

**LOST PINES GROUNDWATER
CONSERVATION DISTRICT**

**GROUNDWATER
MANAGEMENT
PLAN**

**Adopted September 15, 2004;
Revised August 10, 2010;
Revised September 19, 2012;
Revised September 20, 2017;
Revised October 19, 2022;
Revised May 17, 2023**

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ATTACHMENTS

Attachment A: GAM Run 21-017: Lost Pines GCD Groundwater Management Plan

Attachment B: Estimated Historical Water Use and 2022 State Water Plan Datasets: Lost Pines Groundwater Conservation District

- Estimated Historical Water Use
- Projected Surface Water Supplies
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APPENDICES

Appendix A: Copy of GMA 12 Resolution and Submittal Adopting DFCs

Attachment A – Notice for November 30, 2021 GMA 12 Meeting

Attachment B – GMA 12 Desired Future Conditions

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Section 1. THE DISTRICT

The Lost Pines Groundwater Conservation District (District) was created in 1999 by Senate Bill 1911, 76th Texas legislature, pursuant to Section 59, Article 16 of the Texas Constitution and Article 7880-3c, Texas Civil Statutes (now Chapter 36, Texas Water Code); ratified by the 77th Texas Legislature in 2001; and confirmed by voters in Bastrop and Lee Counties in November 2002.

The District includes all of Bastrop and Lee Counties (**Map 1**).

For state water planning purposes, the District was designated by the Texas Water Development Board (TWDB) as part of Groundwater Management Area 12 (GMA 12) (**Map 2**). The District participates in GMA 12 along with Mid-East Texas Groundwater Conservation District, Brazos Valley Groundwater Conservation District, Post Oak Savannah Groundwater Conservation District, and Fayette County Groundwater Conservation District.

The District participates in two of the State's sixteen Regional Planning Areas: Bastrop County is in Lower Colorado Regional Planning Group or Region K and Lee County is in Brazos River Regional Planning Group or Region G (**Map 3**).

Section 2. DISTRICT MISSION AND GUIDING PRINCIPLES: Actions, Procedures, Performance and Avoidance Necessary to Effectuate the Groundwater Management Plan

Mission Statement: The mission of the Lost Pines Groundwater Conservation District (LPGCD) is to develop rules to provide protection to existing wells, prevent waste, promote conservation, provide a framework that will allow availability and accessibility of groundwater on a sustainable basis, protect the quality of the groundwater, maintain responsible local management of the aquifer resources beneath Bastrop and Lee Counties, and operate the District in a fair and equitable manner.

Based on current conditions, the statutory goal of controlling and preventing subsidence is applicable to the District. The TWDB Subsidence Risk Final Report: Identification of the Vulnerability of the Major and Minor aquifers of Texas to Subsidence with Regard to Groundwater Pumping, TWDB Contract Number 1648302062, March 21, 2017 shows the Carrizo-Wilcox aquifer within the District is in medium to high risk of subsidence in the map in Figure 4.7, page 4-13 and stated in section 7.3.7 on page 7-10.

Guiding Principles: The District's guiding principles derive from its mission statement. Groundwater resources within the District are of vital importance to the landowners or persons with private property rights in the District, residents, and businesses in Bastrop and Lee Counties and effectively constitute the only source of water available for most of the District. The District was created to provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater within the two counties, while complying with statutory requirements. The District believes its groundwater resources can be managed in a prudent manner through education and conservation coupled with reasonable regulation, and based on increasing quantitative understanding of available groundwater resources, recharge, and current and future demand, including real-time information on aquifer conditions developed via a network of monitoring wells.

Policy:

1. District groundwater is to be conserved, preserved, and protected and waste prevented to maintain the viability of the groundwater supply for future generations within the District's jurisdiction, while complying with statutory requirements, as amended at the District's discretion, including those applicable to permits for transport of water out-of-District, and including without limitation certain provisions of Chapter 36 which are summarized in Appendix A (which may be supplemented when appropriate).
2. The District will manage the aquifers within its jurisdiction on a sustainable basis. The District defines sustainability as conservation and reasonable long-term management of groundwater in perpetuity.
3. The District, in cooperation with local municipalities and water supply companies, has established a monitoring well network and an aquifer water level monitoring program (the "Monitoring Well Program"), and a system for reporting water levels. The District will measure and monitor water levels to detect declines, to allow the District to consider appropriate action to avoid or minimize depletion of the water supply and to maintain or achieve water levels which are

consistent with the DFCs. For instance, it may be necessary for the District to reduce the amount of groundwater that non-exempt users pump to avoid or to minimize depletion of the groundwater supply in specified areas within the District and to achieve water levels which are consistent with the DFCs.

4. This Groundwater Management Plan and the District rules, as amended from time to time, will be based on the best technical advice available to the District. The District will undertake investigations of the District's groundwater resources, including through the Monitoring Well Program, and will cooperate with investigations of groundwater resources and the interaction of groundwater and surface water by TWDB, TCEQ, GMA 12 or other entities, and will make the results of such investigations available to the Board and to the public. The District recognizes that good long-term groundwater management is built on availability of high-quality data, improved understanding of groundwater flow systems, and increasingly better understanding of the interaction between groundwater and surface water. The District recognizes the uncertainties inherent in long-term management of groundwater resources created by such factors as climate, drought, changes in exempt uses such as mining and oil and gas development, socioeconomic change and population growth, and also recognizes the uncertainties created by the geology and other characteristics of relevant aquifers. The District believes that uncertainties affecting decision-making can be reduced by the development and use of high-quality data.

5. The District will treat all citizens equally. The District may exercise its discretion to consider unique situations or local conditions and the potential for adverse economic and environmental consequences, guided by this Groundwater Management Plan or the District's rules, and such exercise of discretion shall not be construed as limiting the power and authority of the District.

6. In implementing this Groundwater Management Plan, the District will seek cooperation from municipalities, water supply companies, irrigators, and other groundwater users, and will also seek to cooperate and coordinate with state and regional water planning authorities and agencies as well as the districts of GMA 12.

7. In support of its mission of conserving, protecting and preserving interests in groundwater within Bastrop and Lee Counties, while addressing statutory goals and requirements, the Board may, among other actions, after notice and hearing, amend or revoke any permit for non-compliance, or reduce the groundwater production authorized by permit for the purpose of managing District groundwater resources consistent with the DFCs. The District may also enforce the terms and conditions of permits and District rules by fine and/or by enjoining the permit holder in a court of competent jurisdiction as provided by § 36.102.

The District's Board of Directors will implement this Groundwater Management Plan and any necessary changes or modifications to adhere to the policy stated herein.

The District's rules, which may be amended at the Board's discretion, are available on the District website at:

<https://www.lostpineswater.org/DocumentCenter/View/292/Lost-Pines-GCD-Rules-FINAL-Adopted-31523>

Section 3. TIME PERIOD COVERED BY THE GROUNDWATER MANAGEMENT PLAN

This Groundwater Management Plan was originally adopted on September 15, 2004. The first revision was on August 10, 2010, the second revision was approved on September 19, 2012, the third revision was approved on September 20, 2017, the fourth revision was approved on October 19, 2022, and this fifth revision was approved on May 17, 2023. The District may review the Groundwater Management Plan annually, but at least once every five years, the District will review and re-adopt its Groundwater Management Plan, with or without change, and submit it to TWDB pursuant to Chapter 36.¹

¹ See § 36.1072.

Section 4. GOVERNANCE

Board of Directors. The District is governed by a ten-member Board of Directors, five appointed by the Bastrop County Judge and five appointed by the Lee County Judge, qualified and sworn as required by law. After the initial appointment of directors and the setting of staggered terms, each Director is appointed to a four-year term beginning in January. Thus, every second year, following the initial appointment of directors, two directors are appointed by the Bastrop County Judge and two Directors are appointed by the Lee County Judge. The succeeding second year, three Directors are appointed by the Lee County Judge and three Directors are appointed by the Bastrop County Judge.

