

WCID No. 17

Travis County

Travis County Water Control & Improvement District No. 17

Water Conservation Plan

11/16/2023

1. Introduction

- A. Travis County Water Control & Improvement District No. 17 (the District) is a water control and improvement district created by an order of the Commissioner's Court of Travis County, Texas on December 8, 1958, and confirmed by the voters within the District on February 28, 1959. As a political subdivision of the State, the District is retail, non-profit, public utility with the rights, powers, privileges, and authority established by the general laws of the State of Texas, particularly Chapter 51 of the Texas Water Code. The District is subject to the continuing supervision of the Texas Commission on Environmental Quality (TCEQ) and federal agencies, and is located within the corporate and extraterritorial jurisdiction of the cities of Austin, Lakeway, and Bee Cave.

The District is empowered, among other things, to purchase, construct, operate, and maintain all works, improvements, facilities, and plants necessary for the supply and distribution of water; the collection, transportation, and treatment of wastewater; and the control and diversion of stormwater. The District is a taxing authority, and may issue bonds and other forms of indebtedness to purchase or construct such facilities.

The TCEQ has adopted Title 30, Texas Administrative Code (TAC), Chapter 288- Water Conservation Plans, Drought Contingency Plans, Guidelines and Requirements requiring retail public water suppliers with 3,300 or more connections to develop, implement and submit to the Texas Water Development Board water conservation plans which are a combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. The District's Water Conservation Plan (the Plan) is, adopted as of November 16th, 2023, and supersedes the previous versions of the District's Water Conservation Plan.

- B. The Plan has been developed to meet the LCRA Water Conservation Plan Rules for Water Sale Contracts in accordance with the LCRA Water Contract Rules. The Plan recognizes that conservation is a valuable tool in managing water utility systems. Benefits of water conservation include: extending available water supplies; reducing the risk of shortage during periods of extreme drought; reducing water utility operating cost; improving the reliability and quality of water utility service; reducing customer cost for water service; and enhancing water quality and the environment.
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The Plan applies to all District retail water customers located within the District's water service area, as defined in its Water Supply Contract with LCRA.

2. Utility Profile Information

- A. As of September 2023, there were approximately 12,734 connections in the District's water service area. Based on 2010 census data, the estimated population is 46,380. The projected population at full build out is estimated to be approximately 55,000 persons, representing an additional 2,200 connections. District build out is expected to grow at 1.9% per year with a projected completion in the year of 2030. The District operates multiple wastewater treatment plants. The treated wastewater effluent currently produced is 1.639 million gallons per day.

Table 1 in Appendix A provides water use data for the past five years. The five-year average daily water use was 600K gallons. The five-year average water loss was 9.91%. The five-year peak to average daily water use was 2.4x (17.175 peak to 7.259 5-year average). Current per capita water use is 183 total gallons per person per day (GPCD) and 133 residential GPCD. The District employs a record management system which allows for the classification of water sales and uses in accordance with Texas Administrative Code Chapter 288.

3. Water Conservation Plan Goals

- A. The District will ensure that it seeks out community partners to coordinate its conservation plans with so as to maximize their effectiveness. The District's service area is located within state regional water planning area Region K. The District provides water information and copies of this plan to the Region K Board, the Texas Water Development Board (TWDB), the Texas Commission on Environmental Quality (TCEQ), and the Lower Colorado River Authority (LCRA). The District consults with and coordinates conservation and drought planning implementation with all local entities including Lakeway Municipal Utility District, Hurst Creek Municipal Utility District, West Travis County Public Utility Agency, and the cities of Bee Cave, Lakeway, Austin and Cedar Park.
- B. The District's approach to Water Conservation and Enforcement has Two main components; the Water Conservation Plan which contains the District's Conservation Goals, as well as the District's Drought Contingency Plan which has been adopted separately.
- C. The overall goal of the Plan is to establish general policy in support of the District's Conservation Goals.
1. Conserve the overall water supply in Lake Travis.
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2. Provide the public with information to encourage water conservation and decrease waste.
 - a. Ensure that conservation information and incentives are available for customers across demographic sectors and geographic areas.
 - b. Emphasize for every customer, how he or she uses water.
 - c. Communicate steps taken by the District, and those that can be taken by the customer to use water more efficiently.
 - d. Be active in local and national organizations which promote water efficiency and water research.
3. Take steps to decrease the average water usage per connection.
4. Limit unaccounted-for water use to the greatest extent possible.
5. Provide for increased use of recycled and raw water.

