City of Rollingwood Water Conservation Plan

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1. Introduction

The City of Rollingwood water conservation plan has been developed to meet the LCRA Water Conservation Plan Rules for Water Sale Contracts in accordance with the LCRA Water Contract Rules. This 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.

This plan applies to all of the City of Rollingwood's retail water customers located within its water service area, as defined in its Water Supply Contract with LCRA.

2. Utility Profile Information

As of April 2025, there were approximately 625 connections in the City of Rollingwood's water service area. There were 539 residential connections and an estimated population of 1,447. The City of Rollingwood is fully built out. The City does not operate a wastewater treatment plant.

Table 1 in Appendix A provides tables on water use data for the past five years. The five-year average daily water use was 462,491 gallons. The five-year average water loss was 44,913,820 gallons. The five-year average per capita water use is 316 total gallons per person per day (GPCD) and 184 residential GPCD.

3. Water Conservation Goals

Water conservation 5- and 10-year goals are required for overall water use, residential water use, and water loss. The goals proposed by the City of Rollingwood are as follows:

	5-year goals	10-year goals
Gallons per person per day (GPCD)	301	286
Residential gallons per person per day (rGPCD)	175	166
Water loss (in GPCD)	81	77

4. Water Conservation Strategies

4.1 Water Loss

4.1.1 Universal Metering and Meter Replacement and Repair - Required

The City of Rollingwood requires all water meters 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 once a year
Meters 1 inch or smaller:	Test per manufacturer's recommendations

Zero consumption accounts will be checked to see if water is being used or not recorded. In addition, the meters will be checked for proper sizing.

4.1.2 Distribution System Leak Detection and Repair- Required

The City of Rollingwood will conduct leak detection and water audits, making appropriate repairs, in order to meet the utility water loss goal. Water loss audits will be performed in accordance with Texas Water Development Board rules and the City of Rollingwood 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)

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

____ All meters are compatible with automatic reading capabilities. The City of Rollingwood has implemented automated meter reading (AMR) and receives monthly water use data by driving the service area.

_____ The City of Rollingwood is in the process of converting to automated meter infrastructure (AMI), which is scheduled to be complete in 20XX.

__X__ All meters are read automatically using automated meter infrastructure (AMI) and the City of Rollingwood receives real-time water use data.

__X__ The City of Rollingwood staff send leak alerts to customer using AMI data reports.

__X__ A customer portal allows end users to check their water use online.
__X__ Adoption of TWDB Municipal BMP 9.1 Prohibition on Wasting Water.
_____ A requirement for submeters for irrigation for all new commercial and industrial customers.
_____ A requirement for submeters for irrigation for all new residential properties.
_____ 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 creating loops in the water distribution lines.
_____ As feasible, chlorine injection stations will be placed strategically throughout the development 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 - Required

4.2.1 Increasing Block Rates

The City of Rollingwood 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 City of Rollingwood 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 City of Rollingwood'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)

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

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.

____ 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.

_X_ Adoption of a method for monitoring and evaluating the effectiveness of conservation measures by installing electronic meters with advanced metering infrastructure (AMI) that monitors water usage in real time.

4.3 Permanent Watering Schedule - Required

During the months of October through April, customers are encouraged to limit irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems to twice a week between the hours of midnight to 10:00 a.m. and 7:00 p.m. to midnight according to the following schedule:

- Even-numbered addresses are allowed lawn watering two days per week, on Tuesday and Friday.
- Odd-numbered addresses are allowed lawn watering two days per week, on Monday and Thursday.
- The watering of nonestablished trees, shrubs and bushes will be accomplished on the same days.
- If there is no street address associated with the property, such as a parkway, or if there is more than one street address associated with a single contiguous property, the irrigation days are Wednesday and Saturday.

During the months of May through September, customers are encouraged to limit irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems to once a week between the hours of midnight to 10:00 a.m. and 7:00 p.m. to midnight according to the following schedule:

- If the last digit of the address ends in zero or nine, the irrigation day is Monday.
- If the last digit of the address ends in one or eight, the irrigation day is Tuesday.
- If the last digit of the address ends in two or seven, the irrigation day is Wednesday.
- If the last digit of the address ends in three or six, the irrigation day is Thursday.
- If the last digit of the address ends in four or five, the irrigation day is Friday.

4.4 Water Reuse – Required to address applicability, if relevant

Alternative water supplies such as reuse, greywater, or rainwater harvesting were considered during the preparation of this plan. Due to the City's lack of wastewater treatment infrastructure and land use characteristics, these alternatives are not applicable at this time.