Each year, in January, the Board selects one of its members to serve as president to preside over Board meetings and proceedings, a second member to serve as vice-president to preside over Board meetings and proceedings in the absence or recusal of the president, and a third to serve as secretary-treasurer to keep a true and correct account of all proceedings of the Board. The Board may appoint an assistant secretary to assist the secretary-treasurer. Unless a vacancy occurs, members of the Board and officers serve until their successors are appointed, qualified to hold office, and sworn in. In the event of a vacancy in any office, the Board shall select one of its members to fill out the term of office. In the absence of a General Manager, the president of the Board will serve as General Manager.

The president may establish committees for formulation of policy recommendations to the Board and may appoint the chair and membership of the committees, which may include members of the Board and/or non-board members. Committee members serve at the pleasure of the president.

The Board will hold regular meetings at least four times a year on a day and at a place that the Board may establish from time to time by Board resolution. At the request of the president, or by written request of at least three Board members, the Board may hold a special meeting. The business of the District will be conducted at regular or special Board meetings when a quorum is present. All Board meetings will be conducted in accordance with the Open Meetings Act.

Daily Operations. The Board may employ a person to be the General Manager, with full authority to manage and to operate the affairs of the District, subject only to direction provided by the Board through policies and orders adopted by the Board. The General Manager may, with Board approval, employ all persons necessary to carry out daily operations. The General Manager may delegate duties as may be necessary to efficiently and expeditiously accomplish those duties; provided that no delegation will relieve the General Manager from his or her responsibilities under the Texas Water Code, the District enabling act, District rules, or District policies, orders and permits.

The Board shall establish by resolution an official office of the District, and the office will maintain regular business hours.

Section 5. DISTRICT DESIRED FUTURE CONDITIONS (DFCs)

On August 10, 2010, the GMA-12 DFCs were adopted for the relevant aquifers, i.e., the major and minor aquifers within the District other than the Yegua-Jackson (the Sparta, Queen City, Carrizo, Calvert Bluff, Simsboro, and Hooper aquifers) and submitted to TWDB. The Yegua-Jackson Aquifer was considered not relevant for the District and a DFC was not established for it. On April 27, 2017, the second round of DFCs was formally adopted by GMA-12, and on November 30, 2021, the third round of DFCs was formally adopted by GMA-12. See **Appendix A**. The District's DFCs by aquifer that were approved in 2021 are presented in **Table 1**.

Table 1- Desired Future Conditions

Aquifer	District-wide DFC (Average drawdown in feet from Jan. 2011 to Dec. 2070)
Sparta	22
Queen City	28
Carrizo	134
Calvert Bluff	132
Simsboro	240
Hooper	138

Section 6. MODELED AVAILABLE GROUNDWATER

Pursuant to the 2011 amendment of § 36.1071(e)(3), TWDB provided estimates of modeled available groundwater totals for the District, based on the DFCs established by GMA 12 under § 36.108. The modeled available groundwater totals provided by the TWDB in 2022 are presented below in **Table 2**.

Table 2 - Modeled Available Groundwater Totals for the District

All values are in acre-feet/year

AQUIFER	2020	2030	2040	2050	2060	2070
Sparta	1,042	1,246	1,504	1,825	2,222	2,723
Queen City	1,109	1,219	1,340	1,471	1,615	1,771
Carrizo	4,716	5,903	7,237	8,788	10,656	12,980
Calvert Bluff	2,155	2,814	3,485	4,166	4,859	5,563
Simsboro	20,364	65,242	69,104	72,782	76,841	79,945
Hooper	1,691	1,987	2,291	2,607	2,937	3,278
TOTAL	31,077	78,411	84,961	91,639	99,130	106,260

Source: TWDB GAM Run 21-017 MAG.

Section 7. DISTRICT GROUNDWATER RESOURCES

This section presents information on District groundwater and surface water resources.

The annual amount of recharge from precipitation to each aquifer, the annual volume of water that discharges from the aquifer to springs and any surface water bodies and the annual volume of flow into and out of the District within each aquifer and between aquifers were obtained from the TWDB GAM Run 21-017, November 1, 2022 and is provided in **Attachment A**.

The District considered and used all information referenced in this Groundwater Management Plan, including without limitation historic use, surface water supplies, water demands, water supply needs and water management strategies from the State Water Plan Datasets. The TWDB 2022 State Water Plan Dataset for the District is provided in **Attachment B**. The District acknowledges the water supply needs and water management strategies data values that are supplied in the data packet provided by TWDB.

The estimated historical groundwater use in the District for the last five years is provided in **Table 3. Attachment B**, pages 3 - 4 includes the estimated historical groundwater use in the District since 2004.

Table 3 - Estimated Historical Groundwater Use

Year	County	Municipal	Manufacturing	Mining	Steam Electric (Power)	Irrigation	Livestock	Total
2015	Bastrop	10,466	98	44	5,519	3,204	210	19,541
2016	Bastrop	10,346	71	22	3,272	2,872	215	16,798
2017	Bastrop	11,319	167	61	5,163	5,093	269	22,072
2018	Bastrop	11,733	245	47	5,309	5,571	278	23,183
2019	Bastrop	12,306	350	25	5,555	6,810	278	25,324
2015	Lee	2,316	7	904	0	519	321	4,067
2016	Lee	2,168	6	571	0	519	326	3,590
2017	Lee	2,266	8	699	0	692	396	4,061
2018	Lee	2,312	7	1,392	0	674	411	4,796
2019	Lee	2,456	9	741	0	1,142	411	4,759

A. GROUNDWATER RESOURCES

Except for a small area along the northwest border of Bastrop County south of the Colorado River that is not an aquifer, the geologic units exposed in Bastrop and Lee Counties are Tertiary and Quaternary in age. All the Tertiary age geologic units dip or tilt to the southeast, and are composed of varying portions of sand, silt, and clay. From oldest (westernmost) to youngest (easternmost), these exposed Tertiary geologic units include the Midway Group, the Wilcox Group, the Carrizo Formation, the Reklaw Formation, the Queen City Sand, the Weches Formation, the Sparta Sand, the Cook Mountain Formation, the Yegua Formation, and the Jackson Group. Quaternary geologic units include river or stream alluvium, such as along the Colorado River and Middle Yegua Creek, as well as topographically higher terrace deposits.

AQUIFERS

Most of these geologic formations found within the District will yield some quantity of water to wells, as shown by the stratigraphic section below in Table 4.

Table 4 - Stratigraphic Section

Aquifer or Unit	Maximum Thickness (feet)	Description	Water-Bearing Properties
Alluvium	100	Sand, gravel, silt, and clay	Yields small to moderate quantities of fresh to slightly saline water to wells
Yegua-Jackson	900	Medium to fine sand, silt, clay, some lignite	Yields small to moderate quantities of fresh to slightly saline water to wells
Cook Mountain Formation	400	Clay with some sand	Yields small quantities of fresh to slightly saline water to wells
Sparta Sand	170	Fine to medium sand with some clay and silt	Yields small to large quantities of fresh to slightly saline water to wells
Weches Greensand	100	Glauconitic clay and sand	Not known to yield significant quantities of water to wells
Queen City Sand	600	Fine to medium sand, clay, with some conglomerate	Yields small to large quantities of fresh to slightly saline water to wells
Reklaw Formation	100	Glauconitic sand and silt (lower) and clay with some sand (upper)	Yields very small water to wells in upper part of formation
Carrizo Sand	600	Fine to coarse sand with some sandstone and clay	Capable of yielding large quantities of water to wells

Calvert Bluff Formation (Wilcox Group)	1500	Fine to coarse grained sand and sandstone with some silt, mudstone, and lignite	Capable of yielding moderate quantities of water to wells
Simsboro Sand (Wilcox Group)	800	Massive, fine to medium, well sorted sand	Capable of yielding large quantities of water to wells
Hooper Formation (Wilcox Group)	1300	Predominantly mudstone, with some sand and lignite.	Capable of yielding small to moderate quantities of water to wells
Midway Group	?	Mostly shale	Not known to yield significant quantities of water to wells

However, only the Carrizo, Wilcox, Queen City, Sparta, and Colorado River alluvium aquifers yield sufficient quantities to have wells that have been permitted by the District. Each of these geologic units has different water-bearing characteristics and capabilities, and each is described separately below.

