

May 2, 2024 Austin City Council Agenda

File #: 24-4419, Agenda Item # 5 - REVISED EXHIBIT A BACKUP

Agenda Item 5 - Approve a resolution adopting the Water Conservation Plan, as required by the Texas Commission on Environmental Quality, and repealing Resolution No. 20190411-002, which adopted the Utility Profile & Water Conservation Plan for Municipal and Wholesale Water Use. Related to Item #6.

Errata from Austin Water to Resolution Exhibit A as of 4/30/2024

Changes to Exhibit A “City of Austin Water Conservation Plan” previously posted on 4/19/2024

- Page 11, Table 1 heading – delete “and estimate water savings”
- Page 23, 2nd paragraph, last sentence – replace “And 12 additional.9 miles” with “An additional 12.9 miles”.
- Page 33, ANNUAL WATER USE FOR THE TOP FIVE HIGHEST VOLUME RETAIL CUSTOMERS IN 2023 table – replace column heading “Usage (1,000 gallons/year)” with “Usage (gallons)”.
- Page 36, HISTORICAL WATER SALES (GALLONS) table – replace volumes with those listed below:
 - 2019, Residential - 24,625,694,500
 - 2023, Residential – 27,809,231,000
 - 2023, Single-Family – 16,058,699,400
 - 2023, Multi-Family - 11,750,531,600
 - 2023, Commercial – 11,529,513,600
 - 2023, Industrial (Large Volume) - 3,607,375,300
 - 2023, Institutional – 1,125,001,500
 - 2023, TOTAL - 46,802,751,563



CITY OF AUSTIN WATER CONSERVATION PLAN

Developed to Meet Requirements Outlined in 30 TAC §288.2 and §288.5



May 2, 2024

DRAFT

Message from the Director

Thank you for your interest in Austin's most precious natural resource: water. The city was founded in the mid-1800s on the banks of the Colorado River to take advantage of that abundant water resource. Our water supply is just as critical today, but now we face unprecedented challenges: record high temperatures, record low flows into the Highland Lakes, water quality concerns, and continued rapid population growth.

Together, we can meet these challenges. The City of Austin's 100-year Water Forward Integrated Water Resources Plan is focused on water conservation and water use efficiency, as well as strategies to strengthen the diversity of Austin's water supply. Austin has come a long way over the last decade – in 2023, we used essentially the same amount of water as we did in 2011, despite having 140,000 more residents. But the impacts from climate change require us to become even more water-wise and water-efficient.

The update of this Water Conservation Plan is required by the State of Texas every five years to provide short-term strategies to address changing conditions. Even more importantly, the update is a necessary part of the city's future sustainability. This document describes Austin Water's conservation initiatives, programs, and projects to help residents and businesses increase their water use efficiency. In addition, it describes how Austin Water is maximizing our water supply from the Highland Lakes through conservation and water reuse. Learn more about what you can do to conserve our most precious resource at [AustinWater.org](https://austinwater.org).

A handwritten signature in black ink that reads "Shay Ralls Roalson".

Shay Ralls Roalson, P.E.
Austin Water Director

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Executive Summary

The Texas Commission on Environmental Quality and the Texas Water Development Board require an update to the City of Austin's Water Conservation Plan every five years. This document outlines Austin Water's water conservation goals and how these goals will be met, implemented, and enforced by the City.

Since 1983, Austin Water (AW) has a strong history of adopting and implementing water conservation strategies to meet the growing and dynamic challenges of Austin's water needs. These include rapid population growth, increasing frequency of extreme weather events due to climate change, and periods of ongoing drought. Current water conservation activities include incentive programs for residential, commercial, and multi-family customers; commercial regulatory programs; water-use restrictions; water reuse; and water loss control.

Current incentive programs offered to residential customers include rebates for ten different indoor and outdoor water conservation activities. The most popular are rainwater harvesting, drought survival tools, irrigation upgrades, and waterwise landscape conversion. AW offers similar incentives for the commercial and multi-family sector, but the most utilized program with the greatest savings for these customers is the performance-based incentive, Bucks for Business.

While incentive programs encourage customers to partner with AW to save water, mandatory water use requirements result in the greatest savings. In 2012, the City of Austin adopted updates to the Water Conservation Code, including the establishment of several commercial water-use assessment programs for facilities with irrigation systems, vehicle washes, and cooling towers. Also included in these updates was the adoption of outdoor watering restrictions. In 2016, outdoor watering became permanently limited to once-a-week watering for automatic irrigation and twice a week for hose-end sprinklers. Figure 1 illustrates the effect watering restrictions have had on lowering the increase in water consumption relative to population growth. However, recent years with very hot and dry summers, show an increase in water consumption relative to population growth.

