

**A RESOLUTION  
APPROVING WATER CONSERVATION PLAN**

WHEREAS, Headwaters Municipal Utility District of Hays County (the “*District*”) is a conservation and reclamation district created and functioning under Article 16, Section 59 of the Texas Constitution and Chapters 49 and 54 of the Texas Water Code;

WHEREAS, the District purchases raw water from the Lower Colorado River Authority (“*LCRA*”);

WHEREAS, the District previously adopted a Water Conservation Plan;

WHEREAS, 30 TAC §288.2(c) requires a public water supplier for municipal use to review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information, and to review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group; and

WHEREAS, the Board of Directors of the District has reviewed and desires to update its Water Conservation Plan; Now, Therefore,

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF HEADWATERS MUNICIPAL UTILITY DISTRICT OF HAYS COUNTY THAT:

Section 1. The matters and facts stated in the preamble to this Resolution are hereby found to be true and correct and are incorporated as a part of this Resolution.

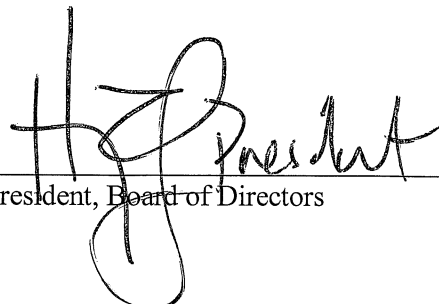
Section 2. The Board of Directors hereby adopts the updated Water Conservation Plan in the form attached hereto.

Section 3. The District’s General Manager is hereby designated the Water Conservation Coordinator responsible for implementing the District’s Water Conservation Plan.


Section 4. The District’s General Manager is hereby authorized and directed to file copies of the approved Water Conservation with TCEQ, TWDB, the Region Planning Group, LCRA and to any other group or entity with relevant jurisdiction.

Section 5. The District’s General Manager is hereby authorized take all other actions deemed necessary or convenient to the implementation of this Resolution.

PASSED AND APPROVED this 18<sup>th</sup> day of April, 2024.

  
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President, Board of Directors

ATTEST:

  
By: \_\_\_\_\_  
Name: Gray Morrow  
Title: Secretary

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WATER CONSERVATION PLAN  
for the  
HEADWATERS MUNICIPAL UTILITY DISTRICT

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July 2008  
Amended October 2022  
Amended April 2024

Prepared by:  
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and  
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## **1.0 INTRODUCTION**

The Headwaters Municipal Utility District (MUD) has developed this Water Conservation Plan (Plan) for its treated water utility systems to manage public water resources efficiently. This Plan fulfills requirements of the Texas Administrative Code (TAC), Title 30, §§288.2 regarding water conservation planning for municipal uses by public water suppliers. Appendix A provides details on how the Water Conservation Plan adheres to the TAC requirements for water conservation plans. The Plan recognizes that conservation is a valuable tool in managing water and wastewater utility systems. Water conservation can extend available water supplies; reduce the risk of shortage during periods of extreme drought; reduce water and wastewater utility operating costs; improve the reliability and quality of water utility service; reduce customer costs for water service; reduce wastewater flows; improve the performance of wastewater treatment systems; enhance water quality and protect the environment.

### **1.1 Authorization and Implementation**

The Headwaters MUD Board of Directors is authorized and directed to implement the applicable provisions of this Plan.

Further, the Headwaters MUD Board of Directors designates the General Manager to act as administrator of this Plan. The administrator will oversee the implementation of the program and will be responsible for ensuring that staff keeps adequate records for program verification.

### **1.2 Public Involvement**

This Plan is based on the *LCRA 2014 Raw Water Conservation Plan* and the *LCRA 2015 Water Conservation Plan Rules for Water Sale Contracts*.

### **1.3 Application**

This Plan applies to treated (potable) water utility systems owned and operated by the Headwaters MUD.

#### 1.4 Coordination with Regional Water Planning Groups

The service area of the Headwaters MUD is located within the Lower Colorado Regional Water Planning Area and the Headwaters MUD will provide a copy of this Plan to LCRA, the Lower Colorado Regional Water Planning Group (Region K) and applicable governmental entities.

## 2.0 DEFINITIONS

For the purposes of this Plan, the following definitions shall apply:

**Aesthetic water use:** water use for ornamental or decorative features such as fountains, reflecting pools and water gardens.

**Agriculture water use:** water use for fruit and vegetable gardens.

**Conservation:** those practices, techniques, and technologies that reduce water consumption; reduce the loss or waste of water; improve the efficiency in water use; and increase the recycling and reuse of water so that supply is conserved and made available for future use.

**Customer:** any person, company, or organization using water supplied by Headwaters MUD.

**Domestic water use:** use of water by an individual or a household to support its domestic activity. Such use may include consumption, washing, or cooking; irrigation of lawns, family garden or orchard; consumption by animals; and recreation including fishing, swimming, and boating. If the water is diverted, it must be diverted solely through the efforts of the user. Domestic use does not include water used to support activities for which consideration is given or received or for which the product of the activity is sold.

