# BRAZOS VALLEY GROUNDWATER CONSERVATION DISTRICT
# WATER CONSERVATION PLAN

## I: INTRODUCTION

The BRAZOS VALLEY GROUNDWATER CONSERVATION DISTRICT (BVGCD) was created by the Texas Legislature to protect and conserve groundwater resources of Robertson and Brazos Counties through local management in concert with Groundwater Management Area 12. **The District will direct its efforts toward preventing waste, collecting data, promoting water conservation, protecting existing users and preventing irreparable harm to the aquifers**.

Aquifers within the boundaries of the District are managed independently of each other. Metered water production for each aquifer is collected annually, static water level measurements are taken throughout the year from designated monitoring wells within each aquifer, and the effect of pumping is assessed. An aquifer not meeting the desired future condition based on collected data and established by the District may have different management methodologies applied. This allows the specified management goals for that aquifer to be addressed separately from the other managed aquifers.

In an effort to achieve these stated goals, the Board has created this Water Conservation Plan. Implementation of an effective conservation effort will require dedication of resources to accomplish. The resolution of the Board of Directors adopting the Water Conservation Plan shall authorize the Board to implement, enforce, and administer the program.

## II. PUBLIC INVOLVEMENT, AWARENESS AND EDUCATION

### A. Public Input

Opportunity for the public to provide input into the preparation of the Plan was provided by the District by scheduling and providing public notice of a public meeting to accept input on the Plan. In the adoption of this plan, the District considered all submitted comments.

### B. Public Awareness

The District will post this Water Conservation Plan on its website and by request send a copy by mail or email to permit holders, County Commissioners Courts, applicable Regional Planning Groups and Groundwater Management Areas to notify the public and permit holders of its policy regarding the District's actions in regard to water conservation.

### C. Public Education

The District will endeavor to provide an ongoing, comprehensive public education effort to promote water conservation and prevent waste of groundwater resources.

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## III: DISTRICT PROFILE

The District encompasses Robertson and Brazos counties in Central Texas. The boundaries of the District are coterminous with the counties' boundaries. The District is bordered by Falls and Limestone counties to the north; Grimes and Washington counties to the south; Leon and Madison counties to the east; and Burleson and Milam counties to the west. The District comprises an area approximately 1,456 square miles or 932,000 acres.

The United States Census Bureau 2020 estimate for population of Brazos County was 233,840 people. This represented an increase of 28% from the 2010 estimate of 194,851 people. An overall growth rate of approximately 26% for the State of Texas was seen during that same period. The estimated population as of July 1, 2025, was 249,088. There are four incorporated cities in Brazos County including College Station, Bryan, Kurten and Wixon Valley. Texas A&M University, located in College Station and Bryan, operates its own water supply system for the main campus.

The Census Bureau 2020 estimate of population for Robertson County was 16,755 people. The estimate for 2010 was 16,622 which indicates a static population. The estimated population as of July 1, 2025, was 17,839. This represented a growth over the past five (5) years of 6.5%, no longer trending static. There are four incorporated cities in Robertson County including Bremond, Calvert, Franklin and Hearne.

The Texas State Data Center and Office of the State Demographer provide Texas Population Projections which details biennial projections of population of the state and all counties in the state by age, sex and race/ethnicity. The projections are used extensively by public and private entities. Every 2-3 years, the program also produces state and county level projections with several scenarios for every year through 2060.

These studies suggest the following potential 2060 populations based upon the generally recommended scenario. This scenario assumes rates of net migration one-half of those of the 1990s. The reason for including this scenario is that many counties in the State are unlikely to continue to experience the overall levels of relative extensive growth of the 1990s. A scenario which projects rates of population growth that are approximately an average of the zero scenario and the 1990-2000 scenario is one that suggests slower than 1990-2000 but steady growth.

Brazos County: 387,765 Robertson County: 16,817

**SOURCE: Population Estimates and Projections Program, Texas State Data Center, Office of the State Demographer, Institute for Demographic and Socioeconomic Research, the University of Texas at San Antonio 2021**

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**2021 GROUNDWATER AVAILABILITY ESTIMATES:**

The District has five significant aquifers within its boundaries. They include the CARRIZO-WILCOX, QUEEN CITY, SPARTA, YEGUA-JACKSON and BRAZOS RIVER ALLUVIUM aquifers. The SIMSBORO SAND is the most prolific water-yielding unit and is part of the CARRIZO-WILCOX aquifer. The other CARRIZO-WILCOX Aquifer layers are the HOOPER, CALVERT BLUFF, and CARRIZO. The total modeled available groundwater (MAG) estimates were adopted by Groundwater Management Area 12 during the 2021 planning effort. The MAG estimates adopted for each aquifer are listed below along with distribution for each county.

