

Water Conservation Plan for Wholesale Customers

GBRA approved this version of the Water Conservation Plan for Wholesale Customers on May 15,2024

SECTION 1:	: IN	TRODUCTION AND INTENT	.3
1.:	.1	Introduction	. 3
1.7	.2	Intent	. 3
SECTION 2:	: RE	EGULATORY REQUIREMENTS	.3
2.:	.1	Description of GBRA's Service Area	. 3
2.2	.2	Water Supply System	. 3
2.3	.3	Reservoir System Operations Plan	. 4
2.4	.4	Specification of Conservation Goals	. 4
2.5	.5	Practices to Measure and Account for Diversions	. 4
2.0	.6	Monitoring and Record Management Program	. 5
2.	.7	Metering and Leak Detection and Repair	. 5
2.8	.8	Conservation Requirements in GBRA Contracts	. 5
2.9	.9	Coordination with Regional Water Plan	. 5
2.:	.10	Means for Implementation and Enforcement	. 5
2.:	.11	Review and Update of Water Conservation Plan	. 6
SECTION 3:	: w	ATER CONSERVATION PLAN DATA	.6

Appendices

Appendix A - Map of GBRA statutory district

Appendix B - Resolution of the GBRA Board of Directors (May 15, 2024)

Appendix C - TCEQ Form 20162 – Utility Profile

SECTION 1: INTRODUCTION AND INTENT

1.1 Introduction

As a wholesale water supplier, GBRA is required to adopt a Water Conservation Plan as required under Section 11.1271, Texas Water Code, and associated administrative rules of the Texas Commission on Environmental Quality (Title 30, Texas Administrative Code, Chapter 288). These rules are set forth by the Texas Administrative Code, Title 30, Chapter 288, Subchapter A, Rule 288.5.

1.2 Intent

The purpose of the GBRA's water conservation program is to increase water use efficiency and reduce water waste. Achievement of significant water conservation savings can only occur if each retail water utility sets and aggressively implements its own water conservation programs. GBRA's water conservation program is predicated on the fact that the implementation of conservation measures must occur largely at the local level and is focused on encouraging and supporting initiatives by wholesale customers.

SECTION 2: REGULATORY REQUIREMENTS

2.1 Description of GBRA's Service Area

Established by the Texas Legislature, GBRA was first created in 1933 under Section 59, Article 16 of the Constitution of Texas as a water conservation and reclamation district called the Guadalupe River Authority. In 1935, it was reauthorized by an act of the Texas Legislature as the Guadalupe-Blanco River Authority.

GBRA provides stewardship for the water resources in its ten-county statutory district, which begins near the headwaters of the Guadalupe and Blanco Rivers, ends at San Antonio Bay, and includes Kendall, Comal, Hays, Caldwell, Guadalupe, Gonzales, DeWitt, Victoria, Calhoun and Refugio counties, encompassing approximately 7,900 square miles. A map of GBRA's statutory district is provided in Appendix A.

2.2 Water Supply System

GBRA supplies wholesale water to customers in its' service area through existing Water Right Permits and Certificates of Adjudication (water rights) issued by the Texas Commission on Environmental Quality (TCEQ) authorizing the storage of firm water supply in Canyon Reservoir and run-of-river diversions at multiple locations in the Guadalupe River Basin. GBRA also has contracts to deliver treated, wholesale water supplies available through existing groundwater permits issued by the Gonzales County Underground Water Conservation District that allow for water to be produced from the Carrizo Aquifer.

GBRA utilizes multiple methods to deliver contracted water supplies to its wholesale customers. GBRA has operational control over the releases from Canyon Lake and the ability to use the bed and banks of the Guadalupe River to convey stored water to wholesale customers downstream. In some cases, the customer owns the diversion infrastructure and has operational control of diversions directly from Canyon Lake or the Guadalupe River. In other cases, GBRA owns the diversion infrastructure and has operational control of transmission pipelines that deliver raw or treated water to wholesale customers. When operational, the treated groundwater supplies from the Carrizo Aquifer are to be pumped and delivered to wholesale customers using wells and transmission pipelines under the operational control of GBRA.