**Industrial water use:** water used in commercial processes, including commercial fish and shellfish production and the development of power by means other than hydroelectric. This does not include agricultural use.

**Landscape irrigation use:** water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-way and medians.

**Livestock water use:** water used for the open-range watering of livestock, exotic livestock, game animals or fur-bearing animals. For purposes of this definition, the terms "livestock" and "exotic livestock" are to be used as defined in § 142.001 of the Agriculture Code, and the terms "game animals" and "furbearing animals" are to be used as defined in §63.001 and §71.001, respectively, of the Parks and Wildlife Code.

**“New landscape” means:**

- a. Installed during construction of a new house, multi-family building, or commercial building;
- b. Installed as part of a governmental entity’s capital improvement project; or
- c. Alters more than one-half of the area of an existing landscape.

**Non-essential water use:** water uses that are not essential or are not required for the protection of public health, safety and welfare, such as:

- a. Irrigating landscape areas, including parks, athletic fields, and golf courses, except for as otherwise provided under this Plan;
- b. Washing any motor vehicle, motorbike, boat trailer, airplane, or other vehicle;
- c. Washing any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
- d. Washing buildings or structures for purposes other than immediate fire protection;
- e. Flushing gutters or permitting water to run or accumulate in any gutter or street;
- f. Filling, refilling, or adding to any indoor or outdoor swimming pools or Jacuzzi-type pools;
- g. Filling a fountain or pond for aesthetic or scenic purposes except when necessary to support aquatic life; and
- h. Failure to repair a controllable leak within a reasonable period after having been directed to do so by formal notice.

Use of water for agriculture or livestock is not included in the definition of “non-essential water use.”

**Retail Water Customer:** an individual or entity that purchases water from an LCRA water utility for its consumption.

**Wholesale Treated Water Customer:** an individual or entity that purchases raw water from LCRA to sell to the public for consumption.

### 3.0 WATER CONSERVATION PLAN

#### 3.1 Service Area Characteristics and Goals

The Headwaters MUD Water System provides retail water service to the following number of service connections separated by type:

- 695 residential connections
- 1 Amenity Center
- 1 Multi Family (248 Apartments)
- 1 Office Park
- 5 irrigation connections

Based on the April 2024 population estimates provided by the District Operator the estimated population served is 2,333.

The two-year average for total gallons per capita per day water use (GPCD) was 162 which includes both wholesale and retail treated water customers. Of the 162 GPCD, approximately 14 GPCD was attributable to unbilled water in 2023 (*e.g.*, losses, waterline & hydrant flushing, *etc.*), or 8.5 percent of total water use.

The Headwaters MUD is supplied wholesale potable water by the West Travis County Public Utility Association (WTCPUA) via a connection the WTCPUA 24" water main located on the north side of SH 290. At full buildout of the Headwaters MUD approximately 1,400 LUEs of potable water service will be provided to retail customers within the MUD.

The water demands in this region can and often triple during the summer months due to water for outdoor irrigation purposes. With this in mind, the Headwaters MUD has focused its conservation and demand management measures on outdoor water use and will continue to expand this effort to meet the growing need for water in this system.

Wastewater System Data for Headwater MUD is as follows:

- Average Monthly Wastewater Flows for Previous 3 Years – 2,330,000 gallons
- Average Daily Wastewater Flows for Previous 3 Years – 77,664 gallons
- Peak Monthly Wastewater Flows for Previous 3 Years – 3,598,000 gallons
- Peak Daily Wastewater Flows for Previous 3 Years – 116,056 gallons
- Percentage of Water Service Connections Using Private Sewage Facilities (as of the adoption of this plan) – 0%

The wastewater treatment plant has been constructed to a current capacity of 260,000 gallons per day. Disposal fields have been constructed for a current capacity of 150,000 gallons per day and there is a future phase currently under construction to extend this capacity in accordance with the TCEQ WWTP and TLAP Permits. At full permit capacity the WWTP and TLAP authorize a treatment and disposal capacity of 325,000 gallons per day.

### **3.2 Water Conservation Goals**

In accordance with Title 30 TAC, Chapter 288 rules, water conservation plans must have specific, quantified goals for municipal use in gallons per capita per day (GPCD). Water conservation goals for the Headwaters MUD were established in 2008 using projected data available at that time.

Conservation goals for the Headwaters MUD have been set for three metrics:

1. Total unit water use reduction (GPCD)
2. Peak day demand reduction (peak day/average day)
3. System-wide water loss reduction.

The five-year total unit water use reduction goal is five percent (5%), or a unit usage of 154 GPCD. The 10-year goal for total unit water use reduction is an additional five percent (5%), or a total unit usage of 146 GPCD.

The five-year, peak day demand reduction goal is ten percent (10%) or a peak day/average day ratio of 1.84. The ten-year goal for peak day demand reduction is an additional five percent, or a peak day annual average ratio of 1.75.

The water loss reduction goal is five percent (5%), or a total water loss 8.1% compared to a total water loss of 8.5% in 2023.

### **3.3 Water Conservation Strategies**

The water conservation strategies to meet these goals include measures to decrease outdoor water use, which will decrease overall water use and peak day demands, and strategies to reduce system-wide water loss. Additional strategies include expanded public education and outreach efforts.

