO	7,298	6,488	5,775	5,147	4,604	4,199
L	LA VERNIA	SAN ANTONIO	277	335	391	443	494	539
L	LIVESTOCK, WILSON	GUADALUPE	108	108	108	108	108	108
L	LIVESTOCK, WILSON	NUECES	108	108	108	108	108	108

L	LIVESTOCK, WILSON	SAN ANTONIO	1,521	1,521	1,521	1,521	1,521	1,521
L	MANUFACTURING, WILSON	SAN ANTONIO	10	10	10	10	10	10
L	MCCOY WSC	NUECES	43	51	59	67	75	81
L	MCCOY WSC	SAN ANTONIO	4	5	5	6	6	7
L	MINING, WILSON	GUADALUPE	174	139	105	70	36	18
L	MINING, WILSON	NUECES	174	139	105	70	36	18
L	MINING, WILSON	SAN ANTONIO	1,581	1,270	955	642	327	168
L	NIXON	GUADALUPE	2	2	2	3	3	3
L	OAK HILLS WSC	SAN ANTONIO	904	1,090	1,275	1,444	1,608	1,757
L	POTH	SAN ANTONIO	387	462	537	607	676	738
L	S S WSC	SAN ANTONIO	1,986	2,384	2,782	3,147	3,503	3,827
L	STOCKDALE	SAN ANTONIO	384	462	539	610	679	742
L	SUNKO WSC	GUADALUPE	5	6	7	7	8	8
L	SUNKO WSC	SAN ANTONIO	783	935	1,100	1,216	1,270	1,388
	Sum of Projected Water Demands (acre-feet)		**24,265**	**24,232**	**24,356**	**24,451**	**24,587**	**25,080**

Projected Water Supply Needs
TWDB 2017 State Water Plan Data

Negative values (in red) reflect a projected water supply need, positive values a surplus.

ATASCOSA COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
L	BENTON CITY WSC	NUECES	533	406	294	185	82	-13
L	BENTON CITY WSC	SAN ANTONIO	66	50	36	23	10	-2
L	CHARLOTTE	NUECES	346	304	265	223	182	143
L	COUNTY-OTHER, ATASCOSA	NUECES	469	376	288	193	94	1
L	COUNTY-OTHER, ATASCOSA	SAN ANTONIO	42	33	26	17	8	0
L	IRRIGATION, ATASCOSA	NUECES	0	0	0	0	0	0
L	IRRIGATION, ATASCOSA	SAN ANTONIO	0	0	0	0	0	0
L	JOURDANTON	NUECES	1,135	1,011	896	777	660	550
L	LIVESTOCK, ATASCOSA	NUECES	0	0	0	0	0	0
L	LYTLE	NUECES	-134	-198	-254	-310	-365	-418
L	MANUFACTURING, ATASCOSA	NUECES	0	0	0	0	0	0
L	MCCOY WSC	NUECES	601	490	386	277	168	66
L	MINING, ATASCOSA	NUECES	0	0	0	0	0	0
L	PLEASANTON	NUECES	1,494	1,195	918	634	354	92
L	POTEET	NUECES	946	895	847	795	740	688
L	SAN ANTONIO WATER SYSTEM	NUECES	-113	-276	-381	-465	-548	-630
L	STEAM ELECTRIC POWER, ATASCOSA	NUECES	3,848	2,554	2,658	1,319	983	836
	Sum of Projected Water Supply Needs (acre-feet)		-247	-474	-635	-775	-913	-1,063

FRIO COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
L	BENTON CITY WSC	NUECES	38	27	19	12	5	-1
L	COUNTY-OTHER, FRIO	NUECES	492	461	418	377	340	305
L	DILLEY	NUECES	1,082	997	922	844	770	702
L	IRRIGATION, FRIO	NUECES	0	0	0	0	0	0
L	LIVESTOCK, FRIO	NUECES	0	0	0	0	0	0
L	MINING, FRIO	NUECES	0	0	0	0	0	0
L	PEARSALL	NUECES	710	550	408	259	115	-19
L	STEAM ELECTRIC POWER, FRIO	NUECES	0	138	157	397	366	392
	Sum of Projected Water Supply Needs (acre-feet)		0	0	0	0	0	-20

KARNES COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
L	COUNTY-OTHER, KARNES	GUADALUPE	14	14	14	14	15	15
L	COUNTY-OTHER, KARNES	NUECES	9	9	9	9	9	9
L	COUNTY-OTHER, KARNES	SAN ANTONIO	9	2	8	11	23	23
L	COUNTY-OTHER, KARNES	SAN ANTONIO-NUECES	14	14	14	14	14	14
L	EL OSO WSC	GUADALUPE	2	2	2	2	2	3
L	EL OSO WSC	NUECES	4	4	4	4	4	4
L	EL OSO WSC	SAN ANTONIO	109	112	124	129	142	135
L	EL OSO WSC	SAN ANTONIO-NUECES	0	1	1	1	1	1
L	FALLS CITY	SAN ANTONIO	73	85	97	103	111	111
L	IRRIGATION, KARNES	GUADALUPE	3	5	8	10	12	13
L	IRRIGATION, KARNES	NUECES	0	4	7	11	14	16
L	IRRIGATION, KARNES	SAN ANTONIO	187	241	291	335	375	406
L	IRRIGATION, KARNES	SAN ANTONIO-NUECES	0	2	3	4	5	6
L	KARNES CITY	SAN ANTONIO	-336	-322	-298	-285	-249	-249
L	KENEDY	SAN ANTONIO	-161	-189	-179	-178	-151	-151
L	LIVESTOCK, KARNES	GUADALUPE	0	0	0	0	0	0
L	LIVESTOCK, KARNES	NUECES	0	0	0	0	0	0
L	LIVESTOCK, KARNES	SAN ANTONIO	0	0	0	0	0	0
L	LIVESTOCK, KARNES	SAN ANTONIO-NUECES	0	0	0	0	0	0
L	MANUFACTURING, KARNES	SAN ANTONIO	58	53	49	46	28	17
L	MINING, KARNES	GUADALUPE	0	0	0	0	0	0
L	MINING, KARNES	NUECES	-217	-156	-94	-35	24	26
L	MINING, KARNES	SAN ANTONIO	-1,572	-1,085	-580	-80	17	29
L	MINING, KARNES	SAN ANTONIO-NUECES	-75	-51	-26	0	9	1
L	RUNGE	SAN ANTONIO	43	41	45	46	47	47
L	SUNKO WSC	SAN ANTONIO	20	12	5	2	0	-2
	Sum of Projected Water Supply Needs (acre-feet)		-2,361	-1,803	-1,177	-578	-400	-402

WILSON COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
L	COUNTY-OTHER, WILSON	GUADALUPE	85	76	68	61	54	47
L	COUNTY-OTHER, WILSON	NUECES	45	36	26	17	8	0
L	COUNTY-OTHER, WILSON	SAN ANTONIO	1,304	1,022	740	482	230	2
L	EAST CENTRAL SUD	SAN ANTONIO	29	10	-12	-36	-64	-91
L	EL OSO WSC	SAN ANTONIO	7	9	12	15	18	18
L	ELMENDORF	SAN ANTONIO	0	0	0	0	0	0
L	FLORESVILLE	SAN ANTONIO	396	-8	-405	-770	-1,124	-1,445
L	IRRIGATION, WILSON	NUECES	71	97	63	72	27	98
L	IRRIGATION, WILSON	SAN ANTONIO	3,014	2,824	2,537	2,165	1,708	1,113
L	LA VERNIA	SAN ANTONIO	269	211	155	103	52	7
L	LIVESTOCK, WILSON	GUADALUPE	0	0	0	0	0	0
L	LIVESTOCK, WILSON	NUECES	0	0	0	0	0	0
L	LIVESTOCK, WILSON	SAN ANTONIO	0	0	0	0	0	0

L	MANUFACTURING, WILSON	SAN ANTONIO	0	0	0	0	0	0
L	MCCOY WSC	NUECES	29	25	20	15	9	4
L	MCCOY WSC	SAN ANTONIO	3	2	2	1	1	0
L	MINING, WILSON	GUADALUPE	0	0	0	0	0	0
L	MINING, WILSON	NUECES	0	0	0	0	0	0
L	MINING, WILSON	SAN ANTONIO	0	0	0	0	0	0
L	NIXON	GUADALUPE	10	9	9	12	12	11
L	OAK HILLS WSC	SAN ANTONIO	959	773	588	419	255	106
L	POTH	SAN ANTONIO	916	841	766	696	627	565
L	S S WSC	SAN ANTONIO	1,607	1,209	811	446	90	-234
L	STOCKDALE	SAN ANTONIO	1,378	1,300	1,223	1,152	1,083	1,020
L	SUNKO WSC	GUADALUPE	3	2	1	0	0	-1
L	SUNKO WSC	SAN ANTONIO	465	320	162	52	1	-114
	Sum of Projected Water Supply Needs (acre-feet)		**0**	-8	-417	-806	-1,188	-1,885

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

ATASCOSA COUNTY

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
BENTON CITY WSC, NUECES (L)							
LOCAL CARRIZO AQUIFER DEVELOPMENT	CARRIZO-WILCOX AQUIFER [ATASCOSA]	0	0	0	0	0	43
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [ATASCOSA]	0	0	0	0	0	31
		0	**0**	**0**	**0**	**0**	**74**
BENTON CITY WSC, SAN ANTONIO (L)							
LOCAL CARRIZO AQUIFER DEVELOPMENT	CARRIZO-WILCOX AQUIFER [ATASCOSA]	0	0	0	0	0	5
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [ATASCOSA]	0	0	0	0	0	4
		0	**0**	**0**	**0**	**0**	**9**
CHARLOTTE, NUECES (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [ATASCOSA]	9	28	33	44	58	74
		9	**28**	**33**	**44**	**58**	**74**
JOURDANTON, NUECES (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [ATASCOSA]	36	119	219	307	360	415
		36	**119**	**219**	**307**	**360**	**415**
LYTLE, NUECES (L)							
DROUGHT MANAGEMENT - LYTLE	DEMAND REDUCTION [ATASCOSA]	7	0	0	0	0	0
EDWARDS TRANSFERS	EDWARDS-BFZ AQUIFER [BEXAR]	134	198	254	310	365	418
MUNICIPAL WATER CONSERVATION (SUBURBAN)	DEMAND REDUCTION [ATASCOSA]	14	53	91	109	132	156
		155	**251**	**345**	**419**	**497**	**574**
PLEASANTON, NUECES (L)							
MUNICIPAL WATER CONSERVATION (SUBURBAN)	DEMAND REDUCTION [ATASCOSA]	89	289	531	795	926	1,062
		89	**289**	**531**	**795**	**926**	**1,062**
SAN ANTONIO WATER SYSTEM, NUECES (L)							
MUNICIPAL WATER CONSERVATION (SUBURBAN) - SAWS	DEMAND REDUCTION [ATASCOSA]	0	0	0	0	0	15
REGIONAL CARRIZO FOR SSLGC PROJECT EXPANSION	CARRIZO-WILCOX AQUIFER [GONZALES]	31	111	0	0	0	0
SAWS SEAWATER DESALINATION	GULF OF MEXICO [GULF OF MEXICO]	0	0	135	135	135	135