2.3 Reservoir System Operations Plan

GBRA's surface water supply system includes a single storage reservoir at Canyon Lake, so a plan for coordinated operation of reservoirs is not applicable to the Guadalupe River system. To the maximum extent possible within regulatory and physical constraints, GBRA seeks to optimize water supply from Canyon Lake and run-of-the-river supplies through coordinated system operation.

2.4 Specification of Conservation Goals

The target goals for municipal use in the GBRA service area specified in the Plan are based on the 2021 South Central Texas Regional Water Plan (Region L Plan) population and demand projections. These municipal demand projections assume that the water conservation goals in the Region L plan have been met for all municipal users. The municipal water conservation goals established in the Region L Plan are, as follows:

- For municipal water user groups (WUGs) with water use of 140 gallons per capita per day (gpcd) and greater, reduction of per capita water use by 1 percent per year until the level of 140 gpcd is reached, after which, the rate of reduction of per capita water use is one-fourth percent (0.25 percent) per year.
- For municipal WUGs having water use of less than 140 gpcd, reduction of per capita water use by one-fourth percent (0.25 percent) per year.

GBRA's municipal customers are required to set goals at the retail level in gallons per capita per day (gpcd) and goals for a maximum acceptable level of unaccounted-for water as part of their local water conservation planning. Municipal customers of GBRA's wholesale water operations will be encouraged to adopt water conservation goals consistent with the goals established in the Region L Plan.

Goals for industrial water conservation are dependent upon individual manufacturing processes. These goals will be determined on a case-by-case basis, and their implementation will be specified in individual water sale contracts.

GBRA's irrigation water customers typically do not have contracts for stored water, so they do not have a dependable water supply during times of drought. In its Calhoun Canal System, GBRA signs annual contracts with irrigation customers for water delivered under GBRA's run of river permits that are interruptible if drought conditions develop during the term of the contract. As a best practice, irrigation contracts for interruptible water are evaluated on an annual basis and may not be available on years where drought conditions are anticipated to limit available supplies. GBRA implements measures to improve irrigation efficiency by re-sectioning canals, rebuilding levees, and removing vegetation. GBRA will also investigate the possibility of abandoning lateral canals that are seldom used.

2.5 Practices to Measure and Account for Diversions

GBRA's wholesale customers are required to provide and maintain a meter at the point of delivery where wholesale water supplies are received to properly measure the quantity of water delivered. The customer is required to calibrate the metering equipment annually, and any meter registering more than 5% above or below the test results shall be deemed to be inaccurate and will be required to be adjusted, repaired, or replaced with a like device having the required accuracy.

2.6 Monitoring and Record Management Program

GBRA maintains records of all water transactions as well as daily reading of Canyon Reservoir storage capacity, inflow and releases and provides water use data to the TCEQ South Texas Watermaster Program on a monthly basis, or more frequently as necessary. The U.S. Geological Survey operates numerous stream gaging stations throughout the basin which provide information on reservoirs and stream flows, including releases from the Canyon Reservoir.

2.7 Metering and Leak Detection and Repair

GBRA' treated and raw water systems include master metering to measure water entering and exiting treatment facilities and transmission systems used to transport treated water prior to delivery to the wholesale customers. These systems allow GBRA to monitor for water losses, and any reported leaks will be repaired in a timely manner.

Wholesale water customers are encouraged to meter all retail water uses and provide master metering at key locations in their system to be able to effectively evaluate water losses. The customers will manage their ongoing leak detection, location and repair programs. Customers are encouraged to minimize water losses by implementing programs for leak detection evaluation and calibration of metered water use data, asset management programs for maintaining their water and wastewater systems, and performing other routine leak detection and surveillance programs.