Carrizo-Wilcox Aquifer

The Carrizo Formation and the Wilcox Group (which includes the Hooper Formation (lower), the Simsboro Formation (middle), and the Calvert Bluff Formation (upper)) form a single, hydrologically connected aquifer system recognized by the State as the Carrizo-Wilcox Aquifer. The Carrizo-Wilcox Aquifer is defined as a major aquifer by the state of Texas, and within Texas it stretches in a wide band from the Rio Grande in South Texas to Louisiana. The Carrizo-Wilcox crops out through the middle of Bastrop County and in the far northeastern portion of Lee County. Wells are completed in the Carrizo-Wilcox Aquifer in and near the outcrop of each of the four individual aquifer units.

Hooper Formation The lowermost aquifer within the Carrizo-Wilcox is the Hooper Formation, which is also generally the least productive of the three Wilcox Group aquifers. The Hooper is used by exempt wells in and near the outcrop area, as well as for municipal purposes by the City of Elgin, Aqua Water Supply Corporation, Manville Water Supply Corporation, and Lee County Water Supply Corporation.

The Hooper is comprised of predominantly mudstone, with varying amounts of sandstone, and some thin lignite beds in the upper part of the formation. The Hooper and the overlying Simsboro and Calvert Bluff Formations are no longer distinguishable as individual units much farther west than the Colorado River. Beyond this point the Wilcox Group aquifer is referred to as undifferentiated Wilcox.

The Hooper crops out in a band approximately 3 miles wide in northwestern Bastrop County near the Travis County line, as well as in far western Lee County. From the outcrop, the Hooper dips at a rate of 125 to 200 feet per mile, with the top of the Hooper reaching a maximum depth of more than 5,000 feet in southern Lee County, although wells completed in the Hooper in the District are generally less than 700 feet deep. The Hooper Formation can be up to 1,300 feet thick within the District.

The Hooper Formation produces a small to moderate amount of water to wells, mainly in the outcrop area. Well yields of larger, non-exempt wells are generally between 200 and 350 gpm, although some Hooper wells can yield more than 500 gpm. Water quality of groundwater produced from the Hooper is generally good, although water quality deteriorates farther down dip from the outcrop.

Simsboro Formation The middle aquifer within the Wilcox Group is the Simsboro Formation. This aquifer is identifiable only from the middle of Bastrop County and eastward, including all of Lee County, and is a highly productive unit. It is used by numerous exempt wells and by the City of Elgin, Aqua Water Supply Corporation, and Manville Water Supply Corporation for municipal supplies. Water is also produced by Alcoa from the Simsboro as part of its mining operations.

The Simsboro is primarily composed of a massive, fine to coarse-grained sand, with relatively small amounts of silt, clay, and mudstone. The Simsboro crops out in a band two to three miles wide across Bastrop and far northwestern Lee County. From the outcrop, the Simsboro dips at a rate of 125 to 200 feet per mile, with the top of the Simsboro reaching a maximum depth of nearly 4,500 feet in southern Lee County. Wells completed in the Simsboro in the District are generally less than 1,000 feet deep, although wells of more than 1,500 feet have been completed in the District. The Simsboro is up to 800 feet thick within the District, although it is generally less than 500 feet thick.

The Simsboro Formation produces large quantities of fresh to slightly saline groundwater to wells. Wells of over 5,000 gpm have been completed in the Simsboro Formation, and yields of 900 to 1,200 gpm in existing non-exempt wells are common. Water quality of groundwater produced from the Simsboro is good, although water quality deteriorates farther down dip from the outcrop.

Calvert Bluff Formation The uppermost aquifer within the Wilcox Group is the Calvert Bluff Formation. The Calvert Bluff is used by numerous exempt wells in and near the outcrop, as well as for irrigation by two non-exempt wells and for municipal purposes by Aqua Water Supply Corporation, Manville Water Supply Corporation, and Bastrop County Water Control Improvement District Nos. 1 and 2.

The Calvert Bluff Formation is comprised primarily of fine to coarse-grained sand and sandstone, interbedded with silt, mudstone, and some lignite. The Calvert Bluff crops out in a band six to eight miles wide in Bastrop and Lee Counties, and from the outcrop the Calvert Bluff dips at a rate of 125 to 200 feet per mile. The top of the Calvert Bluff is more than 3,000 feet deep in southern Lee County, although wells completed in the Calvert Bluff within the District are generally less than 1,000 feet deep. The Calvert Bluff is up to 1,500 feet thick within the District.

The Calvert Bluff is more productive than the Hooper but not nearly as productive as the underlying Simsboro or overlying Carrizo aquifers. Typical non-exempt Calvert Bluff well yields

within the District are 150 to 350 gpm, although several wells with yields of 500 to 1,000 gpm are present. Water quality in the Calvert Bluff is generally good, although water quality deteriorates farther downdip from the outcrop.

Carrizo Formation The uppermost aquifer within the “Carrizo-Wilcox” Aquifer is the Carrizo Formation. The Carrizo is a highly utilized aquifer within the District, with a large number of smaller, exempt wells producing from it in and near the outcrop. In addition, numerous non-exempt wells produce from the Carrizo for municipal purposes, including those operated by the Cities of Lexington, Smithville, and Giddings, as well as by Aqua Water Supply Corporation and Lee County Water Supply Corporation. Some water produced from the Carrizo is also used for irrigation purposes.

The Carrizo Formation is predominantly a fine to coarse-grained massive sand. It crops out in a band one to two miles wide through Bastrop and Lee Counties. From the outcrop the Carrizo dips at a rate of about 140 feet per mile when not affected by faulting, with the top of the Carrizo being found at more than 2,500 feet in southern Lee County. The Carrizo can be up to 600 feet thick within the District, but is generally between 300 and 500 feet thick. The Carrizo is a highly productive aquifer throughout much of its extent not only in the District but throughout much of Texas.

Yields of non-exempt Carrizo wells within the District are generally between 400 and 750 gpm, although well yields of up to 1,500 gpm have been observed. Water quality in the Carrizo is good, although, as with most aquifers in the District, water quality deteriorates farther downdip from the outcrop.

Queen City Aquifer

The Queen City Aquifer is defined as a minor aquifer by the state of Texas. It is located stratigraphically above the Carrizo-Wilcox aquifer, between the Reklaw and Weches formations. The Queen City is used by a large number of exempt wells within the District, as well as for municipal purposes by the cities of Lincoln and Giddings, and the Lee County Water Supply Corporation.

The Queen City Formation is comprised of a massive to thin-bedded, fine to medium-grained sandstone with some silt, clay, shale, and lignite. It crops out in a band two to four miles wide across both Bastrop and Lee Counties. From the outcrop the Queen City dips at a rate of 70 to 140 feet per mile, with the top of the formation being found at approximately 2,000 feet in southern Lee County. However, most Queen City wells are located in or near the outcrop area, with most being less than 1,400 feet deep. The Queen City is generally between 200 and 600 feet thick within the District.

The Queen City yields small to moderate quantities of fresh to slightly saline water to wells in and near the outcrop. Non-exempt Queen City wells in the District area typically yield between 130 and 250 gpm, although one Queen City well produced more than 450 gpm.