VISTA RIDGE PROJECT	CARRIZO-WILCOX AQUIFER [BURLESON]	82	165	246	330	413	493
		113	276	381	465	548	643
Sum of Projected Water Management Strategies (acre-feet)		402	963	1,509	2,030	2,389	2,851

FRIO COUNTY

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
BENTON CITY WSC, NUECES (L)							
LOCAL CARRIZO AQUIFER DEVELOPMENT	CARRIZO-WILCOX AQUIFER [ATASCOSA]	0	0	0	0	0	3
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [FRIO]	0	0	0	0	0	2
		0	0	0	0	0	5
COUNTY-OTHER, FRIO, NUECES (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [FRIO]	0	0	0	0	0	2
		0	0	0	0	0	2
DILLEY, NUECES (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [FRIO]	48	136	233	341	425	470
		48	136	233	341	425	470
PEARSALL, NUECES (L)							
LOCAL CARRIZO AQUIFER WITH CONVERSION	CARRIZO-WILCOX AQUIFER [FRIO]	0	0	0	0	0	20
MUNICIPAL WATER CONSERVATION (SUBURBAN)	DEMAND REDUCTION [FRIO]	81	247	434	497	573	655
		81	247	434	497	573	675
Sum of Projected Water Management Strategies (acre-feet)		129	383	667	838	998	1,152

KARNES COUNTY

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
COUNTY-OTHER, KARNES, GUADALUPE (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	0	1	1	1	1	1
		0	1	1	1	1	1
COUNTY-OTHER, KARNES, NUECES (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	0	0	0	0	0	1
		0	0	0	0	0	1
COUNTY-OTHER, KARNES, SAN ANTONIO (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	7	15	14	16	14	27
		7	15	14	16	14	27
COUNTY-OTHER, KARNES, SAN ANTONIO-NUECES (L)							

MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	0	0	0	0	0	0
		0	**0**	**0**	**0**	**0**	**0**
EL OSO WSC, GUADALUPE (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	1	1	1	2	1	1
		1	**1**	**1**	**2**	**1**	**1**
EL OSO WSC, NUECES (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	2	3	4	4	4	4
		2	**3**	**4**	**4**	**4**	**4**
EL OSO WSC, SAN ANTONIO (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	45	85	114	119	106	112
		45	**85**	**114**	**119**	**106**	**112**
EL OSO WSC, SAN ANTONIO-NUECES (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	1	1	1	1	1	1
		1	**1**	**1**	**1**	**1**	**1**
FALLS CITY, SAN ANTONIO (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	10	22	30	38	40	43
		10	**22**	**30**	**38**	**40**	**43**
KARNES CITY, SAN ANTONIO (L)							
DROUGHT MANAGEMENT - KARNES CITY	DEMAND REDUCTION [KARNES]	31	0	0	0	0	0
LOCAL YEGUA JACKSON AQUIFER DEVELOPMENT	YEGUA-JACKSON AQUIFER [KARNES]	0	0	0	0	249	249
LOCAL YEGUA JACKSON AQUIFER WITH CONVERSION	YEGUA-JACKSON AQUIFER [KARNES]	336	322	298	285	0	0
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	48	95	108	107	100	112
		415	**417**	**406**	**392**	**349**	**361**
KENEDY, SAN ANTONIO (L)							
DROUGHT MANAGEMENT - KENEDY	DEMAND REDUCTION [KARNES]	71	0	0	0	0	0
LOCAL GULF COAST AQUIFER DEVELOPMENT	GULF COAST AQUIFER [GOLIAD]	190	190	190	190	190	190
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	145	268	352	437	484	568
		406	**458**	**542**	**627**	**674**	**758**
MINING, KARNES, GUADALUPE (L)							
MINING WATER CONSERVATION	DEMAND REDUCTION [KARNES]	0	0	0	0	0	0
		0	**0**	**0**	**0**	**0**	**0**
MINING, KARNES, NUECES (L)							
MINING WATER CONSERVATION	DEMAND REDUCTION [KARNES]	0	0	0	0	0	0
		0	**0**	**0**	**0**	**0**	**0**
MINING, KARNES, SAN ANTONIO (L)							

MINING WATER CONSERVATION	DEMAND REDUCTION [KARNES]	0	0	0	0	0	0
		0	**0**	**0**	**0**	**0**	**0**
MINING, KARNES, SAN ANTONIO-NUECES (L)							
MINING WATER CONSERVATION	DEMAND REDUCTION [KARNES]	0	0	0	0	0	0
		0	**0**	**0**	**0**	**0**	**0**
RUNGE, SAN ANTONIO (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	19	36	48	52	50	54
		19	**36**	**48**	**52**	**50**	**54**
SUNKO WSC, SAN ANTONIO (L)							
LOCAL CARRIZO AQUIFER DEVELOPMENT	CARRIZO-WILCOX AQUIFER [WILSON]	0	0	0	0	0	3
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [KARNES]	3	3	4	4	2	3
		3	**3**	**4**	**4**	**2**	**6**
Sum of Projected Water Management Strategies (acre-feet)		**909**	**1,042**	**1,165**	**1,256**	**1,242**	**1,369**

WILSON COUNTY

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
COUNTY-OTHER, WILSON, GUADALUPE (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	0	0	0	0	0	2
		0	**0**	**0**	**0**	**0**	**2**
COUNTY-OTHER, WILSON, NUECES (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	0	0	0	0	0	2
		0	**0**	**0**	**0**	**0**	**2**
COUNTY-OTHER, WILSON, SAN ANTONIO (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	0	0	0	0	4	69
		0	**0**	**0**	**0**	**4**	**69**
EAST CENTRAL SUD, SAN ANTONIO (L)							
HAYS/CALDWELL PUA PROJECT	CARRIZO-WILCOX AQUIFER [CALDWELL]	0	53	56	59	64	91
		0	**53**	**56**	**59**	**64**	**91**
EL OSO WSC, SAN ANTONIO (L)							
MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	3	7	11	13	13	15
		3	**7**	**11**	**13**	**13**	**15**
ELMENDORF, SAN ANTONIO (L)							
MUNICIPAL WATER CONSERVATION (SUBURBAN)	DEMAND REDUCTION [WILSON]	0	0	0	0	0	0
		0	**0**	**0**	**0**	**0**	**0**
FLORESVILLE, SAN ANTONIO (L)							

	LOCAL CARRIZO AQUIFER DEVELOPMENT	CARRIZO-WILCOX AQUIFER [WILSON]	0	1,450	1,450	1,450	1,450	1,450
	MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	80	272	525	823	1,122	1,288
			80	**1,722**	**1,975**	**2,273**	**2,572**	**2,738**
LA VERNIA, SAN ANTONIO (L)								
	MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	11	39	74	106	128	149
			11	**39**	**74**	**106**	**128**	**149**
NIXON, GUADALUPE (L)								
	MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	0	0	0	0	0	0
			0	**0**	**0**	**0**	**0**	**0**
OAK HILLS WSC, SAN ANTONIO (L)								
	MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	30	72	100	139	189	244
			30	**72**	**100**	**139**	**189**	**244**
POTH, SAN ANTONIO (L)								
	MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	7	9	14	27	44	65
			7	**9**	**14**	**27**	**44**	**65**
S S WSC, SAN ANTONIO (L)								
	BRACKISH WILCOX GROUNDWATER FOR SS WSC	CARRIZO-WILCOX AQUIFER [WILSON]	0	0	0	0	0	234
	MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	0	0	0	0	11	104
			0	**0**	**0**	**0**	**11**	**338**
STOCKDALE, SAN ANTONIO (L)								
	MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	13	49	97	141	168	197
			13	**49**	**97**	**141**	**168**	**197**
SUNKO WSC, GUADALUPE (L)								
	LOCAL CARRIZO AQUIFER DEVELOPMENT	CARRIZO-WILCOX AQUIFER [WILSON]	0	0	0	0	0	1
	MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	1	1	1	1	1	1
			1	**1**	**1**	**1**	**1**	**2**
SUNKO WSC, SAN ANTONIO (L)								
	LOCAL CARRIZO AQUIFER DEVELOPMENT	CARRIZO-WILCOX AQUIFER [WILSON]	0	0	0	0	0	116
	MUNICIPAL WATER CONSERVATION (RURAL)	DEMAND REDUCTION [WILSON]	79	103	140	148	109	150
			79	**103**	**140**	**148**	**109**	**266**
	Sum of Projected Water Management Strategies (acre-feet)		**224**	**2,055**	**2,468**	**2,907**	**3,303**	**4,178**

APPENDIX B

GAM Run 19-013:

Evergreen Underground Water Conservation District

Groundwater Management Plan

GAM Run 19-013: Evergreen Underground Water Conservation District Groundwater Management Plan

Shirley C. Wade, Ph.D., P.G.
Texas Water Development Board
Groundwater Division
Groundwater Availability Modeling Department
512-936-0883
April 30, 2019

Shirley C. Wade
4/30/19

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GAM Run 19-013: Evergreen Underground Water Conservation District Groundwater Management Plan

Shirley C. Wade, Ph.D., P.G.
Texas Water Development Board
Groundwater Division
Groundwater Availability Modeling Department
512-936-0883
April 30, 2019

EXECUTIVE SUMMARY:

Texas State Water Code, Section 36.1071, Subsection (h) (Texas Water Code, 2011), states that, in developing its groundwater management plan, a groundwater conservation district shall use groundwater availability modeling information provided by the Executive Administrator of the Texas Water Development Board (TWDB) in conjunction with any available site-specific information provided by the district for review and comment to the Executive Administrator.

The TWDB provides data and information to the Evergreen Underground Water Conservation District in two parts. Part 1 is the Estimated Historical Water Use/State Water Plan dataset report, which will be provided to you separately by the TWDB Groundwater Technical Assistance Department. Please direct questions about the water data report to Mr. Stephen Allen at 512-463-7317 or stephen.allen@twdb.texas.gov. Part 2 is the required groundwater availability modeling information and this information includes:

1. the annual amount of recharge from precipitation, if any, to the groundwater resources within the district;
2. for each aquifer within the district, the annual volume of water that discharges from the aquifer to springs and any surface-water bodies, including lakes, streams, and rivers; and
3. the annual volume of flow into and out of the district within each aquifer and between aquifers in the district.