#### ***3.3.1 Watering Schedule***

In October 2014, the WTCPUA Board approved a plan to adopt a year-round, mandatory twice-weekly watering schedule for the West Travis County Regional Water System, to conserve water, and lower daily peak demand at the water treatment plant. As a wholesale customer of the WTCPUA, the Headwaters MUD is subject to this watering schedule.

This schedule assumes an application rate of one inch of water per week in two half-inch applications. According to research, one inch of water per week is sufficient to sustain most residential lawns and landscapes. However, multiple applications on yards of shallow soil depth allow for less runoff and improved soil retention.

#### ***3.3.2 Increasing Block Water Rates***

The Headwaters MUD Water System has a multi-tiered, increasing block water rate that reflects the cost drivers for the water system. Copies of the complete rate order for this system are available on the Crossroads Utility Services website.

**3.3.3 LCRA WaterSmart Rebates Program**

The Headwaters MUD promotes LCRA's WaterSmart Rebates Program, which can help offset the cost of upgrading irrigation systems and maintaining landscapes and pools to help customers save water and money. LCRA provides rebates of 50 percent of the total cost, or up to \$600 per residential property, for irrigation evaluations, retrofitting or replacing irrigation system equipment, new pool filters and covers, aeration, compost, and mulch.

**3.3.4 Conservation Landscape Best Management Practices**

The Headwaters MUD reviews all applications for irrigation meters to ensure meters are sized correctly and best management practices (BMP) are followed.

**3.3.5 Water Loss**

The Headwaters MUD has experienced rapid growth. In such systems, water loss typically occurs from construction flushing and theft. In addition, additional flushing is needed to maintain water quality in dead-end lines. The Headwaters MUD evaluates the water losses for our systems and determines the best corrective actions to minimize those losses, which can include monthly audits and can include monthly audits or periodic inspections along distribution lines.

**3.4 Adoption of Plan**

Formal adoption of the Water Conservation Plan will be by a resolution from the Headwaters Municipal Utility District Board of Directors.

## **4.0 ADDITIONAL WATER CONSERVATION STRATEGIES**

### **4.1 Water Monitoring and Records Management**

The Headwaters MUD maintains records of water distribution and sales through a central customer consumption tracking and billing system. The billing system provides a way to compile, present, and view water-use and billing information.

### **4.2 Water Metering**

As a wholesale customer of the WTCPUA, the Headwaters MUD is required to abide by the WTCPUA Water Contract Rules which require all water meters to be accurate within plus or minus 5 percent of the indicated flow over the possible flow range. The meters are read on a monthly basis and must be calibrated annually.

The Headwaters MUD follows metering, leak detection, and repair requirements as stated in the LCRA *Water Conservation Plan Rules*.

The water use of all retail customers is metered. A regularly scheduled maintenance program of meter repair and replacement is performed in accordance with the manufacturer's recommendations.

### **4.3 Wholesale Water Conservation Plans**

As a wholesale treated water customer of the WTCPUA, the Headwaters MUD must develop a water conservation plan in accordance with LCRA *Water Contract Rules*. The plan 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.

### **4.4 Education and Outreach**

#### **4.4.1 Water Conservation Public Awareness Program**

WTCPUA, the wholesale treated water provider to the Headwaters MUD, posts its Water Conservation and Drought Contingency Plan, Water Conservation Tips and the LCRA WaterSmart Rebates program on its web site to promote and ensure customer awareness of water conservation. The Headwaters MUD also promotes water conservation through customer communications that include but are not limited to notifications within regular mailings, physical signage postings, and through the MUD operator's website.

#### **4.4.3 WaterSmart Landscaping for Central Texas**

The Headwaters MUD promotes the LCRA WaterSmart landscape guidelines to help homeowners and homebuilders create well-designed, water-efficient landscapes.

## **Appendix A – Adherence to TCEQ Chapter 288 Rules**

As a municipal water supplier, the minimum requirements in the Texas Administrative Code for water conservation plans for municipal uses by public water suppliers are covered in this Plan as follows:

- 288.2 (a)(1)(A) – Utility Profile – Section 3.1
- 288.2 (a)(1)(C) – Specific, Quantified Five- and Ten-Year Goals – Section 3.2
- 288.2 (a)(1)(D) – Measure and Account Water Diverted – Section 4.1, 4.2
- 288.2 (a)(1)(E) – Universal Metering – Section 4.2
- 288.2 (a)(1)(F) – Measures to Determine and Control Unaccounted-for Uses of Water – Section 4.2
- 288.2 (a)(1)(G) – Continuing Public Education and Outreach – Section 4.4
- 288.2 (a)(1)(H) – Rate Structure that is not Promotional – Section 3.3.2
- 288.2 (a)(1)(I) – Reservoir Systems Operation Plan –Water Management Plan.
- 288.2 (a)(1)(J) – Means of Implementation and Enforcement – Section 1.1, 1.6
- 288.2 (a)(1)(K) – Coordination with Regional Water Planning Group(s) – Section 1.4
- 288.2 (a)(3) – Additional Conservation Strategies – Section 4.4