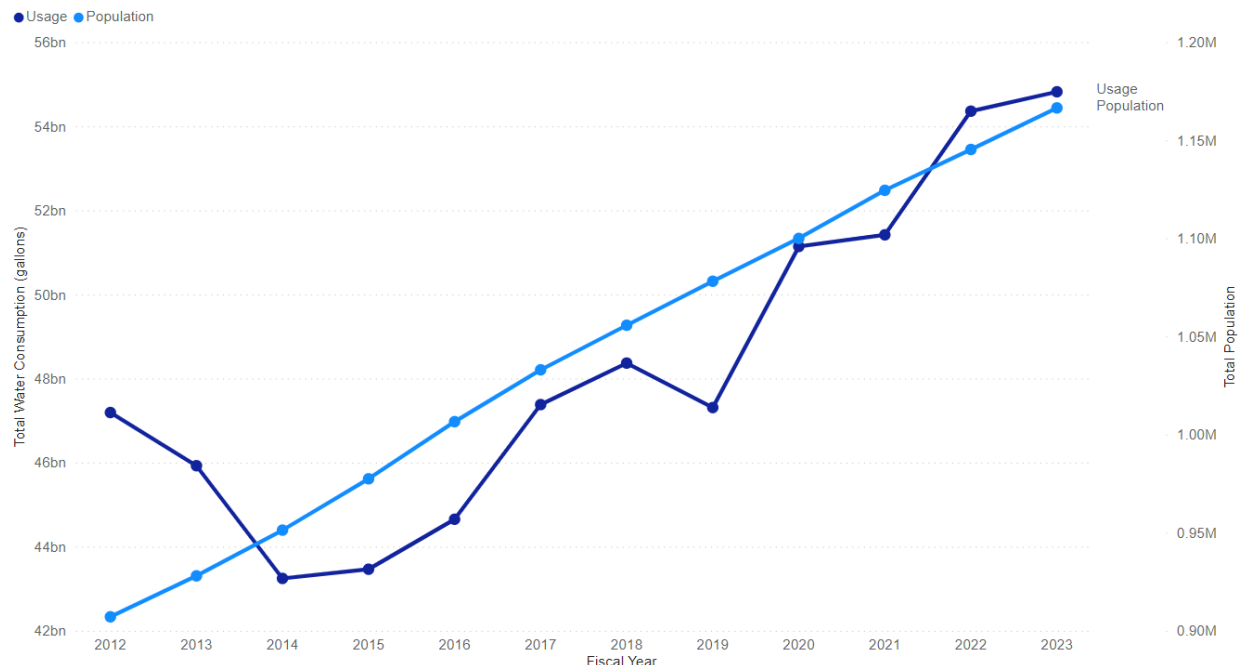
First offered by AW in 1974, reclaimed water helps provide a low-priced source of non-potable water. At present, over 170 metered customers use more than 1.4 billion gallons of reclaimed water annually for the irrigation of golf courses, ballfields, parks, and commercial properties, as well as for cooling towers, manufacturing processes, and toilet flushing. In 2021, the City of Austin began requiring development projects within a specified distance from reclaimed water lines to connect to the system and use reclaimed water for various significant non-potable water uses. Beginning in March 2024, AW launched a new GoPurple program to increase use of reclaimed in and around Austin to make water usage more sustainable. Austin City Council approved additional requirements for large developments to connect to the reclaimed system or develop onsite water reuse systems.

To help manage water loss from leaks and aging infrastructure, AW conducts annual water loss audits. Other efforts to control water loss include AW's use of acoustic technology to inspect over 500 miles of water lines annually, implementation of "Renewing Austin" to replace aging water lines, and the full-scale deployment of the My ATX Water advanced metering system. AW has also contracted a water loss consulting firm to review the utility's water loss program, validate system input volume and meter accuracy, and provide recommendations for improvements.

Beginning in 2020, the My ATX Water program has been replacing analog water meters with more accurate digital meters, offering water savings through leak notifications, customer awareness about water use, and the opportunity for the implementation of heightened water loss strategies in the future. By the end of 2024, the My ATX Water meter replacement program will be complete.

As one of the fastest-growing metropolitan areas in the nation, Austin faces unique challenges to its water supply. Austin has successfully reduced peak water demand and delayed triggering renewal of the Lower Colorado River Authority contract for over 10 years, resulting in numerous benefits to AW and cost savings to its customers. This success has been achieved due to the development, adoption, and implementation of innovative water conservation strategies.