2.8 Conservation Requirements in GBRA Contracts

GBRA includes a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the elements of TCEQ rules and GBRA's Water Conservation Plan and Drought Contingency Plan applicable to the customer. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures.

2.9 Coordination with Regional Water Plan

The water service area of GBRA is located within the South Central Texas Regional Water Planning Group, Region L. GBRA provided a copy of this Water Conservation Plan to the South Central Texas Regional Water Planning group for coordination to ensure consistency with the approved regional water plan.

2.10 Means for Implementation and Enforcement

By resolution dated May 15, 2024,, the GBRA Board of Directors adopted the Wholesale Water Conservation Plan for Wholesale Water Customers. The General Manager/CEO or his/her designee is authorized and directed to implement the applicable provisions of this plan. The General Manager/CEO or his/her designee will act as the administrator of the plan, oversee the execution and implementation of the plan, and will be responsible for keeping adequate records for program verification. A copy of the Board Resolution adopting the Plan has been provided in Appendix B.

2.11 Review and Update of Water Conservation Plan

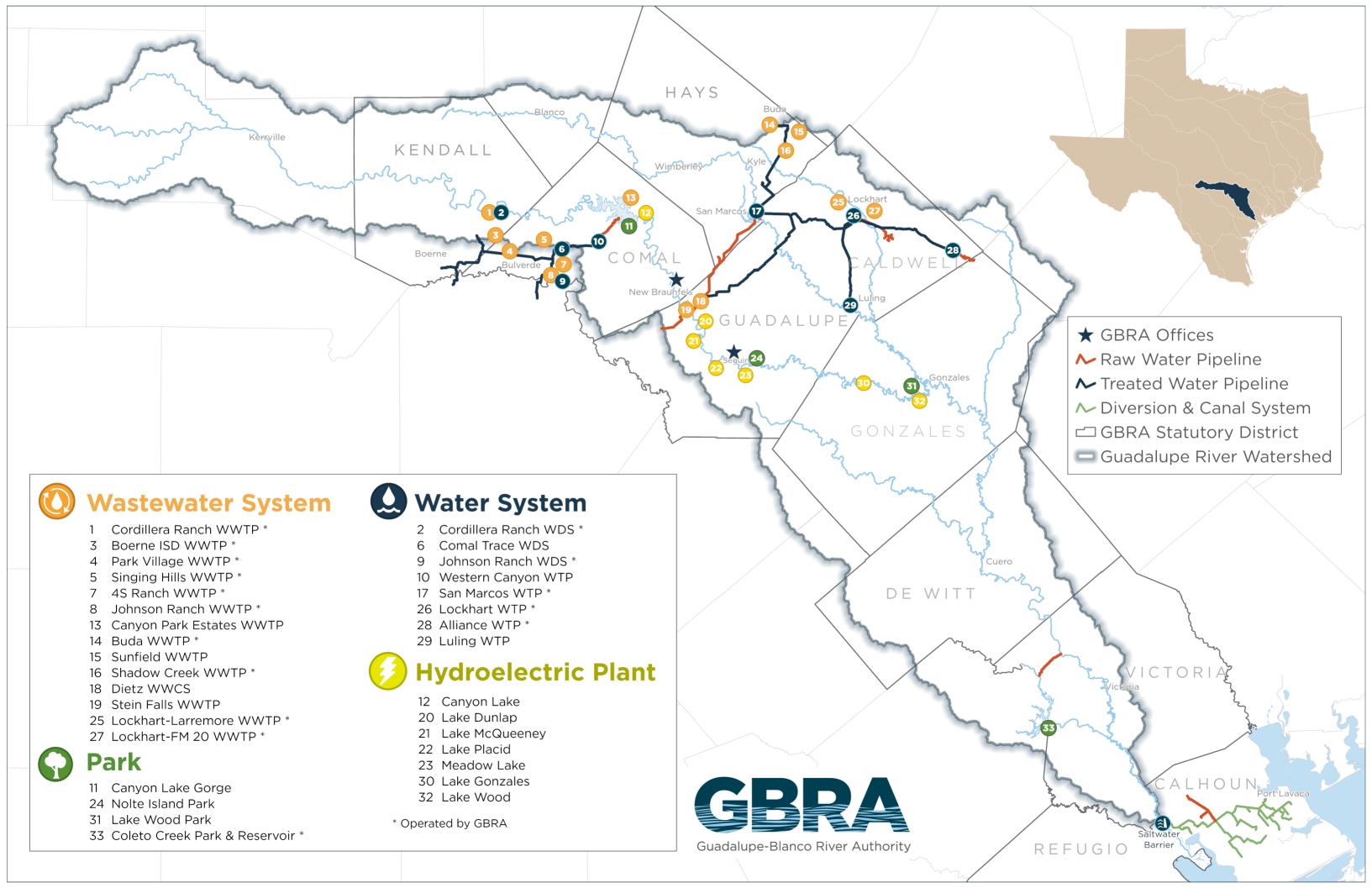
GBRA will review and update this Water Conservation Plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information to coincide with the development of the South Central Texas Regional Water Plan (Region L). Any future amendments or updates to the Water Conservation Plan will be done in open meetings of the GBRA Board of Directors.