| AQUIFER | MAG AC-FT/YEAR | MAG BRAZOS | MAG ROBERTSON |
|---|---|---|---|
| Brazos River Alluvium | 130,657 | 76,039 | 54,618 |
| Carrizo | 5,499 | 3,763 | 1,736 |
| Calvert Bluff | 1,725 | 0 | 1,725 |
| Simsboro | 147,245 | 64,421 | 82,824 |
| Hooper | 2,139 | 0 | 2,139 |
| Queen City | 1,269 | 694 | 575 |
| Sparta | 13,160 | 12,138 | 1,022 |
| Yegua-Jackson | 7,091 | 7,091 | 0 |

## IV: CONSERVATION GOALS

The purpose of this water conservation plan is to reduce long-term demand on limited water resources by encouraging more efficient water use practices in the District. Its primary goal is to prevent irreparable harm to the aquifers by regulating pumping and managing the aquifers to the approved Desired Future Condition (DFC).

### A. Retail Water Suppliers

The goal for retail water supply entities is focused on reducing peak demand. This will help municipalities and rural water supplies make better use of available water resources. Because TCEQ rules require public water suppliers to build capacity to meet escalating peak daily demands, reducing those peak demands will enable this water user group to defer new capital expenditures for production facilities.

The public water suppliers of Robertson and Brazos counties and suppliers receiving water from District water resources via transport permits will periodically evaluate their conservation plans in accordance with State and Federal regulations to determine the extent, if any, that the plans need modification.

To achieve this goal, the District will notify all retail water suppliers and suppliers receiving water from District water resources via transport permits regarding the adoption of this plan and ensure that each group has a water conservation plan on file with the District.

**B. Agricultural Users**

The goal for agricultural users is to encourage use of Best Management Practices as defined by the Texas Water Development Board Report Number 362. This report provides guidance to agricultural users regarding conservation of groundwater and protection of watersheds.

To achieve this goal, the District will notify all permitted agricultural water users regarding adoption of this plan and ensure that each user has a water conservation plan on file with the District or is adhering to the District Water Conservation Plan.

C. **Industrial Users**

The goal for industrial users is focused on reducing peak demand. This will help industry to make better use of available water resources. Increasing use of available surface water supplies to build capacity to meet escalating peak daily demands, reducing those peak demands will enable those entities to defer new capital expenditures for production facilities.

Industrial entities in Robertson and Brazos counties and those receiving water from District water resources via transport permits will periodically evaluate their conservation plans in accordance with State and Federal regulations to determine the extent, if any, that the plans need modification.

To achieve this goal, the District will notify all permitted industrial users and those receiving water from District water resources via transport permits regarding adoption of this plan and ensure that each agency has a water conservation plan on file with the District.

**D. Public Education Program**

The goal of the public education program is to make direct customer contacts each year through presentations, booths at community fairs, special events and plant tours. This does not include indirect contacts through mail outs, web site, newspaper and radio ads, and similar programs. The District will promote water conservation issues by informing the public in the following ways:

1. Requiring a Water Conservation Plan with the permit application process as stated in the District's Rules.
2. Providing water conservation information to all permit holders.
3. Conduct educational presentations, lectures, or demonstrations for schools, civic groups, water user groups and the general public each year.
4. Providing exhibits at two public events each year.
5. Providing water conservation information to the public at the District's headquarters.

6. Use print and broadcast media announcements to disseminate conservation information.

7. Coordinating educational programs or activities with schools throughout the District each year.

8. Coordinating environmental education activities with municipal, industrial, rural and agricultural users and other local organizations to promote water conservation education.

## SECTION V: COORDINATION

This Water Conservation Plan shall work in concert with all public water suppliers in the District, agricultural, steam-electric, and industrial permit holders,suppliers receiving water from District water resources via transport permits and in cooperation with the regional water planning authorities. Specifically, the plan will include:

A. **Coordination with Drought Contingency Plan**

The Water Conservation Plan shall work in accordance with the related Drought Contingency Plan as it may be revised from time to time.

B. **Coordination with Regional Water Planning Group**

The District will provide this Water Conservation Plan to the Brazos Region (Region G) Water Planning Group, as designated by the TWDB.

## SECTION VI: MUNICIPAL AND RETAIL WATER SUPPLY GROUPS

Most public water supply groups in Robertson and Brazos Counties depend upon ground water for their public water supply.