The groundwater management plan for the Evergreen Underground Water Conservation District should be adopted by the district on or before December 16, 2020 and submitted to the Executive Administrator of the TWDB on or before January 15, 2021. The current management plan for the Evergreen Underground Water Conservation District expires on March 16, 2021.

We used four groundwater availability models to estimate the management plan information for the aquifers within the Evergreen Underground Water Conservation District. Information for the Edwards (Balcones Fault Zone) Aquifer is from the GWSIM-IV groundwater availability model for the San Antonio segment of the Edwards (Balcones Fault Zone) Aquifer (Thorkildsen and McElhaney, 1992; Klemt and others, 1979). Information for the Carrizo-Wilcox, Queen City, and Sparta aquifers is from version 2.01 of the groundwater availability model for the southern part of the Carrizo-Wilcox, Queen City, and Sparta aquifers (Kelley and others, 2004). Information for the Yegua-Jackson Aquifer is from version 1.01 of the groundwater availability model for the Yegua-Jackson Aquifer (Deeds and others, 2010). Information for the Gulf Coast Aquifer System is from version 1.01 of the groundwater availability model for the central portion of the Gulf Coast Aquifer System (Chowdhury and others, 2004).

This report replaces the results of GAM Run 15-004 (Goswami, 2015), as the approach used for analyzing model results has been since refined. Tables 1 through 6 summarize the groundwater availability model data required by statute and Figures 1 through 6 show the area of the models from which the values in the tables were extracted. If, after review of the figures, the Evergreen Underground Water Conservation District determines that the district boundaries used in the assessment do not reflect current conditions, please notify the TWDB at your earliest convenience.

METHODS:

In accordance with the provisions of the Texas State Water Code, Section 36.1071, Subsection (h), the four groundwater availability models mentioned above were used to estimate information for the Evergreen Underground Water Conservation District management plan. Water budgets were extracted for the (post 1980) historical model periods for the Edwards (Balcones Fault Zone) Aquifer (1980 through 1989), Carrizo-Wilcox, Queen City, and Sparta aquifers (1980 through 1999), Yegua-Jackson Aquifer (1980 through 1997) and Gulf Coast Aquifer System (1980 through 1999). With the exception of GWSIM-IV, we used ZONEBUDGET Version 3.01 (Harbaugh, 2009) to extract water budgets from the model results. The average annual water budget values for recharge, surface-

water outflow, inflow to the district, and outflow from the district for the aquifers within the district are summarized in this report.

PARAMETERS AND ASSUMPTIONS:

Edwards (Balcones Fault Zone) Aquifer

- We used the GWSIM-IV model of the San Antonio Segment of the Edwards (Balcones Fault Zone) Aquifer. See Thorkildsen and McElhaney (1992) and Klemt and others (1979) for assumptions and limitations of the GWSIM-IV groundwater availability model.

- The GWSIM-IV model contains one layer representing the Edwards (Balcones Fault Zone) Aquifer and the associated limestone.

- This model was run to analyze the groundwater flow entering and leaving Evergreen Underground Water Conservation District.

- Lateral flows, leakage, and reduction in recharge volumes are reported in the model output files. GWSIM-IV reduces recharge when calculated heads exceed the elevation of the top of the aquifer.

Carrizo-Wilcox, Queen City, and Sparta aquifers

- We used version 2.01 of the groundwater availability model for the southern part of the Carrizo-Wilcox, Queen City, and Sparta aquifers. See Deeds and others (2003) and Kelley and others (2004) for assumptions and limitations of the groundwater availability model for the southern part of the Carrizo-Wilcox, Queen City, and Sparta aquifers.

- This groundwater availability model includes eight layers, which generally represent the Sparta Aquifer (Layer 1), the Weches Formation confining unit (Layer 2), the Queen City Aquifer (Layer 3), the Reklaw Formation confining unit (Layer 4), the Carrizo Formation (Layer 5), the Upper Wilcox Unit (Layer 6), the Middle Wilcox Unit (Layer 7), and the Lower Wilcox Unit (Layer 8).

- Water budgets for the district were determined for the Sparta Aquifer (Layer 1), the Queen City Aquifer (Layer 3), and the Carrizo-Wilcox Aquifer (Layers 5 through 8, collectively).

- The model was run with MODFLOW-96 (Harbaugh and McDonald, 1996).

Yegua-Jackson Aquifer

- We used version 1.01 of the groundwater availability model for the Yegua-Jackson Aquifer. See Deeds and others (2010) for assumptions and limitations of the groundwater availability model.
- This groundwater availability model includes five layers that represent the outcrop of the Yegua-Jackson Aquifer and younger overlying units—the Catahoula Formation (Layer 1), the upper portion of the Jackson Group (Layer 2), the lower portion of the Jackson Group (Layer 3), the upper portion of the Yegua Group (Layer 4), and the lower portion of the Yegua Group (Layer 5).
- An overall water budget for the district was determined for the Yegua-Jackson Aquifer (Layer 1 through Layer 5, collectively, for the portions of the model that represent the Yegua-Jackson Aquifer).
- The model was run with MODFLOW-2000 (Harbaugh and others, 2000).

Gulf Coast Aquifer System

- We used version 1.01 of the groundwater availability model for the central part of the Gulf Coast Aquifer System for this analysis. See Chowdhury and others (2004) and Waterstone and others (2003) for assumptions and limitations of the groundwater availability model.
- The model has four layers which represent the Chicot Aquifer (Layer 1), the Evangeline Aquifer (Layer 2), the Burkeville Confining Unit (Layer 3), and the Jasper Aquifer and parts of the Catahoula Formation in direct hydrologic communication with the Jasper Aquifer (Layer 4).
- Water budgets for the district were determined for the Gulf Coast Aquifer System (Layers 1 through 4, collectively).
- The model was run with MODFLOW-96 (Harbaugh and McDonald, 1996).
- Because this model assumes a no-flow boundary condition at the base we used version 1.01 of the groundwater availability model for the Yegua-Jackson Aquifer to investigate groundwater flows between the Catahoula Formation and the base of the Gulf Coast Aquifer System. See Deeds and others (2010) for assumptions and limitations of the groundwater availability model for the Yegua-Jackson Aquifer.

RESULTS:

A groundwater budget summarizes the amount of water entering and leaving the aquifers according to the groundwater availability model. Selected groundwater budget components listed below were extracted from the groundwater availability model results for the Edwards (Balcones Fault Zone), Carrizo-Wilcox, Queen City, Sparta, and Yegua-Jackson aquifers and the Gulf Coast Aquifer System located within Evergreen Underground Water Conservation District and averaged over the historical calibration periods, as shown in Tables 1 through 6.

1. Precipitation recharge—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.

2. Surface-water outflow—the total water discharging from the aquifer (outflow) to surface-water features such as streams, reservoirs, and springs.

3. Flow into and out of district—the lateral flow within the aquifer between the district and adjacent counties.

4. Flow between aquifers—the net vertical flow between the aquifer and adjacent aquifers or confining units. This flow is controlled by the relative water levels in each aquifer and aquifer properties of each aquifer or confining unit that define the amount of leakage that occurs.

The information needed for the district's management plan is summarized in Tables 1 through 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 a district or county boundary, 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.

TABLE 1. SUMMARIZED INFORMATION FOR THE EDWARDS (BALCONES FAULT ZONE) AQUIFER 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 or confining unit	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	Flow to other aquifers	NA[1]

[1]Not applicable. Model assumes a no-flow boundary at the base.

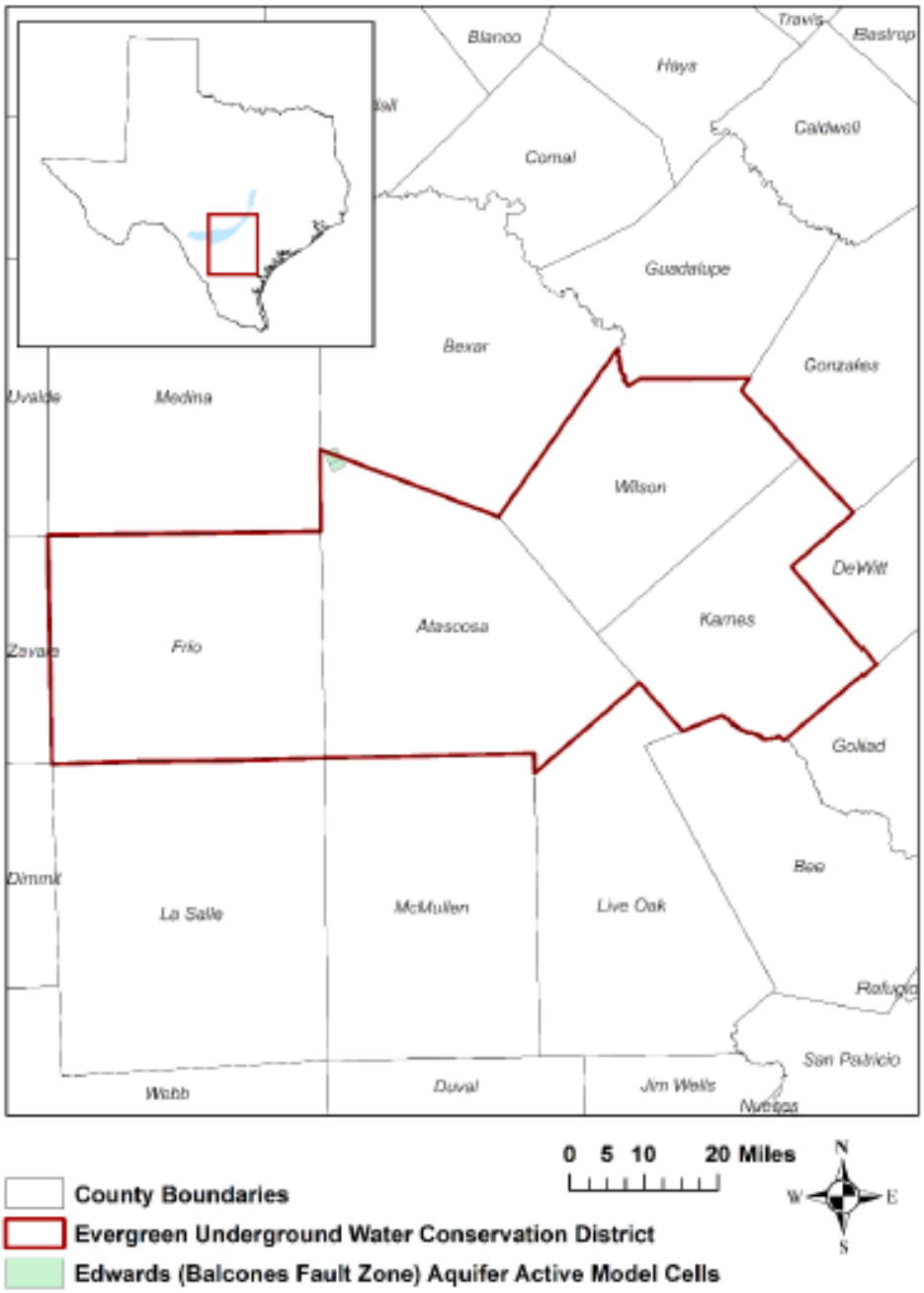


FIGURE 1 AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE EDWARDS (BALCONES FAULT ZONE) AQUIFER FROM WHICH THE INFORMATION IN TABLE 1 WAS EXTRACTED (THE AQUIFER SYSTEM EXTENT WITHIN THE DISTRICT BOUNDARY).