Sparta Aquifer

The Sparta Aquifer is defined as a minor aquifer by the state of Texas. It is located stratigraphically above the Queen City aquifer, between the Weches and Cook Mountain formations. The Sparta is used by exempt wells within the District for domestic and livestock purposes, and for municipal purposes by the Lee County Fresh Water Supply District and Lee County Water Supply Corporation.

The Sparta is primarily a loosely cemented, sand-rich unit, with some interbedded silt and clay. The Sparta crops out in a band one to ten miles wide from southern Bastrop County to northeastern Lee County. From the outcrop the Sparta dips at a rate of approximately 100 feet per mile, with the top of the formation being found at approximately 1,500 feet in southern Lee County. Most Sparta wells are located in or near the outcrop and are less than approximately 500 feet deep. However, one well (59-50-706) is nearly 1,500 feet deep. The Sparta is up to 170 feet thick within the District, and yields small to moderate quantities of fresh to slightly saline water to wells. Yields of non-exempt wells in the District typically range from 100 to 250 gpm. Water quality of groundwater produced from the Sparta is generally good, although, as with other dipping aquifers in the District, water quality deteriorates farther down dip from the outcrop area.

Other aquifers

Colorado River Alluvium Aquifer In addition to the major and minor aquifers described above, the alluvium along the Colorado River also yields significant quantities of water to wells. The Colorado River Alluvium is not defined as a major or a minor aquifer by the State, and a DFC was not established for this aquifer. At the time of the preparation of this Groundwater Management Plan, this aquifer is used for water for municipal supply by the City of Bastrop, as well as for irrigation purposes, from several non-exempt wells.

The Colorado River Alluvium includes alluvial deposits in river bottom land along the Colorado River. The alluvium generally consists of sand, with some small gravel and disconnected layers of silt and clay. The alluvium can be on one side of the river or on both sides. It is not always connected beneath the river, and the maximum thickness is less than 100 feet. The alluvium along the Colorado River generally yields small to moderate quantities of fresh to slightly saline water.

In addition to the alluvium along the Colorado River, most other streams have some alluvium associated with them. Small, exempt wells may be installed in these very localized alluvial aquifers.

Trinity Aquifer The Trinity Aquifer, classified as a major aquifer by the state of Texas, underlies the District. However, it is virtually unused because of the extreme depth and poor water quality of this aquifer with the District. No known wells are completed in the Trinity Aquifer within the District.

Yegua-Jackson Aquifer The Yegua-Jackson Aquifer is classified as a minor aquifer by the state of Texas, and is found in the southeastern third of Lee County and a very small part of Bastrop County. The Yegua-Jackson Aquifer is comprised of the Yegua Formation and the Jackson Group. These units consist of interbedded sand, silt, and clay, with some lignite beds. The thickness of the Yegua-Jackson Aquifer in the District is as much as 900 feet. A few exempt wells are completed

in the Yegua-Jackson Aquifer, primarily in Lee County. Within the District, no non-exempt wells are completed in this aquifer, and it is not expected to yield significant quantities of water to wells within the District.

Midway Group The Midway Group is located stratigraphically beneath the Wilcox Group. The Midway consists of clay, silt, glauconitic sand, and thin beds of limestone and sandstone and can be more than 800 feet thick. Wells drilled into the Midway outcrop may yield small quantities of slightly to moderately saline water, and a few wells within the District have been installed into the Midway.

Reklaw Formation The Reklaw Formation is located stratigraphically between the overlying Carrizo and underlying Queen City Formations. The Reklaw is composed primarily of glauconitic sand and silt, and is about 100 feet thick. It is not considered to be an aquifer by the state of Texas, however a few exempt wells have been completed in the Reklaw within the District, mostly in the outcrop area.

Weches Formation The Weches Formation, sometimes referred to as the Weches Greensand, is located between the Queen City and Sparta Formations. The Weches consists of glauconitic shale, some sandstone, and some thin limestone beds, and is about 100 feet thick. It is not considered to be an aquifer by the state of Texas, however a few exempt wells have been completed in the Weches within the District, mostly in the outcrop area.

Cook Mountain Formation The Cook Mountain Formation is located stratigraphically above the Sparta Formation and below the Yegua Formation. The Cook Mountain consists primarily of clay, with some lenses of sand, sandstone, limestone, glauconite, and gypsum, and can be as much as 400 feet thick within the District. It is not considered to be an aquifer by the state of Texas, however exempt wells producing very small quantities of fresh to moderately saline groundwater have been completed in the Cook Mountain within the District, mostly in the outcrop area.

RECHARGE, DISCHARGE, AND GROUNDWATER FLOW

Recharge is the addition of water to an aquifer. Recharge to aquifers occurs from direct precipitation on aquifer outcrop at ground surface, from losses from surface water bodies to the underlying aquifer, and from inter-formational leakage between aquifers. Recharge estimates for the major and minor aquifers present within the District are included in **Attachment A**.

The amount of recharge that occurs due to direct precipitation appears to be more a function of the specific soils in an area than the amount of precipitation. Recharge of direct precipitation where sandy aquifer units crop out is higher than where the soils and formations at ground surface are clay-dominated. Effective recharge from precipitation, i.e. recharge that moves down dip into the deeper portions of the aquifer and is not discharged to surface streams, is typically only a few percent of average annual rainfall. Leakage between formations accounts for a large component of total recharge to an individual aquifer. Losses from surface water bodies to the underlying aquifers appear to be a minimal source of recharge for most of the aquifers in the District.

Discharge is the loss of water from an aquifer. Before the development of aquifers for groundwater supply purposes, all discharge was natural. This includes discharge to surface water sources such as springs, streams, rivers, and lakes, as well as the removal of groundwater from an aquifer by evapotranspiration and inter-formational leakage. Discharge to surface water bodies are shown in **Attachment A**. After the development of District aquifers for supply purposes, most discharge that occurs is to wells. Other sources of anthropogenic discharge may include gravel pits, mining operations, or other activities that intersect the water table.

Groundwater moves from areas of higher hydraulic head to areas of lower hydraulic head, which is from areas of recharge to areas of discharge. Under normal conditions within the District, the movement of water is in a downdip direction. However, these normal, undeveloped conditions are altered by pumpage that occurs in the aquifer. Because pumpage has become the dominant form of discharge from many of the aquifers in the District, groundwater tends to flow towards areas of pumpage. These natural and altered flow patterns result in not only the movement of groundwater across District boundaries, but also between aquifers within the District. **Attachment A** also includes the amount of water that flows laterally into and out of the District to adjacent districts or counties, and the amount of water that moves vertically between aquifers, respectively. These values do not distinguish between fresh, brackish, and saline water, and therefore all flows include all of these water types.

B. SURFACE WATER RESOURCES

Bastrop and Lee Counties lie along the inner edge of the Texas Gulf Coastal Plain. The topography is flat to gently rolling, with elevations ranging from slightly less than 400 feet where the Colorado River exits Bastrop County to slightly more than 650 feet along the Bastrop-Lee county line just north of the upper reaches of West Yegua Creek.

The District lies within three river basins: the Guadalupe, Colorado, and Brazos. The Colorado River bisects Bastrop County, and a majority of Bastrop County and the southern quarter of Lee County lie within the Colorado River Basin and its tributaries, including Cummins, Rabbs, Pin Oak, Big Sandy, Wilbarger, and Cedar Creeks. The remainder of Lee County lies within the Brazos River basin, with the significant tributaries to the Brazos River within Lee County being the Middle and West Yegua Creeks. In addition to the Colorado and Brazos River basins, the extreme southern portion of Bastrop County lies within the Guadalupe River basin, an area drained by Peach Creek.

Currently surface water resources are little used in Bastrop and Lee Counties because of lack of availability and because what is available has already been appropriated. Surface water from the Colorado River is used as make-up water for Lake Bastrop (which functions as a cooling pond for the LCRA Sim Gideon power plant), for cooling water for another privately owned power plant in Bastrop County, for some irrigation, and for livestock watering in Lee County. No other District uses of surface water are known. The current availability of surface water within Bastrop and Lee Counties is included in **Attachment B**, page 5.