The District will, as part of the permitting process, require that water supply groups and suppliers receiving water from District water resources via transport permits adopt applicable provisions of a water conservation and drought contingency plan or have a plan in effect previously adopted and meeting the basic requirements of 30 TAC §288. These agencies are strongly encouraged to adopt the following measures as part of their Water Conservation Plans:

**A. Plumbing Retrofit Program**

Educate the residents, plumbers, and contractors on the benefits of retrofitting existing facilities with water saving devices through its public education program. In addition, the public water suppliers are encouraged to evaluate the feasibility and cost effectiveness of implementing an Ultra-Low Flow (ULF) rebate program or similar incentive program that would offer cash rebates or other incentives to water customers that replace old toilets, showerheads, and other fixtures with new ULF models.

## B. Landscape Water Management Program

Municipal and rural water suppliers should provide information about the methods and benefits of water conserving landscaping practices and devices, through public education to homeowners, business owners, landscape architects and designers, and irrigation professionals. The following methods are encouraged:

1) The use of Xeriscape™ and "Water Wise" landscaping techniques, including drought tolerant plants and grasses for landscaping new homes and commercial areas.

2) The use of drip irrigation systems when possible or other water conserving irrigation systems that utilize efficient sprinklers and considerations given to prevailing winds.

3) Making sure that ornamental fountains and similar water features are designed to recycle water and use minimal amounts of water.

4) Working with area landscape supply businesses and nurseries to encourage them to sell locally adapted, drought tolerant plants and grasses along with efficient irrigation systems, and to promote use of these materials through demonstrations and advertisements.

5) The use of incentive-based programs relative to consumer adoption of water management methods.

## C. Water Loss Control Measures

The goal of the District's water loss control program is to maintain unbilled water at or below 10% of water produced, on a monthly basis. To meet this goal, public water systems are strongly encouraged to have proactive programs in place, including routine water audits, a program of leak detection and repair, and meter testing for accuracy including:

1) Routine Audits of Public Water Systems

   This should include a monthly water loss report that compares metered production with metered consumption, as well as accounted-for and unaccounted for water losses. This report provides an effective tracking system of water loss. A detailed water system audit by the Texas Water Development Board (TWDB) is required of Public Water Systems once every five years. The public water system audit determines the volume of actual water loss, identification of water loss sources, status and condition of primary water meters, an analysis of water line breaks, an evaluation of underground leakage potential, and provides recommendations for meter replacement.

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2) Leak Detection and Repair

This includes a leak detection and repair program for water distribution systems. This program features a work order prioritization system for leaks needing repair and an inventory of equipment and materials needed to promptly repair all detected or reported leaks. Rehabilitation of the water distribution system should be based on the findings of monthly water loss reports and the leak detection program.

3) Universal Metering

All water production wells and service connections to the public water system must be metered. All pumping stations, interconnections, irrigation, swimming pools, parks, and municipal structures operated by the public water system should be metered.
Meters at water well production pump stations must be calibrated and tested in accordance with District Rule 8.3(h)(1)(a) to provide a minimum accuracy of plus or minus three percent (3%). The schedule of testing is as follows and shall be accomplished no later than July 1st of the production year:

(i) Annual meter testing for wells that permitted for more than 500 ac-ft/yr
(ii) Testing every three years for wells permitted for 100-499 ac-ft/yr
(iii) Testing every five years for wells permitted for less than 100 ac-ft/yr

The public water system should provide a preventive maintenance program for its water meters, wherein regular scheduled testing, repairs, and replacements are performed in accordance with the American Water Works Association (AWWA) standards.

## D. Wastewater Recycling and Reuse

Where feasible, public water suppliers and suppliers receiving water from District water resources via transport permits should consider seeking authorization from the TCEQ to reuse treated wastewater effluent as reuse water. The goal for a water reuse program is to reduce peak demand on the potable (drinking) water systems by switching non-potable uses of water, such as athletic field irrigation, golf courses, parks and public landscape areas to reuse water. Implementation of reuse programs will further reduce overall demand on various groundwater aquifers in the District.

## E. Water Rate Structure

Public water suppliers and suppliers receiving water from District water resources via transport permits are strongly encouraged to adopt water rate structures that utilize a cost-of-service method, which is based on costs incurred for services provided. Fees may include an inclining water rate structure to encourage customers to reduce both peak and overall water usage, while fairly allocating cost of service to each customer class. Under

an inclining rate structure, the rate per thousand gallons increases as the amount of water used increases. If implemented, this rate structure would ensure that rates adequately recover costs of service and meet the goals of this water conservation plan.