SECTION 3: WATER CONSERVATION PLAN DATA

The required Water Conservation Plan data is provided with this Water Conservation Plan by including the required TCEQ Form 20162 — Utility Profile in Appendix C. This form and its attachments contain information on population data, customer data, water use data, water supply system data, and wastewater system data for GBRA's wholesale service area.

APPENDIX A

SERVICE AREA MAP



APPENDIX B RESOLUTION OF THE GBRA BOARD OF DIRECTORS

GUADALUPE-BLANCO RIVER AUTHORITY RESOLUTION APPROVING AMENDMENTS TO GBRA'S WATER CONSERVATION PLAN FOR WHOLESALE CUSTOMERS

BE IT RESOLVED, that the Board of Directors of the Guadalupe-Blanco River Authority does hereby approve amendments to GBRA's Water Conservation Plan for Wholesale Customers (Water Conservation Plan) and directs the General Manager to submit a copy of the Water Conservation Plan, as amended, to the Texas Commission on Environmental Quality, and to administer and enforce the Water Conservation Plan as approved and amended.

Adopted this the 15th day of May, 2024.

Dennis L. Patillo

Chair of the Board of Directors
Guadalupe-Blanco River Authority

Attest:

Stephen B. Ehrig, Secretary-Treasurer

Board of Directors

Guadalupe-Blanco River Authority

APPENDIX C TCEQ FORM 20162 – UTILITY PROFILE



Texas Commission on Environmental Quality

Water Availability Division MC-160, P.O. Box 13087 Austin, Texas 78711-3087 Telephone (512) 239-4600, FAX (512) 239-2214

Utility Profile and Water Conservation Plan Requirements for Wholesale Public Water Suppliers

This form is provided to assist wholesale public water suppliers in water conservation plan development. If you need assistance in completing this form or in developing your plan, please contact the Conservation staff of the Resource Protection Team in the Water Availability Division at (512) 239-4600.

Water users can find best management practices (BMPs) at the Texas Water Development Board's website http://www.twdb.texas.gov/conservation/BMPs/index.asp. The practices are broken out into sectors such as Agriculture, Commercial and Institutional, Industrial, Municipal and Wholesale. BMPs are voluntary measures that water users use to develop the required components of Title 30, Texas Administrative Code, Chapter 288. BMPs can also be implemented in addition to the rule requirements to achieve water conservation goals.