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
____ Irrigation of athletic fields (list names and acreage_____)
____ Irrigation of parks (list names and acreage_____)
____ Irrigation of golf courses (list names and acreage_____)
____ Other (please list _____)

The treated wastewater effluent currently produced is 519,066 gallons per day and 0% of that effluent is used for the irrigation uses listed above.

The City of Rollingwood does not have reuse infrastructure.

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 City of Rollingwood's 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)
(Not required by LCRA, but highly encouraged. Please check all that apply.)

____ Irrigation system evaluations will be offered to customers with large landscape irrigation needs in the utility service area following TWDB Municipal BMP 5.5 Residential Landscape Irrigation Evaluations and offered and actively marketed individually to all customers using over 25,000 gallons per month during peak irrigation months. 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 City of Rollingwood will assist LCRA with promoting water conservation programs to its customers.

_____ Consideration of TWDB Municipal BMP 5.3 Landscape Irrigation Conservation and Incentives, as applicable.

_____ Consideration of TWDB Municipal BMP 9.2 Conservation Ordinance Planning and Development.

_____ 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.

_____ Landscape conservation standards for new development. The City of Rollingwood 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.

_____ The City of Rollingwood will adopt TWDB Municipal BMP 9.3, Enforcement of Texas Irrigation Standards.

_____ Swimming pool conservation standards for new development. The City of Rollingwood will incorporate standards included in Appendix C of this plan into its adopted rules and regulations.

_____ A requirement for submeters at every residential property for new development.

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 - Required

The service area of the City of Rollingwood 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 water conservation 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

This Water Conservation Plan has been formally adopted by the City of Rollingwood City Council via Ordinance No. 2025-06-25-01 on June 25, 2025, in accordance with City Code §103-50.
The general manager, or his/her designee, of the City of Rollingwood 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 City will evaluate the effectiveness of this plan annually by tracking changes in GPCD, customer leak notifications, participation in conservation programs, and annual water loss audit results. Metrics will be used to adjust strategies as needed.

The City of Rollingwood has designated a water conservation coordinator, who will be responsible for the implementation of this water conservation plan. The current water conservation coordinator is Mayor Gavin Massingill. The general manager, or his/her designee, may re-appoint this position. At that time, the City of Rollingwood will inform LCRA about this personnel change.

Approved by: _____ (print name)

8. LCRA Progress Reporting and Plan Updates

The City of Rollingwood agrees to comply with LCRA Water Conservation Plan Rules, Section 8.2, by submitting an annual progress report using forms provided by LCRA. These reports will assess the implementation status and performance of the conservation measures outlined in this plan. Reports will be submitted within 30 days of request, and the plan will be reviewed and updated at least once every five years or sooner if required by LCRA or upon material changes to water use patterns.

Signature:_____ Date: _____

(Customer representative with enforcement authority)

Appendix A – Historical Water Use Data – Table 1

Table 1: Monthly Water Use

Month	2020 (Gallons)	2021 (Gallons)	2022 (Gallons)	2023 (Gallons)	2024 (Gallons)	Average (Gallons)
January	8,118,200	5,704,400	68,024,000	7,520,300	7,572,400	19,387,860
February	6,136,800	5,572,400	6,897,000	111,207,165	8,057,600	27,574,193
March	6,665,600	7,558,000	9,991,000	10,023,400	9,973,600	8,842,320
April	7,718,400	5,927,700	12,433,200	5,265,100	10,418,300	8,352,540
May	11,111,700	6,643,700	14,866,000	6,428,700	11,149,000	10,039,820
June	13,573,600	9,222,400	19,343,000	9,717,500	14,681,000	13,307,500
July	18,055,000	11,299,600	21,209,000	13,385,700	16,510,600	16,091,980
August	17,840,000	13,433,700	19,127,000	15,995,300	19,547,400	17,188,680
September	13,129,900	11,957,400	17,746,900	13,097,300	18,532,300	14,892,760
October	15,212,000	10,753,500	15,018,500	8,955,600	19,495,800	13,887,080
November	11,797,300	8,512,000	9,861,400	10,046,500	12,474,600	10,538,360
December	8,949,200	7,098,700	8,701,100	9,853,600	8,928,000	8,706,120
Total	138,307,700	103,683,500	223,218,100	221,496,165	157,340,600	168,809,213

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 sterilants 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.

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. Hydrozoning 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.

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 **2- 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).

C. Topdress turfgrass areas with quality compost twice a year (about Oct. 1 and March 1) at a depth of ¼ to ½ 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.

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.
I. All residential swimming pools shall be installed with a permanent automatic pool cover to minimize evaporative loss when not in use.

Exhibit F