D. Water Conservation five- and 10-year goals are required for overall water use, residential water use and water loss. The goals proposed by the District are as follows:

	Five-year goals	10-year goals
Gallons per person per day (GPCD)	<u>165</u>	<u>150</u>
Residential gallons per person per day (rGPCD)	<u>130</u>	<u>125</u>
Water loss (in GPCD)	<u>18</u>	<u>16</u>

4. Water Conservation Strategies

4.1 Water Loss

4.1.1 Universal Metering and Meter Replacement and Repair

The District requires all residential water meters to be accurate within plus or minus 1.5% of the indicated flow over the possible flow range. All other water meters are required to be accurate within plus or minus 5% of the indicated flow over the possible flow range. All utility customers will be metered. Water will be metered in and out of all water treatment plants. A regularly scheduled maintenance program of meter repair, replacement and calibration will be performed in accordance with recommended meter manufacturer guidelines following the minimum schedule by meter size:

Production (master) meters:	Test once a year
Meters larger than 1 inch:	Test per manufacturer's recommendations
Meters 1 inch or smaller:	Test per manufacturer's recommendations

Accounts registering zero consumption will be verified for activity and proper connection to the District's AMI network.

4.1.2 Distribution System Leak Detection and Repair- Required

The District will conduct leak detection and water audits, making appropriate repairs, in order to meet the District's water loss goal. Water loss audits will be performed in accordance with Texas Water Development Board rules and The District will review [TWDB Municipal BMP 4.2 Utility Water Audit & Water Loss](#) prior to conducting a water loss audit. LCRA water customers may qualify for [financial assistance](#) for conducting comprehensive water audits.

Measures to proactively reduce water loss will be considered as feasible, including measures to reduce water lost within the water treatment process as well as strategies to reduce line flushing and identify/repair water line leaks quickly.

4.1.3 Additional Water Loss Best Management Practices (BMPs)

- All meters are read automatically using automated meter infrastructure (AMI) and the District receives 'real-time' water use data.
- District staff send leak alerts to customer using AMI data reports.
- A customer portal allows end users to check their water use online.
- Adoption of [TWDB Municipal BMP 9.1 Prohibition on Wasting Water](#).
- A requirement for submeters for irrigation for all new commercial and industrial customers.
- Strategies to minimize water loss on long dead-end main lines will be considered. Examples include adding meters along various line routes to collect more accurate data on water flowing through those routes and engineering loops in the water distribution lines as part of the District's water line replacement plan.
- As feasible, chlorine injection stations will be placed strategically throughout the District to avoid the need for excessive flushing to keep chlorine residuals in compliance.
- As feasible, a protective leak detection program will be developed to decrease water loss in the water distribution system.
- As feasible, recycle backwash water will be used to keep sedimentation out of water treatment plant filters.

4.2 Water Rates and Records Management

4.2.1 Increasing Block Rates

The District currently uses an increasing block rate structure to reflect the cost drivers for the water systems and sends a conservation price signal to customers. The District will periodically evaluate its rate structure to promote conservation to the maximum extent possible. Updated rate schedules for these systems shall be submitted to LCRA

within 30 days of approval. The current rate structure will be submitted with this plan to LCRA and will be located on the utility web site.

4.2.2 Water Monitoring and Records Management

The District's staff maintain records of water distribution and sales through a common monitoring and billing system to provide a central location for water billing information and a way to compile, present, and view water use and billing information.

The billing system is capable of separating water use per customer type into the following categories: single-family residential, multi-family residential, commercial, institutional, industrial, agricultural and wholesale. Any new billing system purchased will be capable of reporting detailed water use data by the sectors listed.

4.2.3 Additional Water Monitoring, Records Management and Planning Best Management Practices (BMPs)

Conservation related planning efforts that take into consideration the customer characteristics of each utility are an important part of a comprehensive and successful water conservation program.

X Consideration of [TWDB Municipal BMP 2.4 Customer Characterization: Analysis to Prioritize BMP selection](#).

X Consideration of [TWDB Municipal BMP 2.3 Water Survey for Single-Family and Multi-Family Customers](#), as applicable.

4.3 Permanent Watering Schedule

A permanent landscape watering schedule limits outdoor spray irrigation for landscapes to no more than twice per week and only between the hours of midnight to 10 a.m. and 7 p.m. to midnight.

Approved Year Round Schedule:

Watering days are based on your address ending number:

- Monday & Thursday: 0, 1, 2, 3 (Res)
- Tuesday & Friday: 4, 5, 6 (Res)
- Tuesday & Friday: Commercial/HOAs
- Wednesday & Saturday: 7, 8, 9 (Res)
- Sunday no automated systems are allowed.

All watering should occur a maximum of two days a week on your designated day.