Contact Information

Guadalupe-Blanco River Authority					
2225 E. Common St. New Braun	2225 E. Common St. New Braunfels TX 78130				
(830)379-5822	Fax: ()				
2074, 3859, 3863, 3896, 5172	, 5173, 5174, 5175, 5176, 5177, 5178, 5234				
5484, 5488					
L					
David Harris	Phone: (830) 379-5822				
Charles Hickman					
Executive Manager of Engineering					
Charlie Hickman	Date: 5/01/2024				
	2225 E. Common St. New Braun (830)379-5822 2074, 3859, 3863, 3896, 5172 5484, 5488 L David Harris Charles Hickman Executive Manager of Engineer				

A water conservation plan for wholesale public water suppliers must include the following requirements (as detailed in 30 TAC Section 288.5). If the plan does not provide information for each requirement, you must include in the plan an explanation of why the requirement is not applicable.

TCEQ-20162 (Rev. 04/2022) Page 1 of 11

Utility Profile

I. WHOLESALE SERVICE AREA POPULATION AND CUSTOMER DATA

- A. Population and Service Area Data:
 - Service area size (in square miles): 7876 square miles
 (Please attach a copy of service-area map) (See Attachment A)
 - 2. Current population of service area:

923,455

- 3. Current population served for:
 - a. Water 923,455
 - b. Wastewater 65,000
- 4. Population served for previous five years:
- 5. Projected population for service area in the following decades:

Year	Population
2019	805,888
2020	829,587
2021	858,340
2022	890,455
2023	923,455

<u>Year</u>	Population
2020	829,587
2030	1,266,535
2040	1,690,217
2050	2,135,675
2060	2,658,791

6. List source or method for the calculation of current and projected population size.

Census data was used for the population served for the last five years, and the population projections adopted by the South Central Texas Water Planning Group for the 2026 Region L Water Plan were used for the projected population.

B. Customer Data

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

Wholesale Customer	Contracted Amount (Acre-feet)	Previous Year Amount of Water Delivered (acre-feet)
See Exhibit A		

TCEQ-20162 (Rev. 04/2022) Page 2 of 11

II. WATER USE DATA FOR SERVICE AREA

A. Water Delivery

Indicate if the water provided under wholesale contracts is treated or raw water and the annual amounts for the previous five years (in acre feet):

Year	Treated Water	Raw Water
2019	26,628	52,562
2020	28,814	74,421
2021	30,093	77,900
2022	30,424	87,681
2023	33,661	76,111
Totals	149,620	368,675

B. Water Accounting Data

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

Year	2023	2022	2021	2020	2019
Month					
January	7,872	8,388	8,350	6,830	7,145
February	6,919	6,406	7,242	6,901	5,202
March	8,362	7,264	8,095	7,483	5,408
April	7,137	8,441	9,051	7,669	5,394
May	9,156	12,239	8,751	7,449	5,880
June	10,489	12,498	9,988	7,271	6,267
July	10,918	12,740	9,836	9,557	6,846
August	11,596	13,585	10,350	11,027	8,238
September	11,243	10,014	10,170	10,403	7,162
October	9,422	9,796	8,963	10,845	7,218
November	8,266	8,039	8,307	9,643	7,450
December	8,441	8,695	8,890	8,158	6,980

TCEQ-20162 (Rev. 04/2022) Page 3 of 11

Totals 109823 118105 107993 103235 79190

2. Wholesale population served and total amount of water diverted for **municipal use** for the previous five years (in acre-feet):

<u>Y</u> ear	Total Population Served	Total Annual Water Diverted for Municipal Use
2019	805,888	73,098
2020	829,857	79,902
2021	858,340	79,947
2022	890,455	80,599
2023	923,455	81,250

C. Projected Water Demands

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

III. WATER SUPPLY SYSTEM DATA

A. Projected Water Demands

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

Water Type	Source	Amount Authorized
Surface Water	Guadalupe River	345,073 AF/yr
Groundwater	Carrizo Aquifer	15,000 AF/yr
Other		

- *B. Treatment and Distribution System (if providing treated water)*
 - 1. Design daily capacity of system (MGD):