C. DISTRICT WATER DEMANDS, NEEDS AND STRATEGIES

Based on data from the 2021 Regional Water Plan data, over the planning horizon, regional water planning data from Region G and Region K shows population is expected to increase from 95,487 in 2020 in Bastrop County to 384,244 in 2070 (an increase of 302%), and from 19,131 in 2020 in Lee County to 23,889 in 2070 (an increase of 25%). In addition, over the planning horizon, total water demands are projected to increase in Bastrop County from 34,240 acre-feet/year in 2020 to 75,154 acre-feet/year in 2070, and to increase in Lee County from 8,573 acre-feet/year in 2020 to 5,947 acre-feet/year in 2070.

Demands within the District, water supply needs within the District, and water management strategies are included in the 2022 State Water Plan Datasets in **Attachment B**, pages 6 - 7, pages 8 - 9, and 10 - 13 respectively. The projected needs listed in the TWDB estimated historical water use/2022 state water plan data packet (attached here as Attachment B) are primarily municipal, manufacturing, mining, livestock, and irrigation. Needs in Bastrop County exist for the following water user groups (WUGs): Aqua Water Supply Corporation, City of Bastrop, Bastrop County Water Control Improvement District no. 2, Creedmoor-Maha Water Supply Corporation, City of Elgin, Lee County Water Supply Corporation, Polonia Water Supply Corporation, City of Smithville. Additional needs exist in one other WUGs: Irrigation, Livestock, Manufacturing, Mining, and Steam-Electric Power. The projected needs in Bastrop County between 2020 and 2070 increase from 675 to 37,368 acre-feet per year. Needs in Lee County exist for the following water user groups (WUGs): Aqua Water Supply Corporation, City of Giddings, Lee County Water Supply Corporation, City of Lexington, and Southwest Milam Water Supply Corporation. Additional needs exist in one other WUGs: Irrigation, Livestock, Manufacturing, and Mining. The projected needs in Lee County between 2020 and 2070 decrease from 275 to 12 acre-feet per year.

Projected water management strategies for Bastrop and Lee Counties listed in the TWDB estimated historical water use/2022 state water plan data packet (Attachment B), are: Drought Management (Aqua WSC, Bastrop County WCID no. 2, County-Other Bastrop, City of Elgin, Lee County WSC, Polonia WSC, City of Smithville), Municipal Water Conservation – Aqua WSC (Aqua WSC) Municipal Water Conservation (Aqua WSC, City of Bastrop, Bastrop County WCID no. 2, Bastrop County – Other, City of Elgin, City of Smithville, City of Giddings, City of Lexington), Downstream Return Flows (Aqua WSC), Expansion of Current Groundwater Supplies – Carrizo-Wilcox Aquifer (Aqua WSC, City of Elgin, Lee County Mining, Southwest Milam WSC), LCRA – Import Return Flows from Williamson County (Aqua WSC, City of Bastrop, Bastrop County WCID no. 2, City of Smithville), Development of New Groundwater Supplies – Trinity Aquifer (City of Elgin), Mining Conservation (County-Other Bastrop), Development of New Groundwater Supplies – Yegua-Jackson Aquifer (City of Smithville), LCRA – Enhanced Municipal and Industrial Conservation (LCRA), Industrial Water Conservation (Mining – Lee County). The total water management strategies in Bastrop County between 2020 and 2070 increase from 3,725 to 42,318 acre-feet per year. The total water management strategies in Lee County between 2020 and 2070 decrease from 275 to 274 acre-feet per year.

Groundwater currently meets nearly all District demand for municipal, manufacturing, mining, livestock, and irrigation purposes, with surface water used principally to meet some irrigation and

all steam-electric demand (cooling water).² Currently, the two largest uses are mining and municipal purposes, including rural-domestic use. Almost all mining water use is from the Simsboro Aquifer.

It is important to note that the 2022 State Water Plan Projected Net Water Demands:

- do not distinguish between projected demands met by surface water and those met by groundwater;
- do not include out-of-District demand for District groundwater;
- do not account for groundwater pumpage within the District that is exported out-of-District (such as demand represented by the District’s current export of groundwater to Fayette County) (demand estimates from Regions G and K submitted to TWDB are for in-District demands only); and
- do not account for demand in areas outside the District which are served by pumpage within the District by retail rural water sellers or other special utility districts whose “Certificate of Convenience and Necessity” (CCN) extends beyond District boundaries.

These factors have not been contemplated in the State Water Plan because the regional planning groups, pursuant to 31 Tex. Admin. Code § 357.32(d) and Tex. Water Code §16.053(e)(2-a), may only consider modeled available groundwater derived from the most recent DFC. As such, all demands must be separately evaluated by the District when implementing this Groundwater Management Plan.

The District expects that improvements to the applicable GAM and expanded data from the Monitoring Well Program will allow better understanding of District groundwater resources and better future estimates of groundwater availability as the District seeks to manage the District’s groundwater resources consistently with the DFCs and its mission.

Municipal demands are expected to nearly quadruple in Bastrop County by 2070. Mining demands are expected to decrease significantly in both Bastrop and Lee Counties by 2070.

² The District has issued a permit to the Lower Colorado River Authority (LCRA) to produce groundwater to meet power generation needs at LCRA’s Lost Pines Power Park.

Section 8. MANAGEMENT GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS

A. Statutory Goals.

GOAL 1: Provide the most efficient use of groundwater.

Management Objective 1.1: The General Manager will develop and evaluate a schedule for expanding the monitoring well network in the Monitoring Well Program and will measure and record water levels in the monitoring wells.

Performance Standard: The General Manager will annually, before March 31st, evaluate and report to the Board on the current status of the monitoring well network and any need for improvements.

Management Objective 1.2: The General Manager will make available to the public information on efficient use of groundwater, at the District office and on the District website, and/or by public workshops or other presentations.

Performance Standard: The General Manager will report annually, before March 31st, to the Board, in the Annual Report or in any other mandated report, on information on efficient use of groundwater which has been made available, at the District office and on the District website, and identifying the publications and the number and dates of any public workshops or other presentations.

GOAL 2: Controlling and preventing waste of groundwater.

Management Objective 2.1: The District will make available to the public information on controlling and preventing waste of groundwater, at the District office and on the District website, and/or by public workshops or other presentations.

Performance Standard: The General Manager will report annually, before March 31st, to the Board, in the Annual Report or in any other mandated report, on information on controlling and preventing the waste of groundwater which has been made available at the District office and on the District website, and identifying the publications and the number and dates of any public workshops or other presentations.

Management Objective 2.2: The General Manager will document and promptly report to the relevant water supply entity any water leaks from pipelines or distribution systems which are noted or reported to the District.

Performance Standard: The General Manager will report annually, before March 31st, to the Board, in the Annual Report or in any other mandated report, any leaks noted and reported. Additionally, the General Manager will promptly inform the Board of such leaks.

GOAL 3: Controlling and preventing subsidence: This goal is applicable to the District according to the TWDB subsidence risk report.

Management Objective 3.1: The District will monitor drawdowns to track and prevent land subsidence.

Performance standard 1: At least once every five years, beginning in 2023, the General Manager will investigate and report to the District’s Board of Directors projected land subsidence for areas where water levels will decrease more than 300 feet (over a 50-year period) based on groundwater availability model (GAM) simulations used for the joint planning process and areas of high risk based on the TWDB subsidence risk assessment tool.

Performance Standard 2: If actual subsidence is suspected or confirmed, the District will consider whether or not production should be curtailed in impacted areas or undertake any other action deemed to be necessary to reduce or halt further subsidence.

GOAL 4: Address conjunctive surface water management issues.

Management Objective 4.1: The District will encourage the use of surface water supplies, where available and practical, to meet the needs of specific user groups within the District.