TABLE 2. SUMMARIZED INFORMATION FOR THE CARRIZO-WILCOX AQUIFER 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 or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Carrizo-Wilcox Aquifer	20,850
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	3,621
Estimated annual volume of flow into the district within each aquifer in the district	Carrizo-Wilcox Aquifer	72,094
Estimated annual volume of flow out of the district within each aquifer in the district	Carrizo-Wilcox Aquifer	15,081
Estimated net annual volume of flow between each aquifer in the district	Flow into the Carrizo-Wilcox Aquifer from the overlying Reklaw confining unit	18,695
	Flow from the Carrizo-Wilcox Aquifer into downdip units	2,313

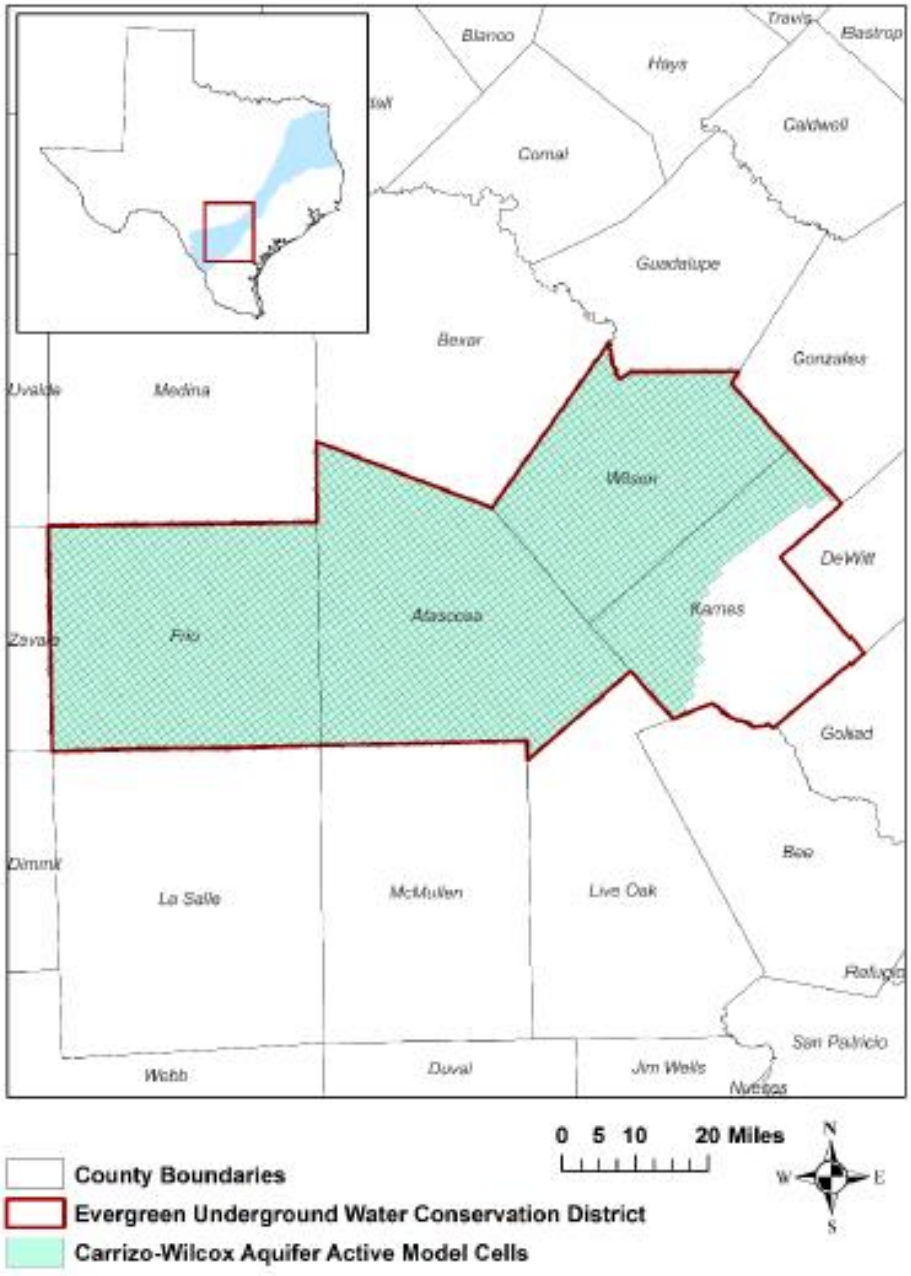


FIGURE 2 AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE CARRIZO-WILCOX AQUIFER FROM WHICH THE INFORMATION IN TABLE 2 WAS EXTRACTED (THE AQUIFER SYSTEM EXTENT WITHIN THE DISTRICT BOUNDARY).

TABLE 3. SUMMARIZED INFORMATION FOR THE QUEEN CITY AQUIFER 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 or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Queen City Aquifer	23,084
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	7,097
Estimated annual volume of flow into the district within each aquifer in the district	Queen City Aquifer	79
Estimated annual volume of flow out of the district within each aquifer in the district	Queen City Aquifer	1,716
Estimated net annual volume of flow between each aquifer in the district	Flow into the Queen City Aquifer from the Weches confining unit	6,259
	Flow into the Reklaw confining unit from the Queen City Aquifer	7,282
	Flow from the Queen City Aquifer into downdip units	527

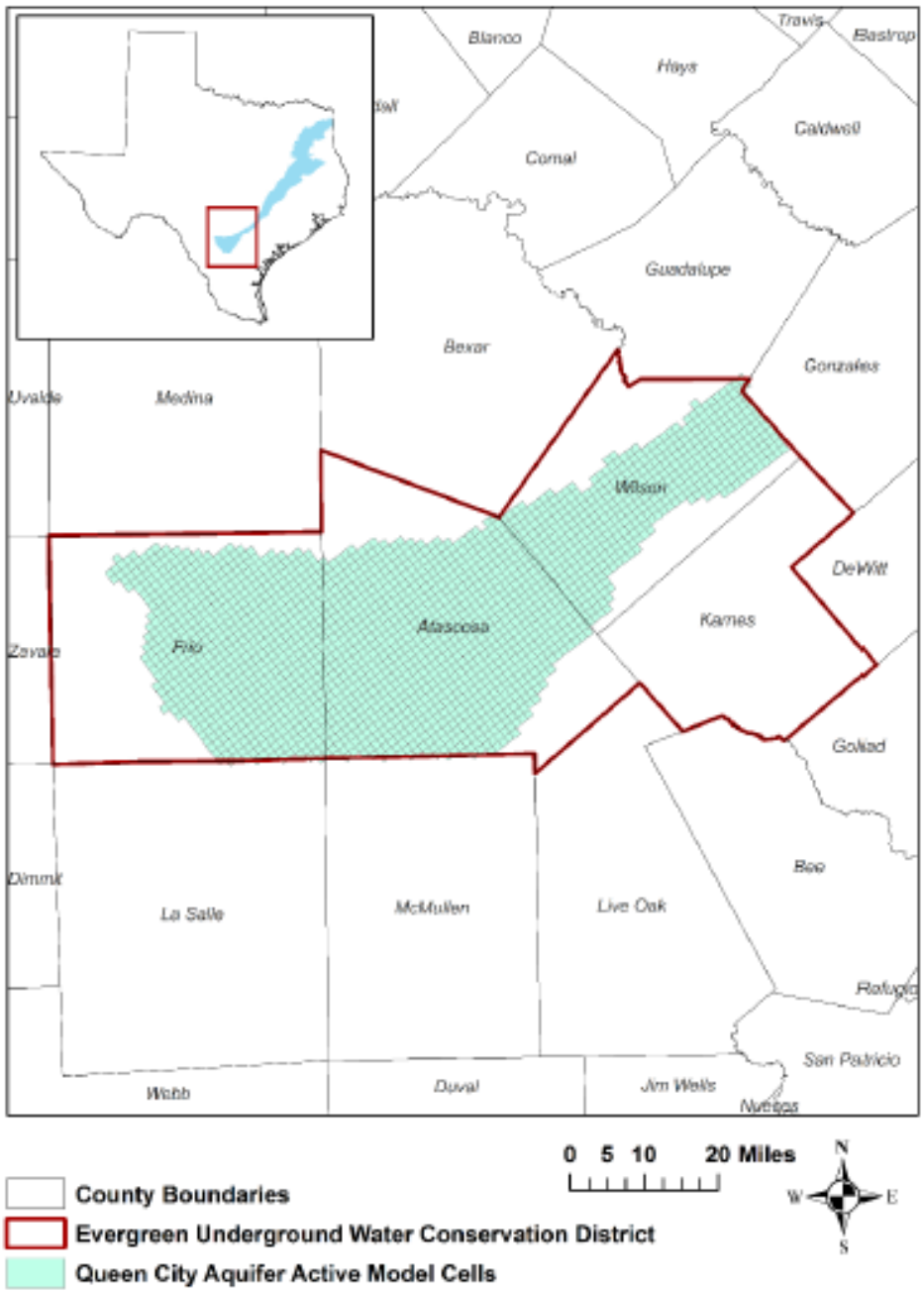


FIGURE 3 AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE QUEEN CITY AQUIFER FROM WHICH THE INFORMATION IN TABLE 3 WAS EXTRACTED (THE AQUIFER SYSTEM EXTENT WITHIN THE DISTRICT BOUNDARY).