### F. COORDINATION

Recognizing that each public water supplier has similar water systems and customer bases, and similar needs for water conservation, municipalities and rural water supply systems are encouraged to work together in developing similar water conservation plans and public education efforts to achieve an effective message through Robertson and Brazos counties and those areas where suppliers are receiving water from District water resources via transport permits.

## SECTION VII: AGRICULTURAL USERS

The Texas Water Development Board (TWDB), in cooperation with the Texas State Soil and Water Conservation Board (TSSWCB) and the Texas Irrigation Council has developed a resource for BEST MANAGEMENT PRACTICES (BMP) GUIDE for water conservation by agricultural users in Texas. The resource is REPORT 362, April 2005 published by the Water Conservation Implementation Task Force. The legislation that created this Task Force was passed to further conservation efforts in Texas.

### A. Best Management Practices

Agricultural water users are encouraged to explore and adopt appropriate Best Management Practices to maximize effective and efficient use of groundwater. The BMPs for agriculture are outlined in the report under the following general categories:

1) Agricultural irrigation water use management. This BMP includes specific information related to irrigation scheduling, volumetric measurement of irrigation water use, crop residue management and conservation tillage, and on-farm irrigation audits.

2) Land management systems. This BMP includes information related to furrow dikes, land leveling, contour farming, conversion of supplemental irrigated farmland to dry-land farming, brush control management, lining of on-farm irrigation ditches, replacement of irrigation ditches with pipelines, low pressure center pivot sprinkler irrigation systems, drip-micro irrigation systems, field irrigation distribution systems, and linear-move irrigation systems. Leaching of high-salinity areas may be necessary as a best management practice.

3) Miscellaneous systems including tail water recovery and reuse systems.

4) Cost effectiveness for agricultural water users is covered under section 2.5.

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## B. Technical Assistance

1) Help or assistance comes from various federal, state and local agencies. A primary source of help to agricultural landowners or operators is technical assistance provided by the Natural Resources Conservation Service (NRCS) and the Texas A&M AgriLife Extension. Through Memoranda of Understanding with USDA and NRCS, local Soil and Water Conservation Districts (SWCDs) are able to furnish technical assistance to farmers and ranchers in the preparation of a complete soil and water conservation plan to meet each land unit's specific capabilities and needs.

2) The Texas State Soil & Water Conservation Board the state agency charged with the overall responsibility of coordinating the SWCD programs in Texas, also makes technical assistance funds available to districts through a grant program. Personnel hired under this program are district employees who work cooperatively with NRCS employees to help agricultural landowners/operators plan and install conservation practices.

3) With water quality being a major issue of concern in Texas, the 73rd Legislature passed Senate Bill 503. This bill created the Water Quality Management Plan Program to provide agricultural and silvicultural (forestry) producers with an opportunity to comply with state water quality laws through traditional, voluntary, incentive-based programs.

4) Landowners and operators may request the development of a site-specific water quality management plan through local SWCDs. Plans include appropriate land treatment practices, production practices and management and technology measures to achieve a level of pollution prevention or abatement consistent with state water quality standards.

5) Districts also work with the USDA-Farm Service Agency, Texas A&M AgriLife Extension, Texas Forest Service, U.S. Forest Service and others when necessary to assist agricultural landowners/operators meet individual land use needs.

## C. Water Conservation Plans for Agricultural Users

The Texas Commission for Environmental Quality provides sample plans for agricultural users to implement their management practices. These plans are included in APPENDIX A: AGRICULTURAL WATER CONSERVATION PLAN (NON-IRRIGATION) and APPENDIX B: SYSTEM INVENTORY & WATER CONSERVATION PLAN FOR INDIVUALLY-OPERATED IRRIGATION SYSTEMS. These plans can be used by permit holders and applicants to comply with the provisions of the District’s rules related to the requirement for conservation plans.

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## SECTION VIII: RECOGNITION PROGRAM

The District will establish a proactive program to recognize extraordinary efforts in water conservation in each of the following categories:

A. Residential

B. Industrial

C. Agricultural

D. Municipal

E. Elected Official

F. Other

## SECTION IX: IMPLEMENTATION

The District established the **Water Conservation Plan** by Resolution. This District will review the procedures in this Plan every other year or more frequently, if necessary. Modifications may be required to accommodate system growth, changes in water use demand, available water supply, and/or other circumstances.

This Plan was adopted by the Brazos Valley Groundwater Conservation District at the properly noticed meeting held on July 11, 2024.

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