Performance Standard: The District will participate at least annually in the Region G and Region K Regional Water Planning processes, and encourage the development of surface water supplies where appropriate and document any such activity in the Annual Report.

GOAL 5: Address natural resource issues that impact the use and availability of groundwater and which are impacted by the use of groundwater.

Management Objective 5.1: The District will identify potential hazards that might negatively impact water quality or reduce the availability of high quality groundwater for consumptive use.

Performance Standard 1: The General Manager will produce a map that includes the location of all known and identifiable mining hazards as well as the monitoring wells nearest to these sites, no later than November 2023. The hazardous sites will be noted as to type (e.g., coal ash, gravel and sand, etc).

Performance Standard 2: The General Manager will water test annually the wells nearest these mapped sites for contamination and report results no later than November 1st of each year.

Performance Standard 3: The General Manager will produce a map that includes the location of all known active or abandoned oil and gas production wells, no later than November 1, 2024.

Performance Standard 4: The General Manager will test monitoring wells nearest the oil and gas well sites for contamination and report results no later than November 2024.

Performance Standard 5: The Management Committee, or another committee of the Board of Directors, will conduct an investigation to determine sources for potential hazards and develop in-house database for all hazards of negative impact on water quality or availability, and summarize findings by March 31st of each year. The General Manager will publish and maintain this database on the district's website.

Management Objective 5.2: The District will plan for and establish a hydrological monitoring program on water quality in the alluvial aquifers and the interactions between surface water and groundwater and stream flows in the Colorado River.

Performance standard 1: The Board of Directors approved a hydrological surface water to groundwater interactions study on January 18, 2023. The District's hydrogeologists and General Manager will report to the District's Board of Directors the findings of the study no later than November 1, 2023. The General Manager will publish and maintain this report on the district's website.

Performance standard 2: The General Manager will investigate the locations and methods necessary to evaluate water quality and the interactions of groundwater production on surface water in the Colorado River and report to the District's Board of Directors the plan to monitor water quality and surface water and groundwater interactions no later than November 1, 2024.

Performance standard 3: Before the expiration of this Groundwater Management Plan, the District shall establish a monitoring program that focuses on water quality and the interactions between Colorado River Alluvial and stream flows in the Colorado River within the District. The General Manager shall submit a report to the Board of Directors of the data collected from the monitoring program annually. The General Manager's report shall include a discussion on the applicable criteria for creation of an alluvial management zone. The General Manager must publish and maintain this report on the district's website.

GOAL 6: Address drought conditions.

Management Objective 6.1: The District will monitor information on drought severity and provide a link to the drought information on the District website.

Performance Standard: The General Manager will monitor a public source on local drought conditions, such as <https://waterdatafortexas.org/drought> make the information available to the public on the District website, and report annually to the Board on the status of this objective in the Annual Report or in any other mandated report.

Management Objective 6.2: The District will monitor District monitoring wells at specified intervals.

Performance Standard: The General Manager will provide a summary of water levels in District monitoring wells at least annually to the Board.

GOAL 7: Address conservation, recharge enhancement, rainwater harvesting, precipitation enhancement, or brush control, where appropriate and cost-effective.

Recharge enhancement: It is currently not economically feasible for the District to undertake recharge enhancement. Therefore, based on current conditions, this goal is not currently applicable.

Precipitation enhancement: The District does not know of any precipitation enhancement activity currently applicable to the District. Therefore, this goal is not currently applicable.

Management Objective 7.1: The District will make available to the public at the District office and on the District website information on water conservation on topics such as advances in plumbing fixtures that conserve water, xeriscaping, and other related subjects, where appropriate and cost-effective, identified by the District.

Performance Standard: The General Manager will report annually to the Board, in the Annual Report or in any other mandated report, on information on conservation which has been made available at the District office and on the District website, identifying the information and the number and dates of any public workshops or other presentations.

Management Objective 7.2: The District will make available to the public at the District office and on the District website information concerning rainwater harvesting where appropriate and cost effective, including one or more publications related to advances in rainwater harvesting or any other related subject identified by the District.

Performance Standard: The General Manager will report annually to the Board, in the Annual Report or in any other mandated report, on information on rainwater harvesting which has been made available at the District office and on the District website, identifying the information and the number and dates of any public workshops or other presentations.

Management Objective 7.3: The District will make available to the public information concerning brush control where appropriate and cost effective, including on topics related to brush control or any other related subject identified by the District.

Performance Standard: The General Manager will report annually to the Board, in the Annual Report or in any other mandated report, on information on brush control which has been made available, identifying the information and the number and dates of any public workshops or other presentations.

GOAL 8: Address desired future conditions (DFCs) of the groundwater resources established pursuant to § 36.108.

Management Objective 8.1: The District will assure conformance with the desired future conditions (DFC) adopted by the District.

Performance standard 1: At least once a year in by March 31st, the General Manager will report to the Board the measured water levels obtained from the monitoring wells for each Management Zone and aquifer, calculated from the measured water levels of the monitoring wells within the Management Zone.

Performance standard 2: The General Manager will report annually by March 31st to the Board the total permitted production and the estimated total annual production for each aquifer and compare these amounts to the MAGs listed in the District's Groundwater Management Plan for each aquifer.

Management Objective 8.2: The District will assess whether or not management zones should be established within its counties, or, if established, modified.

Performance Standard: The General Manager will annually assess by March 31st of each year and report to the Board whether management zones should be established within its counties, or, if established, modified.

Management Objective 8.3: In order to facilitate District operations and achievement of management goals, the District may undertake other strategic initiatives such as evaluation of historic use, establishment of permit production limits, model evaluations, or other studies or programs.

Performance Standard: If the District undertakes strategic initiatives in support of operations and management goals, progress on these activities will be reported in the Annual Report to the Board of Directors.

Management Objective 8.4: Each year, the District will make an evaluation of the District Rules to determine whether any amendments are recommended to support achievement of the DFCs adopted by the District.

Performance Standard: Each year, the District will include a discussion of the evaluation of the District Rules and the determination of whether any amendments to the rules are recommended to support achievement of the DFCs adopted by the District in the Annual Report of the District provided to the Board of Directors.

B. District-Specific Goals

GOAL: Provide public education on groundwater resources including watershed protection, drought management and water conservation.

Management Objective: Educating public school children to better understand the water cycle, surface and groundwater characteristics and their relationships.

Performance standard 1: A teacher or member of the Education committee will do at least one presentation to fifth grade students within school districts of LPGCD in 2023.

Performance standard 2: The Education committee will secure a stream hydrology trailer by Spring of 2023 for use in educational presentations to K-12 students and the public.

Performance standard 3: The Education committee will secure an aquifer model by Spring of 2023 for use in educational presentations to K-12 students and the public.

Performance standard 4: A teacher or a member of the Education Committee will coordinate an essay contest in area high schools every fall semester beginning in 2023, with topics such as health, water quantity and quality, economics, energy production, recreation.

GOAL: Provide community outreach so that the community is aware of LPGCD existence and mission.

Management Objective: Carry out activities that increase community awareness and support of LPGCD.

Performance standard 1: A member of the Outreach committee will hold a photo contest, each odd year, beginning in the Spring of 2023. Winners will be published in a calendar.

Performance standard 2: A member of the Outreach committee will publish at least 6 informational articles in local newspapers each year beginning in 2023.

Performance standard 3: The Assistant General Manager will publish and distribute at least 10 monthly newsletters each year that provide relevant and timely information about LPGDC and distribute in public places, beginning in 2023.

GOAL: Register all wells within District boundaries.

Management Objective: The District will register all exempt wells drilled since the District Rules became effective and work towards registering all pre-existing exempt wells.