Approved hours are either between 12 a.m. – 10 a.m. and/or 7 p.m. – 12 a.m. on your authorized day.

4.4 Water Reuse – Required to address applicability, if relevant

For utilities operating a wastewater treatment plant:

If wastewater treatment is required on-site, a development design plan should include a reuse system designed to deliver wastewater for the following types of water uses once the wastewater volume is adequate:

- Irrigation of right-of-ways and medians (42 acres)
- Irrigation of athletic fields (Steiner Ranch Elementary approximately 8 acres)
- N/A Irrigation of parks (None Available within Service Area)
- Irrigation of golf courses (Flintrock Falls Golf Course – 153 acres, UT Golf Course – 145 acres)
- Other (Lakeway Regional Reuse Irrigation – 3.6 acres, Steiner Ranch Regional Reuse Irrigation 28.7 acres)

The treated wastewater effluent currently produced is 1.6 million gallons per day and 68.7% of that effluent is used for the irrigation uses listed above.

4.4.1 Additional Water Reuse Best Management Practices

- Consideration of [TWDB Municipal BMP 8.3 Water Reuse](#).
- The District shall have a goal of working with community partners, municipalities, etc to develop plans for the expansion of its water reuse system to reach 20 additional acres of irrigated Right of Ways, Medians, Sports Fields and Parkland in the next five years.

4.5 Education and Outreach

4.5.1 Required Measures

Throughout the year, water conservation literature will be made available to users regarding water conservation, native landscaping and other related topics to garden clubs, homeowner associations, and various other interested groups. The District staff may attend such events or request a presentation from LCRA staff to promote water conservation.

4.5.2 Additional Education and Outreach Best Management Practices (BMPs)

- X When Staffing allows the District will provide no charge Irrigation system evaluations for its customers with large landscape irrigation needs in the utility service area following [TWDB Municipal BMP 5.5 Residential Landscape Irrigation Evaluations](#) and actively market to all customers the same. Irrigation evaluations consist of evaluating the irrigation system, checking for leaks and other performance problems, and customizing an irrigation schedule.
- X Customers will be offered [rebates](#) for irrigation system equipment, irrigation system evaluations, pools, landscapes and soil testing from LCRA, as listed on LCRA's website. The District will assist LCRA with promoting water conservation programs to its customers.
- X Consideration of [TWDB Municipal BMP 5.3 Landscape Irrigation Conservation and Incentives](#), as applicable.
- X Hotels will be strongly encouraged to adopt a hotel linen reuse option policy where linens are only changed out upon request during multi-night short stays.

4.6 Other Best Management Practices for New Development

(Not required by LCRA, but highly encouraged. Please check all that apply.)

- X Temporary landscape watering schedule variance for new landscapes. New landscapes can be watered according to the following schedule for the first 30 days after installation.
 - Days 1 through 10: spray irrigation allowed every day.
 - Days 11 through 20: spray irrigation allowed every other day.
 - Days 21 through 30: spray irrigation allowed every three days.
 - Watering times: Midnight to 10 a.m. and 7 p.m. to midnight.
- X Landscape conservation standards for new development. The District will incorporate standards included in Appendix B of this plan into its adopted rules and regulations, and will follow the ordinance approach described in [TWDB Municipal BMP 7.5 Water Wise Landscape Design and Conversion Programs](#).
- X The District will adopt [TWDB Municipal BMP 9.3, Enforcement of Texas Irrigation Standards](#).
- X Swimming pool conservation standards for new development. The District will incorporate standards included in Appendix C of this plan into its adopted rules and regulations.

5. Wholesale Water Conservation Plans - Required

Wholesale treated water customers must develop a drought contingency and a water conservation plan in accordance with LCRA Water Contract Rules. The plans must include a governing board resolution, ordinance or other official document noting that the plan has been formally adopted by the utility. Wholesale treated water customers must include in their wholesale water supply contracts the requirement that each

successive wholesale customer develop and implement a water conservation and drought contingency plan.

6. Coordination with Regional Water Planning Group

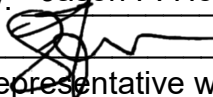
The service area of the District is located within the Lower Colorado River Water Planning Area (Region K) of the State of Texas and the District has provided or will provide a copy of this Plan to the regional water planning group. The plan can be sent to the LCRA, c/o Water Contracts and Conservation, P.O. Box 220, Austin, Texas, 78703.

7. Authorization and Implementation

The General Manager, or his/her designee, of the District is hereby authorized and directed to implement the applicable provisions of the Plan. The General Manager, or his/her designee, will act as administrator of the water conservation program. He/she will oversee the execution and implementation of the program and will be responsible for keeping adequate records for program verification. A signed and dated copy of this plan by the General Manager, or his/her designee, will be sufficient to meet this requirement.