TABLE 4. SUMMARIZED INFORMATION FOR THE SPARTA AQUIFER SYSTEM 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 or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Sparta Aquifer	6,150
Estimated annual volume of water that discharges from the aquifer to springs and any surface-water body including lakes, streams, and rivers	Sparta Aquifer	4,407
Estimated annual volume of flow into the district within each aquifer in the district	Sparta Aquifer	73
Estimated annual volume of flow out of the district within each aquifer in the district	Sparta Aquifer	864
Estimated net annual volume of flow between each aquifer in the district	Flow from the Sparta aquifer into overlying younger units	970
	Flow from the Sparta Aquifer System into the Weches confining unit	4,486
	Flow from the Sparta Aquifer into downdip units	1,096

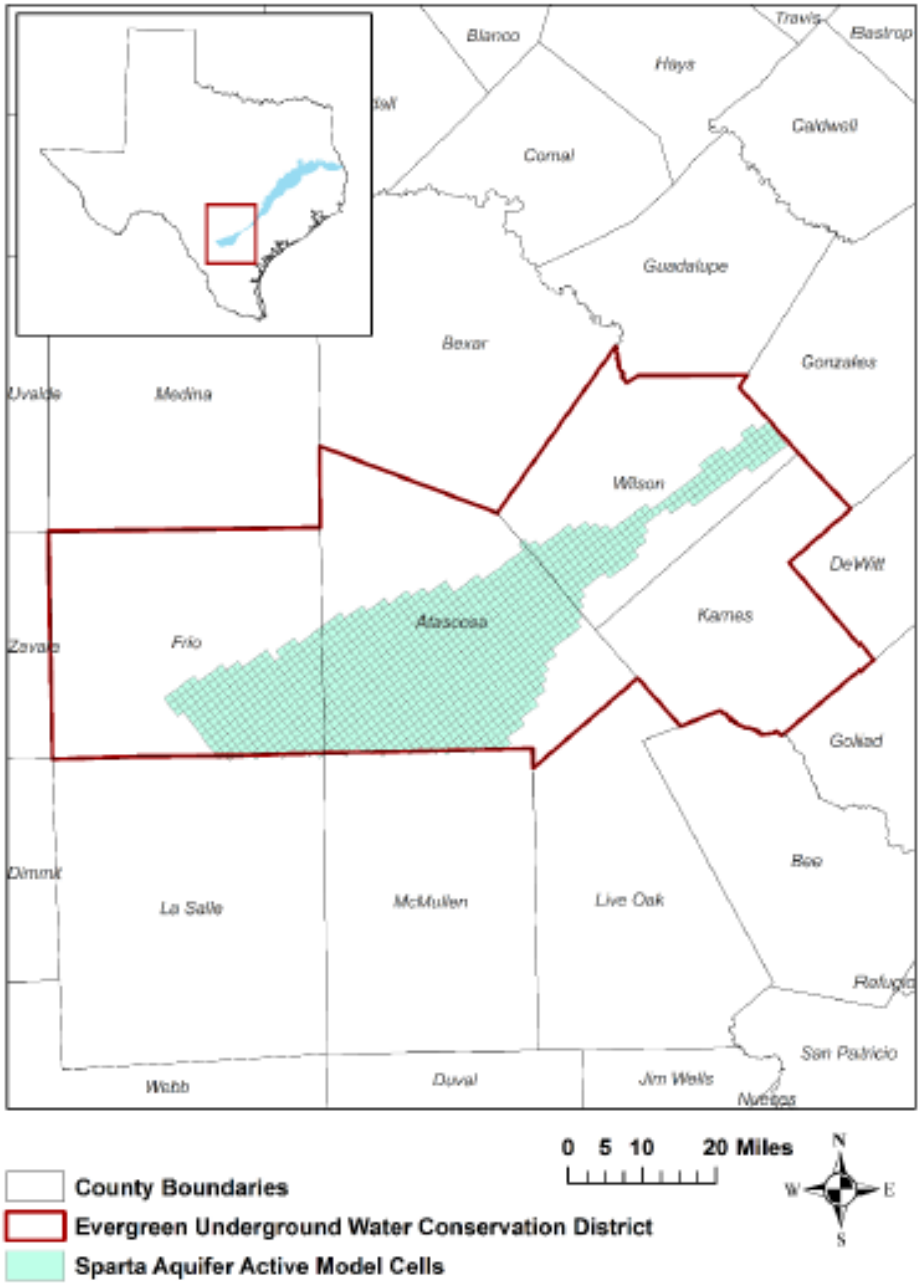
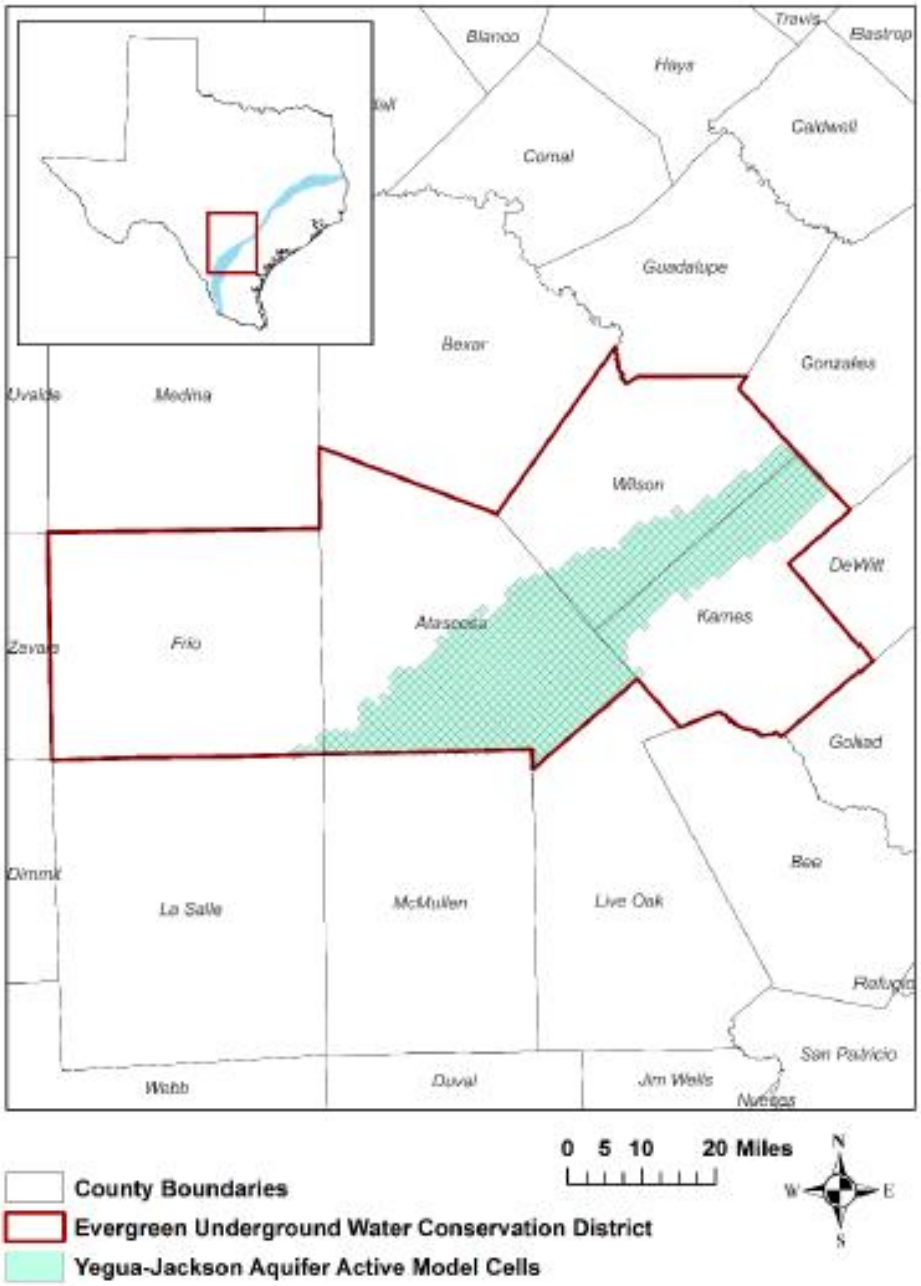


FIGURE 4 AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE SPARTA AQUIFER FROM WHICH THE INFORMATION IN TABLE 4 WAS EXTRACTED (THE AQUIFER SYSTEM EXTENT WITHIN THE DISTRICT BOUNDARY).

TABLE 5. SUMMARIZED INFORMATION FOR THE YEGUA-JACKSON AQUIFER 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 or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Yegua-Jackson Aquifer	42,086
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	46,062
Estimated annual volume of flow into the district within each aquifer in the district	Yegua-Jackson Aquifer	2,679
Estimated annual volume of flow out of the district within each aquifer in the district	Yegua-Jackson Aquifer	4,578
Estimated net annual volume of flow between each aquifer in the district	Flow from the Yegua-Jackson Aquifer into the Catahoula	41
	Flow from the Yegua-Jackson Aquifer into downdip Yegua-Jackson units	228



gcd boundaries date = 01.22.18, county boundaries date = 02.02.11, ygjk model grid date = 11.13.17

FIGURE 5 AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE YEGUA-JACKSON AQUIFER FROM WHICH THE INFORMATION IN TABLE 5 WAS EXTRACTED (THE AQUIFER SYSTEM EXTENT WITHIN THE DISTRICT BOUNDARY).

TABLE 6. SUMMARIZED INFORMATION FOR THE GULF COAST AQUIFER SYSTEM 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 or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Gulf Coast Aquifer System	1,196
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 System	1,496
Estimated annual volume of flow into the district within each aquifer in the district	Gulf Coast Aquifer System	746
Estimated annual volume of flow out of the district within each aquifer in the district	Gulf Coast Aquifer System	1,198
Estimated net annual volume of flow between each aquifer in the district	Flow from the Catahoula Formation[2] into underlying Yegua-Jackson units	627

[2] In and near the outcrop the Catahoula Formation is considered part of the Gulf Coast Aquifer System. Extracted from the groundwater availability model for the Yegua-Jackson Aquifer.