FIGURE 1. AUSTIN WATER RETAIL POPULATION SERVED AND WATER CONSUMPTION



AW prepared this Water Conservation Plan and Utility Profile for Municipal and Wholesale Water Use to comply with Title 30 Texas Administrative Code §§ 288.2 and 288.5. This plan provides an overview of Austin's current and future water conservation initiatives within the framework recommended by forms TCEQ-10218 and 20162. In addition, the utility profile is used to convey information about the City of Austin's water and wastewater system to the Texas Commission on Environmental Quality (TCEQ). A checklist of the Stage-required components for a Water Conservation Plan is provided in Appendix A.

Conservation Program History

Austin's water conservation program was established in 1983 in response to the adoption of an ordinance allowing the City to implement temporary water use restrictions to address increasing infrastructure constraints. At that time, Austin primarily utilized water demand management as a crisis response tool rather than an ongoing conservation strategy. Since then, and as water demand increased with significant population growth and development, Austin shifted its focus to using water conservation measures as a means of extending the available water supply, lowering greenhouse gas emissions, and extending infrastructure capacity.

Initially, Austin's conservation program focused on rebates and incentives to achieve high volumes of water savings and to provide customers with education about water use. Over time, certain measures such as toilet retrofits and clothes washer rebates reached market saturation and were phased out. Other major milestones for Austin's conservation program include:

2007 – Austin strengthened and prioritized its conservation focus with the adoption of strategies recommended by a City Council-created water conservation task force aimed at reducing peak day water use by one percent per year for ten years. These strategies were anticipated to result in a 25-million-gallon-per-day reduction from peak use by 2017.

2010 – A second task force proposed additional water use reduction measures beyond the 2007 recommendations. This led to City Council adoption of a resolution to reduce water use to no more than 140 gallons per capita per day by 2020.

2012 – The City's Conservation Code was repealed and replaced, restricting outdoor watering to twice a week and establishing commercial assessment programs.

2016 – The City's Conservation Code was again revised following years of drought, restricting automatic irrigation to once a week. During this period, auxiliary water ordinances and Plumbing Code revisions were implemented to improve fixture efficiencies and offset potable water consumption.

2018 – The Austin City Council adopted the 100-year Water Forward Integrated Water Resources Plan. The plan is updated every five years and serves as a demand management strategy roadmap for water conservation.

2020 – The City adopted an ordinance to regulate the collection, treatment, and use of alternative water sources for non-potable uses in multi-family and commercial buildings.

Austin continues to explore innovative ways to leverage existing and new technologies to better inform customers, conduct analysis, and achieve water-savings breakthroughs. The new My ATX Water smart meters, digital rebate application forms, and alternative water technologies are helping advance water conservation in Austin to a level never imagined in 1983.

In addition to this Water Conservation Plan, water conservation efforts integral to City planning efforts include:

Water Forward Integrated Water Resource Plan: Water Forward is Austin's 100-year integrated water resource plan. It's an adaptive plan updated on a 5-year cycle, evaluating water supply and demand management strategies for the City of Austin within a regional water supply context. A significant portion of near-term strategies include conservation activities. The initial Water Forward Plan was adopted in 2018 and is currently being updated, with completion anticipated by the end of 2024.

Austin Climate Equity Plan: Austin's Climate Equity Plan was created with input from nearly 200 community members and focused on engaging racially and economically diverse residents about challenges, barriers, and opportunities facing historically excluded groups. A goal for sustainable buildings is to achieve a community-wide water demand of 152,000 acre-feet per year by implementing strategies outlined in the Water Forward Plan.

Drought Contingency Plan: The state-mandated Drought Contingency Plan specifies how the City will respond and manage the water system during drought, as well as during demand or infrastructure events that constrain water supply. The most recent plan was approved in conjunction with the Water Conservation Plan in 2024 (See Appendix B).

Public Education and Information

With one of the most extensive water conservation programs in the nation, AW plays a leadership role at the regional, state, and national levels, sharing experiences and resources with other water providers to promote conservation innovation and effectiveness. AW utilizes public education and community outreach to encourage participation in water conservation programs and incentives, as well as to raise awareness about water use restrictions.

Community Events & Education Programs

AW offers the Dowser Dan School Assembly Program, a musical and theatrical program targeting kindergarten through fourth-grade students in public and private schools served by AW. Since 1990, this program has been a valuable resource for teachers, reaching hundreds of thousands of students in Austin and surrounding communities with educational content about how to conserve water through everyday actions. Although requests for in-person presentations declined during the global pandemic, 2023 saw a resurgence in requests for Dowser Dan performances. During the period of decreased in-person assemblies, AW kept Dowser Dan and his message of water conservation relevant by producing several music videos and downloadable educational worksheets, which are available online and distributed via AW social media channels. These resources remain available for teachers and parents to share with students and families in our community.