7.1 Plan Implementation

The District has designated a water conservation coordinator, who will be responsible for the implementation of this water conservation plan. The current water conservation coordinator is the District's Operations Manager. The General Manager, or his/her designee, may re-appoint this position. At that time, the District will inform LCRA about this personnel change.

Approved by: Jason F. Homan _____ (print name)
Signature:  _____ Date: November 16, 2023
(Customer representative with enforcement authority)

8. Annual Reporting and Review

An annual report describing the implementation, status, and effectiveness of the water conservation plan will be submitted as required to the Texas Water Development Board. The general manager and the district engineer will review this plan annually, and make recommendations to the Board of Directors on any updates or amendments which may be required.

9. Appendixes:

- A. Appendix A – Historical Water Use Data – Table 1
- B. Appendix B – Landscape Conservation Standards
- C. Appendix C – New Pool Construction Standards

A. Appendix A – Historical Water Use Data – Table 1

Table 1: Monthly Water Use

Month	2018 (MG)	2019 (MG)	2020 (MG)	2021 (MG)	2022 (MG)	Average
January	139.156	124.560	143.888	142.496	150.465	
February	114.801	118.298	122.304	162.989	143.076	
March	167.106	161.132	151.672	167.712	190.103	
April	209.573	178.750	171.609	207.908	244.757	
May	245.713	183.297	224.838	188.520	287.148	
June	291.772	202.008	270.645	224.994	322.617	
July	288.945	268.832	326.019	253.842	372.270	
August	328.506	346.571	349.795	269.691	477.772	
September	174.160	323.169	229.374	292.147	303.290	
October	152.449	248.543	259.4920	228.497	289.632	
November	138.728	161.954	212.215	188.190	198.209	
December	137.865	147.727	161.623	170.788	183.306	
Total	2,388.774	2,464.841	2,623.473	2,497.774	3,162.645	

B. Appendix B - Landscape Conservation Standards

These standards are similar to the Greater Austin Homebuilder “Sensible Landscaping for Central Texas” guidelines developed with significant input from the LCRA. The standards are meant to provide builders and homeowners with a well-designed, water-efficient landscape. The standards can be adopted through ordinance, deed restriction or covenant where economically feasible and allowed by federal, state and local law.

Design

- A. No more than 50% or up to 7,000 square feet of the landscape shall be planted in turf. Longer leafed native grasses and wildflowers that use low amounts of water are not considered turf grass when determining how much turf grass is allowed.
- B. Automatic spray irrigation for each home/business shall be limited to 2.5 times the foundation footprint, with a 12,000-square-foot maximum. The footprint may include both the house and the garage, but not the driveway or patio.

Soil

- A. There shall be no less than **6 inches** of high-quality topsoil in planted areas.
- B. Topsoil shall be native soil from the site, or fertile, friable, blended soil/compost blend. Topsoil shall not be of any admixture of subsoil or slag and shall be free of stones over 1½ inches in diameter, lumps, refuse, plants or their roots, sticks, noxious weeds, salts, soil sterilant or other material that is detrimental to plant growth. If topsoil is delivered, it shall be obtained from a well-drained site that is free of flooding. Topsoil shall not be delivered or spread while in a muddy condition.
- C. Non-native topsoil shall contain not less than 25 percent organic matter (compost) that is blended through the soil.
- D. Topsoil that is added to the site shall be incorporated into the existing surface in a two- to three-inch scarified transition layer to enable water to drain adequately through the different types of soil. Do not scarify within the drip line of existing trees that are to be retained.