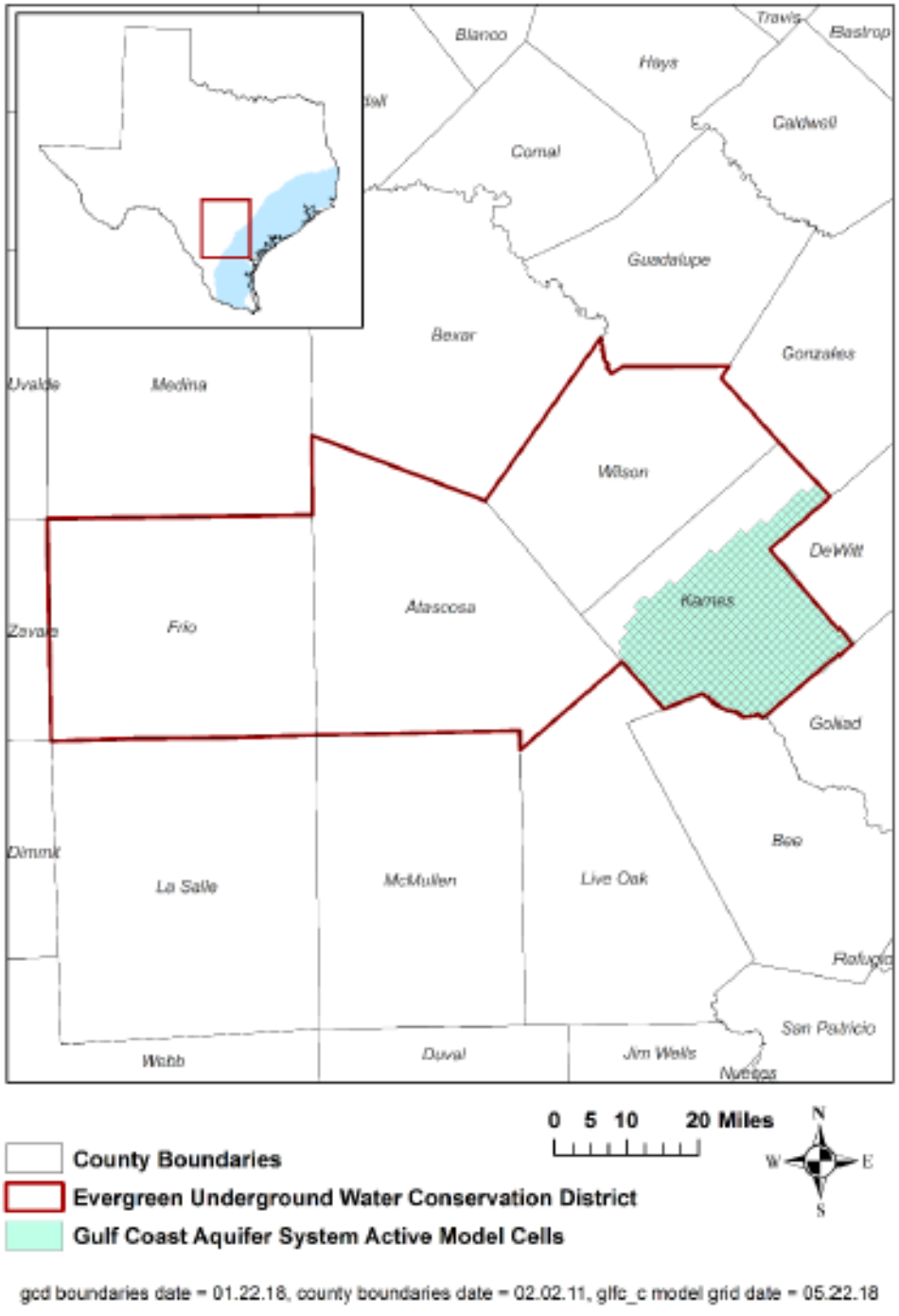


FIGURE 6 AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE GULF COAST AQUIFER SYSTEM FROM WHICH THE INFORMATION IN TABLE 6 WAS EXTRACTED (THE AQUIFER SYSTEM EXTENT WITHIN THE DISTRICT BOUNDARY).

LIMITATIONS:

The groundwater models used in completing this analysis are the best available scientific tools that can be used to meet the stated objectives. To the extent that this analysis will be used for planning purposes and/or regulatory purposes related to pumping in the past and into the future, it is important to recognize the assumptions and limitations associated with the use of the results. In reviewing the use of models in environmental regulatory decision making, the National Research Council (2007) noted:

> *"Models will always be constrained by computational limitations, assumptions, and knowledge gaps. They can best be viewed as tools to help inform decisions rather than as machines to generate truth or make decisions. Scientific advances will never make it possible to build a perfect model that accounts for every aspect of reality or to prove that a given model is correct in all respects for a particular regulatory application. These characteristics make evaluation of a regulatory model more complex than solely a comparison of measurement data with model results."*

A key aspect of using the groundwater model to evaluate historical groundwater flow conditions includes the assumptions about the location in the aquifer where historical pumping was placed. Understanding the amount and location of historical pumping is as important as evaluating the volume of groundwater flow into and out of the district, between aquifers within the district (as applicable), interactions with surface water (as applicable), recharge to the aquifer system (as applicable), and other metrics that describe the impacts of that pumping. In addition, assumptions regarding precipitation, recharge, and interaction with streams are specific to particular historical time periods.

Because the application of the groundwater models was designed to address regional-scale questions, the results are most effective on a regional scale. The TWDB makes no warranties or representations related to the actual conditions of any aquifer at a particular location or at a particular time.

It is important for groundwater conservation districts to monitor groundwater pumping and overall conditions of the aquifer. Because of the limitations of the groundwater model and the assumptions in this analysis, it is important that the groundwater conservation districts work with the TWDB to refine this analysis in the future given the reality of how the aquifer responds to the actual amount and location of pumping now and in the future. Historical precipitation patterns also need to be placed in context as future climatic conditions, such as dry and wet year precipitation patterns, may differ and affect groundwater flow conditions.

REFERENCES:

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APPENDIX C

Public Notices Regarding Hearing

Related to Plan Adoption

Evergreen Underground Water Conservation District
Notice of Public Hearing

The Evergreen Underground Water Conservation District will conduct a public hearing on the proposed adoption of the Management Plan of the District. The Board of Directors will take public comments on the proposed Management Plan at 9:00 a.m. on Friday, January 29, 2021 at the Evergreen Underground Water Conservation District office located at 110 Wyoming Blvd., Pleasanton, Texas, 78064 or by email at info@evergreenuwcd.org. A copy of the proposed Management Plan may be reviewed or copied at the Evergreen Underground Water Conservation District office from 8:00 a.m. to 5:00 p.m., Monday through Friday. A copy is also available for download on the District website at evergreenuwcd.org.

The above Notice of Public Hearing was posted this 22nd day of January 2021 at 10:00 a.m./p.m. by Melissa Gonzalez.

/22/202

EUWCD

Evergreen Underground Water Conservation District
110 Wyoming Blvd
Pleasanton, TX 78064

NOTICE OF MEETING
OF THE BOARD OF DIRECTORS
EVERGREEN UNDERGROUND WATER CONSERVATION DISTRICT

Notice is hereby given that a meeting of the Evergreen Underground Water Conservation District will be held **Friday, January 29, 2021 at 9:00 a.m. by teleconference* at (844) 854-2222, Access Code: 221637*, Online Meeting ID: info38353** at which the following subjects will be discussed, to wit:

AGENDA

Matters to be discussed that are subject to vote by the Directors of the Evergreen Underground Water Conservation District are as follows:

1. Declaration of Quorum and Call to Order.

Recess to Public Hearing

Public Hearing-Proposed District Management Plan

a. Call to Order.
b. Public Comments on the Proposed District Management Plan.
c. Adjourn.

Public Hearing- Water Well Drilling and Production Permit Applications

a. Call to Order.
b. Public Comments.
c. Drilling/Production Permit Applications.
d. Adjourn.

Reconvene to Regular Meeting

2. Public Comments on Agenda Items, Limited to 5 minutes each.
3. Approval of Minutes from the December 18, 2020 Board of Directors Meeting.
4. Approval of Report of Bills Paid, Deposits, and Financial Statements for December 2020.
5. Approve Resolution #2021-01-29 to Adopt the District Management Plan.
6. Order General Election of Directors for Atascosa, Frio, Karnes, and Wilson Counties.
7. Appoint Scholarship Committee and Approve 2021 Scholarship Essay Question.
8. Staff Report on District Activities:
    - General Manager District Update
9. Public Comments on Other District Business, Limited to 5 minutes each.
10. Consider and Take Appropriate Action on Items to be Placed on the Next Agenda.
11. Set Date and Time for Next Board of Directors Meeting.
12. Adjourn.

Agenda items may be considered, deliberated and/or acted upon in a different order than set forth above

At any time during the meeting and in compliance with the Texas Open Meetings Act, Chapter 551, Government Code, Vernon's Texas Codes, Annotated, the Evergreen Underground Water Conservation District Board may meet in executive session on any of the above agenda items for consultation concerning attorney-client matters (§551.071); deliberation regarding real property (§551.072); deliberation regarding prospective gifts §551.073 ; personnel matters (§551.074); and deliberation regarding security devices (§551.076). Any subject discussed in executive session may be subject to action during an open meeting

110 Wyoming Blvd.
Pleasanton, TX 78064
Phone: 830-569-4186
Fax: 830-569-4238

Evergreen Underground Water Conservation District

Fax

To: County Clerk- Atascosa, Frio, Wilson, Karnes

From: Melissa Gonzalez

Date: 1/22/21

Pages: 3 Including Cover

Re: Agenda & Public Notice Management Plan Hearing

☑ **For Posting** ☐ **For Review** ☐ **Please Comment** ☑ **Please Reply**

Fax Numbers: 830-780-4576, 830-769-3361, 830-393-7334, 830-334-0021

Comments:

Please post the attached Agenda/Permit Hearing and if possible can I have a confirmation of the posting faxed or emailed to melissa.gonzalez@evergreenuwcd.org. Thank you.

Broadcast Report

Date/Time	01-22-2021	10:26:20 a.m.	Transmit Header Text
Local ID 1	830		Local Name 1

This document : Confirmed
(reduced sample and details below)
Document size : 8.5"x11"

110 Wyoming Blvd.
Pleasanton, TX 78064
Phone: 830-569-4186
Fax: 830-569-4238

Evergreen Underground Water Conservation District

Fax

To: County Clerk- Atascosa, Frio, Wilson, Karnes **From:** Melissa Gonzalez

Date: 1/22/21

Pages: 3 Including Cover

Re: Agenda & Public Notice Management Plan Hearing

☑ For Posting ☐ For Review ☐ Please Comment ☑ Please Reply

Fax Numbers: 830-780-4570, 830-769-3361, 830-393-7334, 830-334-0021

Comments:

Please post the attached Agenda/Permit Hearing and if possible can I have a confirmation of the posting faxed or emailed to melissa.gonzalez@evergreenuwcd.org. Thank you.