See #3

- 2. Storage capacity (MGD):
 - a. Elevated
 - b. Ground See #3

3. Please attach a description of the water system. Include the number of treatment plants, wells, and storage tanks

<u>Name</u>	Design Daily Capacity	GBRA Owner/Operator	Storage Capacity (All Ground Storage)	<u>Total</u>
Western Canyon	10 MGD	Owner	(2x) 2MG + (2x) 168,000G	4.336MG Storage
San Marcos WTP	21 MGD	Operator	2MG + (2x)1MG + 0.5MG	4.5MG Storage
Luling WTP	2.5 MGD	Owner	o.5MG	o.5MG Storage

IV. WASTEWATER SYSTEM DATA

- A. Wastewater System Data (if applicable)
 - 1. Design capacity of wastewater treatment plant(s) (MGD):

See Exhibit B

2. Briefly describe the wastewater system(s) of the area serviced by the wholesale public water supplier. Describe how treated wastewater is disposed. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and the receiving stream if wastewater is discharged.

See Exhibit B

- B. Wastewater Data for Service Area (if applicable)
 - 1. Percent of water service area served by wastewater system: 7.04%
 - 2. Monthly volume treated for previous five years (in 1,000 gallons):

<u>Year</u>	2023	2022	2021	2020	2019
Month					
January	124,500	118,410	106,830	94,990	104.630
February	119,770	118,850	105,360	89,680	85,670
March	129,800	123,230	101,180	102,110	92,870
April	132,670	100,960	105,350	101,400	98,610
May	144,590	113,420	137,630	114,440	111,550
June	131,670	117,120	121,030	102,190	110,240
July	128,480	120,220	128,520	104,550	105,820
August	130,850	124,530	116,090	83,020	102,010
September	125,170	118,700	110,740	110,380	96,260

TCEQ-20162 (Rev. 04/2022) Page 5 of 11

October	139,330	120,230	129,910	99,670	95,300
November	138,150	125,390	114,480	97,320	88,910
December	138,820	127,560	116,960	104,210	92,460
Totals	1,583,790	1,428,610	1,394,050	1,203,960	1,184,330

TCEQ-20162 (Rev. 04/2022) Page **6** of **11**

Water Conservation Plan

In addition to the description of the wholesaler's service area (profile from above), a water conservation plan for a wholesale public water supplier must include, at a minimum, additional information as required by Title 30, Texas Administrative Code, Chapter 288.5. Note: If the water conservation plan does not provide information for each requirement an explanation must be included as to why the requirement is not applicable.

A. Specific, Quantified 5 & 10-Year Targets

The water conservation plan must include specific, quantified 5-year and 10-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. Note that the goals established by a wholesale water supplier under this subparagraph are not enforceable. These goals must be updated during the 5-year review and submittal.

B. Measuring and Accounting for Diversions

The water conservation plan must include a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply.

C. Record Management Program

The water conservation plan must include a monitoring and record management program for determining water deliveries, sales, and losses.

D. Metering/Leak-Detection and Repair Program

The water conservation plan must include a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system.

E. Contract Requirements for Successive Customer Conservation

The water conservation plan must include a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of Title 30 TAC Chapter 288. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

F. Reservoir Systems Operations Plan

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

G. Enforcement Procedure and Official Adoption

TCEQ-20162 (Rev. 04/2022) Page **7** of **11**

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

H. Coordination with the Regional Water Planning Group(s)

The water conservation plan must include documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

Example statement to be included within the water conservation plan:

The service area of the	_ (name of water	supplier) is located	within the
(name of regional water planning a	rea or areas) and	(name	of water supplier) has
provided a copy of this water conser	vation plan to the	2 (nam	e of regional water
planning group or groups).			

I. Plan Review and Update

A wholesale water supplier shall review and update its water conservation plan, as appropriate based on an assessment of previous 5-year and 10-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan no later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. The revised plan must also include an implementation report.