In 2015, the Texas Colorado River Rolling Exhibit, also known as the Mobile River, was developed, and launched in partnership with the Austin Independent School District, AW, and the Colorado River Alliance. Housed inside a 40-foot trailer, the Mobile River functions as a mobile science museum featuring interactive exhibits and hands-on activities targeted at middle school-aged students. The program is still active and popular at community events throughout the Austin area and the Lower Colorado River basin.

AW also participates in community festivals, school events, and informational fairs, providing knowledgeable staff to answer common questions and materials to promote water conservation. In 2009, AW developed a Water Conservation Speakers Bureau to provide presentations to local organizations on topics such as conservation, irrigation, leak detection, and water waste.

Advertising and Marketing

Marketing and advertising campaigns are used to disseminate information about water conservation programs, rebates, and incentives through newspaper, radio, and television outlets; websites; and social media platforms. Local celebrities have appeared in several television and radio commercials to promote watering restrictions and discourage water waste. Additionally, information is provided directly to customers through messaging on customer bills and the City of Austin Utilities Now! newsletter.

AW has implemented branded templates for conservation program applications and informational materials to provide consistency and improve readability. Clear information about program requirements and checklists were developed to help customers meet all program requirements. A key strategy implemented in 2023 was converting all applications for conservation rebates and programs to online fillable forms. These improvements benefit customers and help AW staff more efficiently process applications. All forms and program information are available on the AW website.

AW uses its My ATX Water customer portal and its social media platforms such as Facebook, Instagram, YouTube, and NextDoor to share conservation messaging and program information to the community on a weekly basis and monitor engagement. Graphics, photography, and videos enhance messaging and increase engagement.

Workshops and Presentations

AW provides both in-person and virtual educational workshops about water conservation and available programs at no cost. These are adapted to the specific needs of residential and commercial customers. Beginning in 2024, AW will introduce on-demand videos designed to help residential customers efficiently manage their irrigation controllers, detect toilet leaks, and navigate the online billing portal.

The WaterWise Irrigation Professionals Seminar includes information on water-efficient irrigation systems, water conservation programs, the mandatory watering schedule, electrical troubleshooting, irrigation auditing, and turf grass watering requirements. This seminar provides continuing education credits toward license renewal for irrigation professionals.

AW actively participates in the Central Texas Water Efficiency Network, a coalition of regional water agencies and advocacy groups that meet to share information and promote water efficiency education, legislation, programs, and technologies. This network organizes the annual Central Texas Water Conservation Symposium, a one-day regional event aimed at providing conservation education to over 100 water professionals.

Residential Customer Programs

Digital Garden Hose Meters and Sunlight Calculators

AW has partnered with the Austin Public Library to provide digital garden hose meters and Sunlight Calculators through the library check-out system. The meters, which attach to standard outdoor hoses, spray nozzles, and faucets, enable customers to track their water usage for activities such as watering lawns and washing cars and adjust to conserve. Sunlight calculators determine daylight levels in specific areas outdoors so that appropriate plants can be selected and placed to minimize water consumption.

Household Material Distribution

AW distributes complimentary water-saving tools to residents and households served by AW's wholesale water customers. These include showerheads, kitchen/bathroom aerators, soil moisture meters, toilet leak detection tablets, and a "Practical Plumbing Handbook." Historically, customers were required to pick up the items at AW's headquarters. However, due to challenges posed by the COVID-19 pandemic, participation declined. Beginning in May 2023, materials are now mailed directly to eligible customers, which has resulted in a surge of participation of over 600 percent.

TABLE 1. HOUSEHOLD MATERIAL DISTRIBUTION

Historical program performance

Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021	Fiscal Year 2022	Fiscal Year 2023
1,479 items	95 items	74 items	780 items	5,923 items

Residential Irrigation Audits

AW offers a free irrigation system evaluation to residential customers who experience unusually high-water bills. To qualify, customers must exceed 25,000 gallons of water used in one month or 20,000 gallons for two consecutive months. The residential irrigation audit, conducted by a licensed irrigator from AW, involves examining the system in operation to identify leaks, assess water application rates, and ensure adequate coverage. The irrigator also assists in establishing an efficient watering schedule and making controller adjustments. Finally, the evaluation includes an assessment of equipment adequacy and recommendations for component replacement if necessary.