Total Pages Scanned : 3 Total Pages Confirmed : 12

No.	Job	Remote Station	Start Time	Duration	Pages	Line	Mode	Job Type	Results
001	811	18307804576	10:18:18 a.m. 01-22-2021	00:01:37	3/3	1	EC	HS	CP14400
002	811	18307693361	10:18:18 a.m. 01-22-2021	00:01:37	3/3	1	EC	HS	CP14400
003	811	18303937334	10:18:18 a.m. 01-22-2021	00:01:37	3/3	1	EC	HS	CP14400
004	811	18303340021	10:18:18 a.m. 01-22-2021	00:01:36	3/3	1	EC	HS	CP14400

Melissa Gonzalez Log Off

Open Meeting Submission

TRD:	2021000480
Date Posted:	01/22/2021
Status:	Accepted
Agency Id:	0670
Date of Submission:	01/22/2021
Agency Name:	Evergreen Underground Water Conservation District
Board:	Evergreen Underground Water Conservation District
Committee:	Board of Directors
Date of Meeting:	01/29/2021
Time of Meeting:	09:00 AM (**##:## AM Local Time)**
Street Location:	110 WYOMING BLVD
City:	PLEASANTON
State:	TX
If Emergency Meeting, Reason:	8305694186
Liaison Name:	Melissa Gonzalez
Liaison Id:	3
Additional Information Obtained From:	830-569-4186
Agenda:	Evergreen Underground Water Conservation District Notice of Public Hearing

The Evergreen Underground Water Conservation District will conduct a public hearing on the proposed adoption of the Management Plan of the District. The Board of Directors will take

public comments on the proposed Management Plan at 9:00 a.m. on Friday, January 29, 2021 at the Evergreen Underground Water Conservation District office located at 110 Wyoming Blvd., Pleasanton, Texas, 78064 or by email at info@evergreenuwcd.org. A copy of the proposed Management Plan may be reviewed or copied at the Evergreen Underground Water Conservation District office from 8:00 a.m. to 5:00 p.m., Monday through Friday. A copy is also available for download on the District website at evergreenuwcd.org.

The above Notice of Public Hearing was posted this 22nd day of January 2021

at 10:00 a.m./p.m. by Melissa Gonzalez, District Secretary.

New Submission

APPENDIX D

Letters Coordinating with Regional

Surface Water Management

MONIQUE NORMAN
ATTORNEY AT LAW

512.459.9428
P.O. BOX 50245 FAX 512.459.8671
AUSTIN, TEXAS 78763 NORMAN.LAW@EARTHLINK.NET

February 5, 2021

Allison Elder, JD,
Director of Legal Services
San Antonio River Authority
100 East Guenther St.
San Antonio, Texas 78204

Re: Notification of Management Plan Adoption by the Evergreen Underground Water Conservation District

Dear Ms. Elder:

I am the attorney for the Evergreen Underground Water Conservation District ("District"), the Texas local government that regulates groundwater in Atascosa, Wilson, Frio, and Karnes counties. The District adopted its most recent Management Plan on January 29, 2021, after a noticed public hearing. Notification of the adopted management plan is sent to all surface water entities in the District, as provided by the Texas Water Development Board.

This District's adopted Management Plan may be found on the District's website: http://www.evergreenuwcd.org/management-plan.html.

If you have any questions or comments, please contact the District's General Manger, Russell Labus at (830)-569-4186, russell.labus@evergreenuwcd.org.

Regards,

Monique M. Norman

Monique M. Norman

Cc: Russell Labus, General Manager
Evergreen Underground Water Conservation District

MONIQUE NORMAN
ATTORNEY AT LAW

512.459.9428
P.O. BOX 50245 FAX 512.459.8671
AUSTIN, TEXAS 78763 NORMAN.LAW@EARTHLINK.NET

February 5, 2021

Ed Berger
Bexar-Medina-Atascosa Counties WCID 1
PO Box 170
Natalia, Texas 78059-0170

Re: Notification of Management Plan Adoption by the Evergreen Underground Water Conservation District

Dear Mr. Berger:

I am the attorney for the Evergreen Underground Water Conservation District ("District"), the Texas local government that regulates groundwater in Atascosa, Wilson, Frio, and Karnes counties. The District adopted its most recent Management Plan on January 29, 2021, after a noticed public hearing. Notification of the adopted management plan is sent to all surface water entities in the District, as provided by the Texas Water Development Board.

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If you have any questions or comments, please contact the District's General Manger, Russell Labus at (830)-569-4186, russell.labus@evergreenuwcd.org.

Regards,

Monique M. Norman

Cc: Russell Labus, General Manager
Evergreen Underground Water Conservation District

MONIQUE NORMAN
ATTORNEY AT LAW

P.O. BOX 50245
AUSTIN, TEXAS 78763

512.459.9428
FAX 512.459.8671
NORMAN.LAW@EARTHLINK.NET

February 5, 2021

David Davenport, General Manager
Canyon Regional Water Authority
850 Lakeside Pass
New Braunfels, Texas 78130

Re: Notification of Management Plan Adoption by the Evergreen Underground Water Conservation District

Dear Mr. Davenport:

I am the attorney for the Evergreen Underground Water Conservation District ("District"), the Texas local government that regulates groundwater in Atascosa, Wilson, Frio, and Karnes counties. The District adopted its most recent Management Plan on January 29, 2021, after a noticed public hearing. Notification of the adopted management plan is sent to all surface water entities in the District, as provided by the Texas Water Development Board.

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If you have any questions or comments, please contact the District's General Manger, Russell Labus at (830)-569-4186, russell.labus@evergreenuwcd.org.

Regards,

Monique M. Norman

Cc: Russell Labus, General Manager
Evergreen Underground Water Conservation District

MONIQUE NORMAN
ATTORNEY AT LAW

P.O. BOX 50245
AUSTIN, TEXAS 78763

512.459.9428
FAX 512.459.8671
NORMAN.LAW@EARTHLINK.NET

February 5, 2021

Escondido Watershed District
491 N Sunset Strip, Suite 103
Kenedy, Texas 78119-2051

Re: Notification of Management Plan Adoption by the Evergreen Underground Water Conservation District

Dear General Manager:

I am the attorney for the Evergreen Underground Water Conservation District ("District"), the Texas local government that regulates groundwater in Atascosa, Wilson, Frio, and Karnes counties. The District adopted its most recent Management Plan on January 29, 2021, after a noticed public hearing. Notification of the adopted management plan is sent to all surface water entities in the District, as provided by the Texas Water Development Board.

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If you have any questions or comments, please contact the District's General Manger, Russell Labus at (830)-569-4186, russell.labus@evergreenuwcd.org.

Regards,

Monique M. Norman

Cc: Russell Labus, General Manager
Evergreen Underground Water Conservation District

MONIQUE NORMAN
ATTORNEY AT LAW

P.O. BOX 50245
AUSTIN, TEXAS 78763

512.459.9428
FAX 512.459.8671
NORMAN.LAW@EARTHLINK.NET

February 5, 2021

Hondo Creek Watershed Improvement District
4635 FM 743
Kenedy, Texas 78119-4735

Re: Notification of Management Plan Adoption by the Evergreen Underground Water Conservation District

Dear General Manager:

I am the attorney for the Evergreen Underground Water Conservation District ("District"), the Texas local government that regulates groundwater in Atascosa, Wilson, Frio, and Karnes counties. The District adopted its most recent Management Plan on January 29, 2021, after a noticed public hearing. Notification of the adopted management plan is sent to all surface water entities in the District, as provided by the Texas Water Development Board.

This District's adopted Management Plan may be found on the District's website: http://www.evergreenuwcd.org/management-plan.html.

If you have any questions or comments, please contact the District's General Manger, Russell Labus at (830)-569-4186, russell.labus@evergreenuwcd.org.

Regards,

Monique M. Norman

Cc: Russell Labus, General Manager
Evergreen Underground Water Conservation District

MONIQUE NORMAN
ATTORNEY AT LAW

P.O. BOX 50245
AUSTIN, TEXAS 78763

512.459.9428
FAX 512.459.8671
NORMAN.LAW@EARTHLINK.NET

February 5, 2021

Ecleto Creek Watershed District
491 N. Sunset Strip, Suite 103
Kenedy, Texas 78119

Re: Notification of Management Plan Adoption by the Evergreen Underground Water Conservation District

Dear General Manager:

I am the attorney for the Evergreen Underground Water Conservation District ("District"), the Texas local government that regulates groundwater in Atascosa, Wilson, Frio, and Karnes counties. The District adopted its most recent Management Plan on January 29, 2021, after a noticed public hearing. Notification of the adopted management plan is sent to all surface water entities in the District, as provided by the Texas Water Development Board.

This District's adopted Management Plan may be found on the District's website: http://www.evergreenuwcd.org/management-plan.html.

If you have any questions or comments, please contact the District's General Manger, Russell Labus at (830)-569-4186, russell.labus@evergreenuwcd.org.

Regards,

Monique M. Norman

Cc: Russell Labus, General Manager
Evergreen Underground Water Conservation District

MONIQUE NORMAN
ATTORNEY AT LAW

P.O. BOX 50245
AUSTIN, TEXAS 78763

512.459.9428
FAX 512.459.8671
NORMAN.LAW@EARTHLINK.NET

February 5, 2021

John Byrum, Executive Director
Nueces River Authority
539 HWY 83 S.
Uvalde, TX 78801

Re: Notification of Management Plan Adoption by the Evergreen Underground Water Conservation District

Dear Mr. Byrum:

I am the attorney for the Evergreen Underground Water Conservation District ("District"), the Texas local government that regulates groundwater in Atascosa, Wilson, Frio, and Karnes counties. The District adopted its most recent Management Plan on January 29, 2021, after a noticed public hearing. Notification of the adopted management plan is sent to all surface water entities in the District, as provided by the Texas Water Development Board.

This District's adopted Management Plan may be found on the District's website: http://www.evergreenuwcd.org/management-plan.html.

If you have any questions or comments, please contact the District's General Manger, Russell Labus at (830)-569-4186, russell.labus@evergreenuwcd.org.

Regards,

Monique M. Norman

Cc: Russell Labus, General Manager
Evergreen Underground Water Conservation District

APPENDIX E

Evergreen Underground Water Conservation District

Board of Directors Resolution Adopting Revised Management Plan

Resolution No. 2021-01-29

WHEREAS, the Evergreen Underground Water District (District), under the direction of the Board of Directors of the District (the "Board"), and in accordance with Sections 36.1071, 36.1072 and 36.108 of the Texas Water Code, and 31 Texas Administrative Code Chapter 356, developed an amended Management Plan that addresses the following management goals, as applicable:

(1) providing the most efficient use of groundwater;
(2) controlling and preventing waste of groundwater;
(3) controlling and preventing subsidence;
(4) addressing conjunctive surface water management issues;
(5) addressing natural resource issues;
(6) addressing drought conditions;
(7) addressing conservation, recharge enhancement, rainwater harvesting, precipitation enhancement, or brush control, where appropriate and cost-effective; and
(8) addressing the desired future conditions adopted by the district under Section 36.108;

WHEREAS, the District issued the notice in the manner required by state law and held a public hearing on January 29, 2021 at 9:00 a.m. to receive public comments on the proposed Management Plan at the District office located at 110 Wyoming Blvd, Pleasanton, TX 78064.