Irrigation

- A. Automated irrigation systems shall not be required in any new landscape. However, if irrigation is installed it shall meet the guidelines outlined in this section.
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- B. All irrigation systems shall be installed in accordance with state law, Title 2 Texas Water Code, Chapter 34, and Title 30 Texas Administrative Code, Chapter 344 rules, as regulated and enforced by TCEQ. Irrigation contractors who install the irrigation systems must be TCEQ-licensed irrigators.
 - C. Drip irrigation shall be used for all irrigated landscaped areas, excluding turf. Turf can be irrigated with drip, but drip irrigation is not required.
 - D. Areas planted with turf shall be on separate zones from areas planted with shrubs, trees or perennials.
 - E. Hydro zoning of all areas that are irrigated automatically will be scheduled with plants with similar watering needs.
 - F. All automatic irrigation systems are required to have a rain sensor, a soil moisture sensor and/or a weather sensor connected to an irrigation controller to stop the irrigation cycle during and after a rainfall event. Rain sensors are to be installed in a location where rainfall is unobstructed. Rain sensors should be adjusted at the ¼-inch setting.
 - G. Sprinkler irrigation is prohibited in median strips, parking islands and all landscape areas less than 10 feet from curb to curb or 10 feet in width. Areas less than 10 feet curb-to-curb or 10 feet in width can be irrigated with low-volume irrigation. Low-volume irrigation (subsurface drip irrigation or drip irrigation) shall be installed in long landscape strips less than 10 feet in width to avoid runoff and overspray onto the hardscape.
 - H. All new residential irrigation systems are required to have pressure regulation where static operating pressure exceeds the sprinkler manufacturer's recommended operating range to eliminate extensive misting. These may include in-line pressure regulators, flow control valves, or sprinkler devices equipped with pressure regulation stems or nozzles.
 - I. Irrigation systems are to have a controller that features multiple start times, rain sensor capability, a water budget feature, and a non-volatile memory in case of power outage.
 - J. Scheduling recommendations shall be posted inside or immediately near the controller enclosure box for easy reference.
 - K. Homeowners shall be provided with a complete irrigation plan (or as-built drawing) that describes the location of each irrigation zone, control valves, and sprinkler devices.
 - L. Sprinkler systems shall be designed with no overspray onto the hardscape.
 - M. Sprinkler zones located at the bottom of sloped terrain along curbs, sidewalks, driveways, and other hardscapes should be equipped with devices that prevent low-head drainage after the sprinkler zone is turned off. In-line check valves and sprinkler heads with check valves already installed will help prevent low-head drainage.
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Plant Choice

- A. Plants used must be native and drought tolerant.
- B. Turf grasses should be limited to low water use turfs. St. Augustine grasses should not be planted.
- C. Invasive plants shall not be used.

Plant Prepping

- A. A hole dug for the plant or tree should be two to three times wider than the container or root ball in which the plant is being stored, ensuring water is able to be absorbed by the plant's roots.
- B. The existing soil should be blended with compost before the sodding or seeding with the recommended turfgrass.

Plant Placement and Spacing

Proper plant placement and spacing is critical to plant health and long-term landscape quality. Placing plants too close to buildings can cause problems with plant disease, as well as insect and structural problems. Proper plant spacing helps ensure good air flow and room for plants to mature without crowding. Consider the mature height and width of plants before planting them.

Mulch

- A. All areas planted with trees, perennials and shrubs shall be finished with a **3 to 4 inch-deep** layer of high-quality 50/50 blend of organic mulch and compost blend.
- B. Wood chip mulch shall be clean wood chips free of man-made debris, shredded into coarse pieces ranging from 1 to 3 inches.
- C. Rock mulch shall be used in planting beds only as temporary mulch until full plant coverage is achieved, or as permanent mulch in areas with native shrubs and perennials.

Maintenance

- A. Replenish mulch/compost blend in non-turf areas every two years at a minimum. Doing so during the fall and spring is recommended.
 - B. Aerate turfgrass within the first year of construction and twice a year after that (about Oct. 1 and March 1).
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- C. Top dress turfgrass areas with quality compost twice a year (about Oct. 1 and March 1) at a depth of $\frac{1}{4}$ to $\frac{1}{2}$ inch following the aeration and drag or rake it into the canopy and aeration holes.
- D. Set the automatic irrigation system back to a normal schedule after the establishment period.

C. Appendix C – New Pool Construction Standards

- A. Private residential swimming pools shall not be installed with sand media filters.
 - B. Pool water features installed with public swimming pools or private residential swimming pools must be designed so the water feature can be turned off without affecting the filtering capabilities of the pool. Automatic pool fill features must be designed so they can be turned off in both public and private residential swimming pools.
 - C. Pools with shared water between the pool and spa shall be designed so water can be shared without the necessity of an above-ground water feature that cannot be turned off. If a water feature between the spa and the pool exists, the default setting will be for it to be turned off.
 - D. Automatic pool fill features must include an automatic pool shut-off feature.
 - E. Vanishing or negative edge pools must be designed with catch basins large enough to prevent splashing that leads to increased water use.
 - F. Backwash systems must be designed so they may be turned off.
 - G. Pool skimmers should be managed in such a way as to minimize water consumption. The range of allowable water within the skimmer fill range should allow for several inches of evaporative loss prior to filling.
 - H. All residential swimming pools shall have a hose end timer installed at the nearest hose bib location. In addition, a hose bib back-flow prevention device must be connected to the hose bib fixtures nearest to the pool.
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