V. ADDITIONAL CONSERVATION STRATEGIES

Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of 30 TAC §288.5(1), if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

- 1. Conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;
- 2. A program to assist agricultural customers in the development of conservation, pollution prevention and abatement plans:
- 3. A program for reuse and/or recycling of wastewater and/or graywater;
- 4. Any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

VI. WATER CONSERVATION PLANS SUBMITTED WITH A WATER RIGHT APPLICATION FOR NEW OR ADDITIONAL STATE WATER

Water Conservation Plans submitted with a water right application for New or Additional State Water must include data and information which:

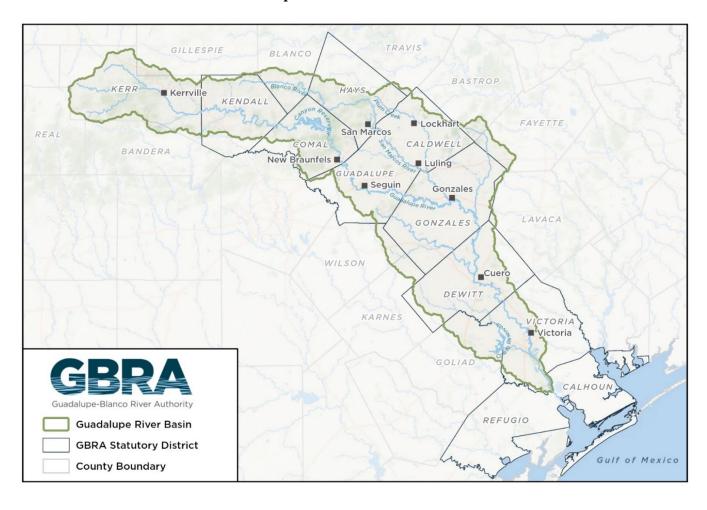
TCEQ-20162 (Rev. 04/2022) Page 8 of 11

- 1. support the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;
- 2. evaluates conservation as an alternative to the proposed appropriation; and
- 3. evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.

Additionally, it shall be the burden of proof of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

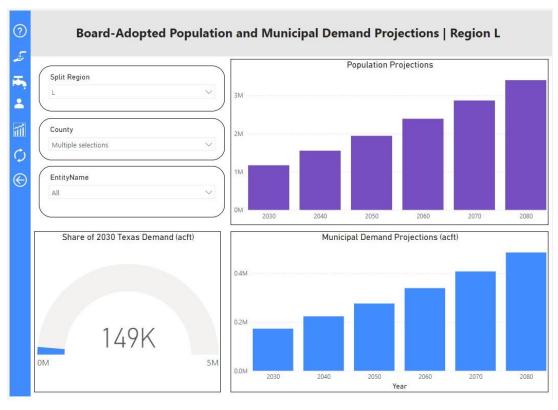
TCEQ-20162 (Rev. 04/2022) Page 9 of 11

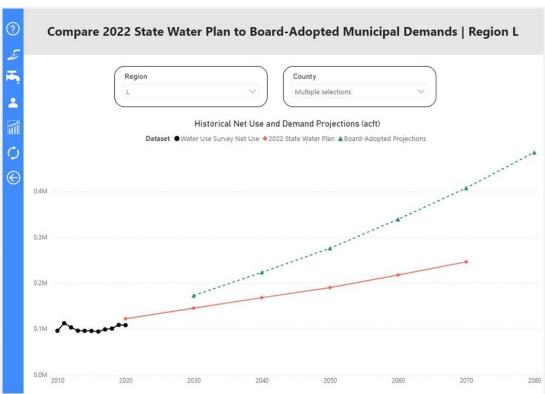
Attachment A - Service Area Map



TCEQ-20162 (Rev. 04/2022) Page **10** of **11**

Attachment B - Demand Projections





TCEQ-20162 (Rev. 04/2022) Page 11 of 11