WHEREAS, the Board finds that the Management plan meets all the requirements of Chapter 36, Water Code, and 31 Texas Administrative Code Chapter 356;

WHEREAS, after the public hearing, the Board of Directors met in a regular board meeting on January 29, 2021, properly noticed in accordance with state law, and considered adoption of the attached Management Plan, and approval of this resolution after due consideration of all comments received.

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

1. The Board of Directors of the District hereby adopts the attached Management Plan;

2. The General Manager of the District is further authorized to take all steps necessary to implement this resolution and submit the Management Plan to the Texas Water Development Board in its review and approval pursuant to the provisions of Section 36.1072 of the Texas Water Code.

AND IT IS SO ORDERED.

PASSED AND ADOPTED on this 29th day of January, 2021.

Blaine Schorp
Board President

Diane Savage
Board Secretary

APPENDIX F

Minutes of Evergreen Underground Water Conservation District Board of Directors Meetings Related to Public Hearings for and Adoption of the Management Plan

MINUTES
EVERGREEN UNDERGROUND WATER CONSERVATION DISTRICT
JANUARY 29, 2021- REGULAR SCHEDULED BOARD MEETING

The public meeting of the Board of Directors of the Evergreen Underground Water Conservation District, pursuant to notice, was held by teleconference at (844) 854-2222, Access Code: 221637*, Online Meeting ID: info38353.

Directors Present: Blaine Schorp, President (call-in)
Frank Kruciak, Vice President (call-in)
Diane Savage, Secretary/Treasurer (call-in)
Larry Bartek (call-in)
Jay Troell (call-in)
Weldon Riggs
Thomas Moy III (call-in)
Sherman Posey (call-in)

Directors Absent: Clayton Neal

Employees Present: Russell Labus, General Manager
Christopher McFarlane, Assistant Manager
Melissa Gonzalez, District Secretary/Bookkeeper
Landon Yosko, Technical Specialist

Guests Present: Monique Norman (call-in)
Monica Jacobs (call-in)
Steve Siebert (call-in)
Scott McClelland (call-in)

Agenda: Attached.

Declaration of Quorum and Call to Order:

President Schorp declared a quorum present by roll call and called the meeting to order at 9:06 a.m. The meeting was posted and filed as required by law.

Recess to Public Hearings

Public Hearing-Proposed District Management Plan

a. Call to Order:

President Schorp called the Public Hearing to order at 9:06 a.m.

Attorney, Monique Norman mentioned that the District Management Plan is required to be renewed and adopted every five years. The District Management Plan is a general philosophy of the district and state information is compiled into the plan. The plan presented today is the draft plan that was approved by the Texas Water Development Board.

b. Public Comments on the Proposed District Management Plan:

None.

c. Adjourn:

President Schorp called the Public Hearing to order at 9:16 a.m.

Public Hearing- Water Well Drilling and Production Permit Applications

a. Call to Order:
President Schorp called the Public Hearing to order at 9:16 a.m.

b. Public Comments:
None.

c. Drilling/Production Permit Applications:
The Board was presented with one drilling and production permit application for JL Brush Country Partners LLC (Drilling/Production Permit#2929) for new well to be located in Frio County for Irrigation use. Director Savage moved to approve the drilling and production permit. Director Bartek seconded the motion, and there being no further discussion the motion carried.

The Board was presented with one drilling and production permit application for G&M Farms (Drilling/Production Permit#2930) for new well to be located in Frio County for Irrigation use. Director Riggs moved to approve the drilling and production permit. Director Posey seconded the motion, and there being no further discussion the motion carried.

The Board was presented with one drilling and production permit application for Iron Oak Ranch (Drilling/Production Permit#2931) for new well to be located in Atascosa County for Irrigation/Livestock use. Director Troell moved to approve the drilling and production permit. Director Riggs seconded the motion, Director Moy abstained, and there being no further discussion the motion carried.

The Board was presented with one drilling and production permit application for Bladerunner Inc. (Drilling/Production Permit#2932) for new well to be located in Atascosa County for Irrigation use. Director Bartek moved to approve the drilling and production permit. Director Riggs seconded the motion, Director Moy abstained, and there being no further discussion the motion carried.

The Board was presented with one drilling and production permit application for Humberto Montalvo (Drilling/Production Permit#2933) for new well to be located in Karnes County for

Industrial use. Director Savage moved to approve the drilling and production permit. Director Bartek seconded the motion, and there being no further discussion the motion carried.

d. Adjourn:

President Schorp called the Public Hearing adjourned at 9:29 a.m.

Public Comments on Agenda Items, Limited to 5 minutes each:
None.
Approval of Minutes from the December 18, 2020 Board of Directors Meeting:
The minutes of the December 18, 2020 were presented to the board. Director Savage moved to approve the minutes with a minor correction. Director Riggs seconded the motion, and there being no further discussion the motion carried unanimously.
Approval of Report of Bills Paid, Deposits, and Financial Statements for December 2020:

The report of bills paid, deposits, and financial statements for December were presented to the Board. Director Savage moved to receive and file the reports. Director Posey seconded the motion, and there being no further discussion the motion carried unanimously.

Approve Resolution #2021-01-29 to Adopt the District Management Plan:

After some discussion and a couple of corrections Director Troell moved to approve Resolution #2021-01-29 to adopt the District Management Plan. Director Savage seconded the motion, and there being no further discussion the motion carried unanimously.

Order Election of Directors for Atascosa, Frio, Karnes, and Wilson Counties:

Director Riggs moved to Order the election for Atascosa, Frio, Karnes, and Wilson Counties. Director Bartek seconded the motion, and there being no further discussion the motion carried unanimously.

Appoint Scholarship Committee and Approve 2021 Scholarship Essay Question:
Directors Moy, Troell, Posey, and Savage were appointed for the Scholarship Committee.
The approved essay question:
What is the State of Texas's preferred method of groundwater management? Who owns the groundwater? How does a groundwater district manage and protect the groundwater resources for the landowners and all other water users?

Staff Report on District Activities:

General Manager, Russell Labus mentioned that the Senate Proclamation was delivered to Clifton Stacy and the board received a copy of the newspaper articles.
Meetings:
January 8, 2021- TAGD Budget & Finance Committee Meeting
January 14, 2021- GMA 15 Meeting

January 26 & 27, 2021- Quarterly TAGD Business Meeting & TAGD Legislative Committee Meeting.
February 4, 2021- Region L Meeting
February 5, 2021- GMA 13 Meeting

Mr. Labus presented the Drought Monitor Map. Mr. Labus said that there were fifty five (55) exempt well registrations entered into the database and five (5) permits were approved for the month of January.

Attorney, Monique Norman gave a brief legislative update. Summary of update is attached.

Public Comments on Other District Business, Limited to 5 minutes each:

Scott McClelland with the CVLGC mentioned that they are now split from Schertz Seguin and are now managing themselves separately.

Consider and Take Appropriate Action on Items to be Placed on the Next Agenda:

None.

Set Date and Time for Next Board of Directors Meeting:

The Board agreed to set the next meeting date for Friday, February 26, 2021 at 9 a.m. at the District Office in Pleasanton, TX 78064.

Adjourn:

There being no further business to come before the Board, President Schorp declared the meeting adjourned at 10:23 a.m.

_____

Blaine Schorp, President

ATTEST:

_____

Diane Savage, Secretary/Treasurer

Evergreen Underground Water Conservation District
110 Wyoming Blvd
Pleasanton, TX 78064

NOTICE OF MEETING

OF THE BOARD OF DIRECTORS

EVERGREEN UNDERGROUND WATER CONSERVATION DISTRICT

Notice is hereby given that a meeting of the Evergreen Underground Water Conservation District will be held **Friday, January 29, 2021 at 9:00 a.m. by teleconference* at (844) 854-2222, Access Code: 221637*, Online Meeting ID: info38353** at which the following subjects will be discussed, to wit:

AGENDA

Matters to be discussed that are subject to vote by the Directors of the Evergreen Underground Water Conservation District are as follows:

1. Declaration of Quorum and Call to Order.

Recess to Public Hearing

Public Hearing-Proposed District Management Plan

a. *Call to Order.*
b. *Public Comments on the Proposed District Management Plan.*
c. *Adjourn.*

Public Hearing- Water Well Drilling and Production Permit Applications

a. *Call to Order.*
b. *Public Comments.*
c. *Drilling/Production Permit Applications.*
d. *Adjourn.*

Reconvene to Regular Meeting

2. Public Comments on Agenda Items, Limited to 5 minutes each.
3. Approval of Minutes from the December 18, 2020 Board of Directors Meeting.
4. Approval of Report of Bills Paid, Deposits, and Financial Statements for December 2020.
5. Approve Resolution #2021-01-29 to Adopt the District Management Plan.
6. Order General Election of Directors for Atascosa, Frio, Karnes, and Wilson Counties.
7. Appoint Scholarship Committee and Approve 2021 Scholarship Essay Question.
8. Staff Report on District Activities:
   - General Manager District Update
9. Public Comments on Other District Business, Limited to 5 minutes each.
10. Consider and Take Appropriate Action on Items to be Placed on the Next Agenda.
11. Set Date and Time for Next Board of Directors Meeting.
12. Adjourn.

Agenda items may be considered, deliberated and/or acted upon in a different order than set forth above

At any time during the meeting and in compliance with the Texas Open Meetings Act, Chapter 551, Government Code, Vernon's Texas Codes, Annotated, the Evergreen Underground Water Conservation District Board may meet in executive session on any of the above agenda items for consultation concerning attorney-client matters (§551.071); deliberation regarding real property (§551.072); deliberation regarding prospective gifts §551.073 ; personnel matters (§551.074); and deliberation regarding security devices (§551.076). Any subject discussed in executive session may be subject to action during an open meeting

APPENDIX G

Evergreen Underground Water Conservation District

Contact Information

EVERGREEN UNDERGROUND WATER CONSERVATION DISTRICT

District Staff

Russell Labus, General Manager

Chris McFarlane, Assistant Manager

Landon Yosko, Technical Specialist

Melissa Gonzalez, District Secretary & Bookkeeper

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Pleasanton, Texas 78064

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