Performance Standard: The District will encourage registration of newly drilled exempt wells by refunding the drilling permit fee upon submittal of completion reports, well logs, and well registration materials. Because registration of exempt wells existing prior to the effective date of District rules is voluntary, the General Manager or the General Manager's

designated representative will note the existence of unregistered wells, locate such wells on a map as best possible, and visit with the landowner, if possible, to encourage registration of the wells. The District will document such attempts at the District office.

GOAL: Publicize operating permit requirements

Management Objective: The District will publicize the requirement for operating permits for non-exempt wells, not otherwise excluded, and notify operating permit holders of the need to renew their operating permit at least sixty days prior to expiration.

Performance Standard: At least annually, the District will notify all known water-well drillers and pump installers operating in the District of the requirement for owners of non-exempt wells, not otherwise excluded, to obtain an operating permit and the requirement that the driller and/or pump installer insure that no non-exempt well, not otherwise excluded, is placed into service within the District without an operating permit. Such notice may be by publication in one or more newspapers of general circulation in Bastrop and Lee Counties.

GOAL: Publicize transport permit requirements

Management Objective: The District will publicize the requirement for transport permits and to notify holders of transport permits of the need to renew their transfer permit prior to expiration.

Performance Standard: At least annually, the District shall cause to be published in one or more newspapers of general circulation in Bastrop and Lee Counties a publication including or related to the requirement to obtain a transport permit to transport groundwater out of the District.

GOAL: Timely process operating permits and transport permits.

Management Objective: The District will endeavor to set an application on the agenda for a Board meeting within sixty (60) days of the date on which the General Manager determines that an application is Administratively Complete as defined by District rules.

Performance Standard: On an annual basis the District will track the dates on which applications and components of requested information are received, the dates on which (following technical review) an application is determined to be administratively complete, and the dates on which the Board considers applications. For any permit application taking longer than sixty days to process, the General Manager will cause a brief comment to be included in the files as to the reason for the delay. The General Manager will include an annual summary of permit application tracking in the Annual Report. Upon review and approval of the Annual Report, the District will make it available for public review at the District office and on the District website.

GOAL: Maintain a single database of registration of exempt wells, operating permits of non-exempt wells, and transport permits, permitting development of spacing and completion

information for District wells, water level data, water production data, water quality and other information which facilitates management of groundwater consistent with DFCs.

Management Objective: The District will maintain a single database of **water level data, water production data, water quality for** each registration of an exempt well, each operating permit for a non-exempt well, and each transport permit, such that the District can generate plots of the locations of each registered and permitted well, access available completion and other relevant information for wells, and compute distances between the wells.

Performance Standard: Data on **water level data, water production data, water quality for** each registration of an exempt well, each operating permit for a non-exempt well, and each transport permit shall be entered in the database within sixty (60) days of issuance of the operating permit or registration. A summary of exempt wells will be provided in the annual hydrological data report. This report will be made available on the District website.

Section 9. DISTRICT CERTIFICATIONS

A. Regional Cooperation and Coordination

Evidence of coordination by the District with the relevant surface water entities in its boundaries is provided in **Appendix B**. In addition:

Lower Colorado River Regional Planning Group (Region K). The District regularly coordinates with Region K by participating at regional planning meetings and by written and verbal communication as needed.

Brazos River Regional Planning Group (Region G). The District regularly coordinates and communicates with Region G. A District representative commonly attends Region G planning meetings.

Lower Colorado River Authority (LCRA). The District communicates with LCRA through the Region K planning group and directly as needed. The District will participate when regular communication begins on conjunctive use of surface and groundwater.

Brazos River Authority (BRA). The District communicates with BRA through the Region G planning group and directly as needed. BRA representatives commonly attend District Board meetings. The District will participate when regular communication begins on conjunctive use of surface and groundwater.

B. District's Resolution Adopting Groundwater Management Plan

Appendix C contains a certified copy of the District resolution adopting this Groundwater Management Plan.

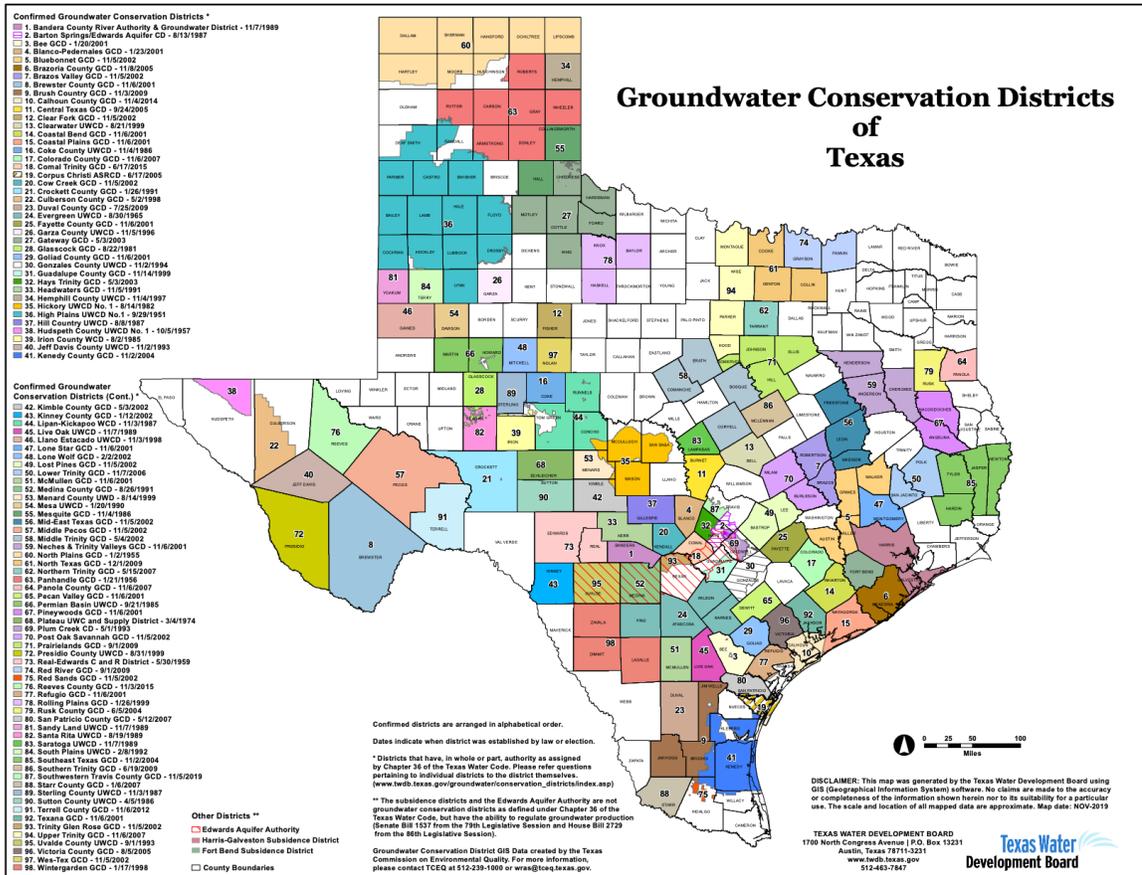
C. Evidence of Public Notice and Hearing of Groundwater Management Plan

Appendix D contains evidence of public notice and hearing prior to adoption of this Groundwater Management Plan.

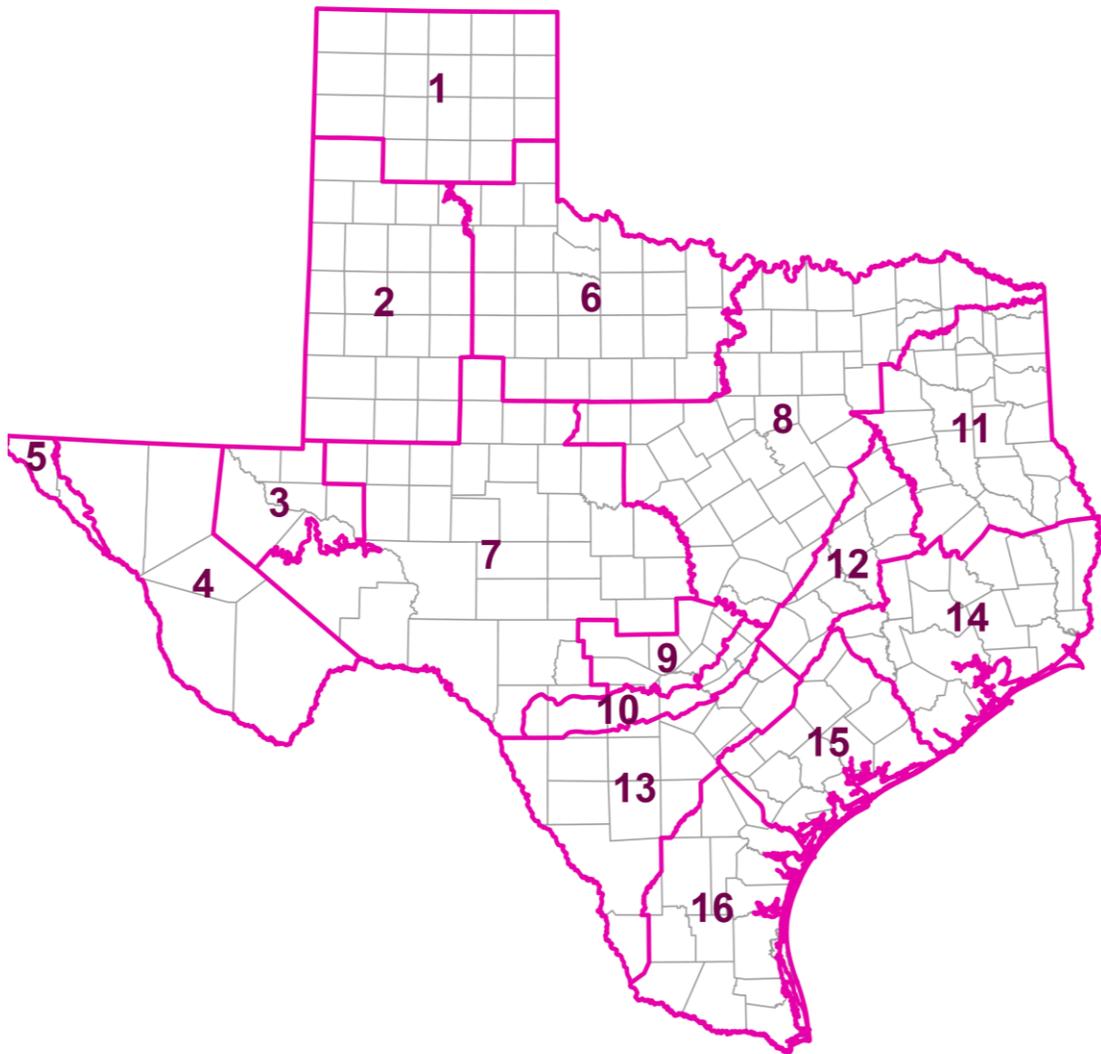
D. Site-Specific Information Provided to the TWDB

No site-specific information is available to provide to the Executive Administrator regarding the estimates required in subsections 31 TAC §356.52(a)(5)(C), (D), and (E).

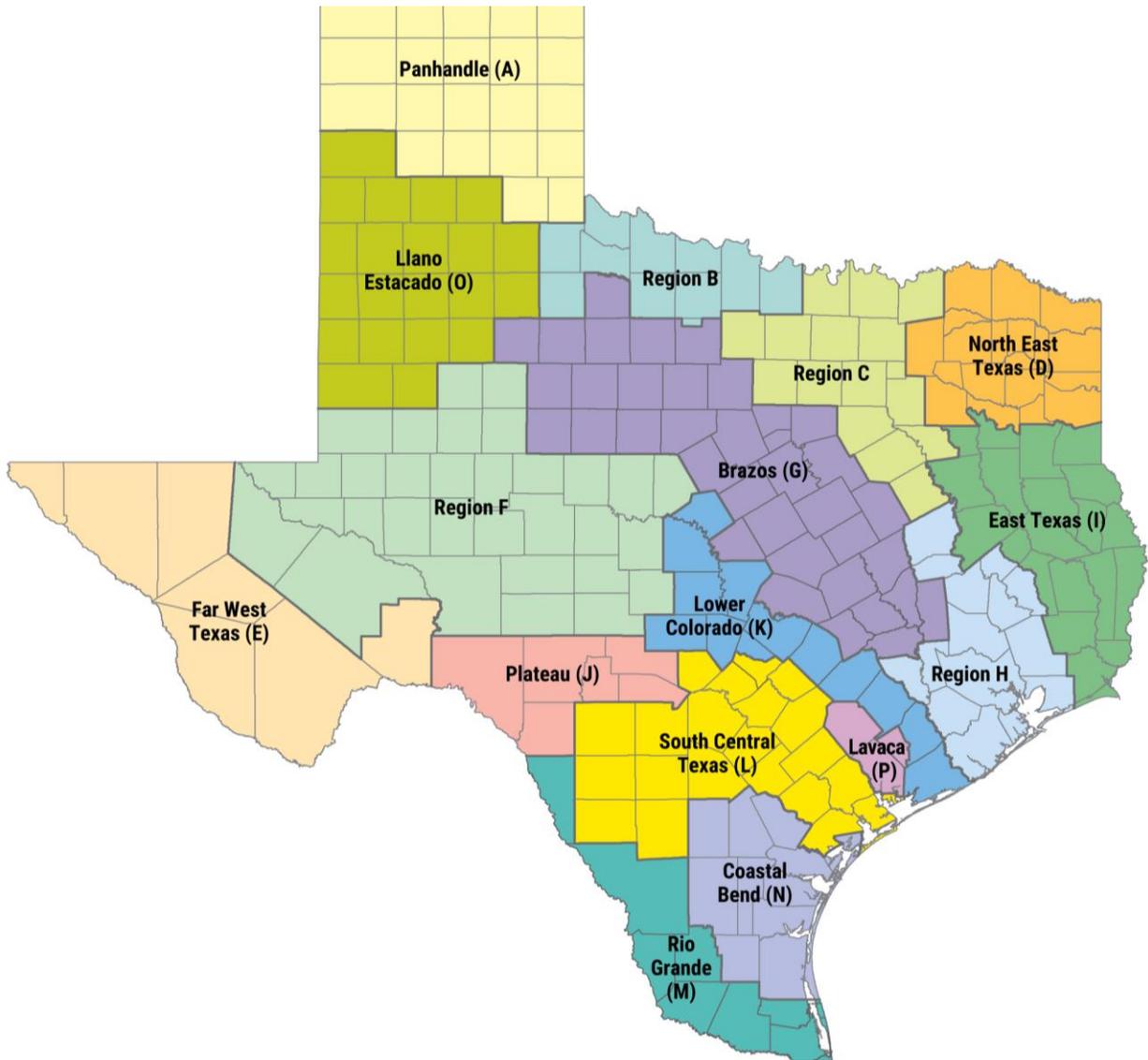
Maps



Map 1. Groundwater Conservation Districts



Map 2. Groundwater Management Areas



Map 3. Regional Water Planning Groups

Attachment A

**GAM Run 21-017 MAG: Lost Pines GCD Groundwater
Management Plan**

Attachment B

**Estimated Historical Water Use and 2022 State Water Plan Datasets:
Lost Pines Groundwater Conservation District**

Appendix A

Copy of GMA 12 Resolution and Submittal Adopting DFCs

Appendix B

Evidence of Coordination with Surface Water Management Entities

Appendix C

**Certified Copy of District Resolution Adopting Groundwater Management
Plan**

Appendix D

Evidence of Public Notice and Hearing on Groundwater Management Plan