In Fiscal Year 2023, the number of requests for residential irrigation audits declined substantially. This reduction corresponds with a rise in telephone and online assistance, where customer service staff supported customers through the online My ATX Water customer portal to assess their irrigation system. The new portal provides insights into irrigation usage frequency and the volume of water consumed per irrigation cycle.

TABLE 2. RESIDENTIAL IRRIGATION AUDITS

Historical program performance and estimated water savings

Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021	Fiscal Year 2022	Fiscal Year 2023	Estimated Water Savings
214 audits	234 audits	122 audits	215 audits	140 audits	30,331 (gallons per year per audits)

Plumbing Program

For over a decade, AW has been helping customers in need with assistance with plumbing repairs. In 2019, AW partnered with the Austin Housing Department's Go Repair! program to support eligible low-income customers of AW by covering qualified large and costly repairs. Repairs covered as part of this program include toilets, showers, plumbing, sinks, and faucets.

In 2022, the Go Repair! plumbing component became a stand-alone program, entitled the Plumbing Program, administered by the Austin Housing Department and funded by AW. The program can be combined with other assistance programs, can fund larger and costlier repairs, and offers broader eligibility requirements to provide greater assistance to eligible low-income customers. To be eligible, customers must have an AW account, maintain an income less than or equal to 100% of Austin's Median Family Income, and reside in a single-family home or duplex.

TABLE 3. GO REPAIR! AND PLUMBING PROGRAM

Historical number of homes that received repairs.

Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021	Fiscal Year 2022	Fiscal Year 2023
18	55	40	20	11

Austin Energy All-Star Conservation Kits

As a participant in this program since 2022, AW offers energy-saving and water-saving tips and products to educate 6th-grade students within the Austin Energy service area about conservation. This educational initiative involves in-class curriculum and take-home kits provided to teachers, students, and their families at no expense.

Residential Incentive Programs

AW provides opportunities for customers to offset costs and conserve water through rebates and incentives. These programs aim to motivate eligible customers to adopt water-saving measures such as installing high-efficiency fixtures, enhancing the effectiveness of existing irrigation systems, and rainwater harvesting.

Irrigation Upgrade Rebate

Homeowners can receive incentives of up to \$1,000 to upgrade irrigation systems to reduce water usage and waste. Eligible upgrades include rain/soil moisture sensors, pressure reduction valves, and converting from spray to multi-stream multi-trajectory rotor nozzles.

Landscape Survival Tools

Rebates are offered to homeowners for water-saving items such as mulch, compost, and core aeration services to facilitate moisture retention, nutrient replenishment, and turf grass health.

Laundry to Landscape

Homeowners can receive incentives of up to \$150 for installing a laundry-to-landscape system, which allows the reuse of graywater from laundry activities for landscape irrigation.

Pressure Regulating Valves

A rebate of up to \$150 is offered for the purchase and installation of pressure regulating valves to reduce indoor water pressure and prevent water waste and damage to pipes and fixtures.

Pool Cartridge Filter Rebate

Homeowners can receive up to \$250 for replacing a sand or diatomaceous earth pool filter with a cartridge pool filter that requires less frequent backwashing.

Pool Cover Rebate

An incentive of up to \$200 is offered towards the purchase of a new swimming pool cover to reduce water loss due to evaporation.

Rainwater Harvesting Rebate

Homeowners can receive an incentive of up to \$5,000 for the installation of rainwater collection tanks to supplement or offset reliance on potable water for outdoor watering activities.

Water Timer Rebate and Instant Savings

Up to 50% of the pre-tax purchase price for up to two hose timers, for a maximum rebate of \$40, is offered to homeowners. Additionally, an instant savings of \$5.00 off the cost of a water timer is provided at select retail stores.

WaterWise Landscape Rebate

A rebate is offered for up to \$100 for every 100 square feet of turf areas converted to water-efficient landscapes, with a cap of \$3,000.

WaterWise Rainscape

A rebate of \$0.50 per square foot, with a bonus up to \$1,500, is offered for the removal of turf grass and installation of features that direct and retain rainwater for on-site irrigation and other beneficial purposes.

TABLE 4. RESIDENTIAL INCENTIVE PROGRAMS

Historical number of rebate applications and the estimated average water savings

Residential Incentive Program	Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021	Fiscal Year 2022	Fiscal Year 2023	Annual water savings per activity
Landscape Survival Tools	108	69	66	72	55	Undetermined*
Laundry to Landscape	-	0	0	0	0	Undetermined*
Pressure Regulating Valves	19	13	4	1	7	37,213 gallons per year
Pool Cartridge Filter Rebate	-	0	2	1	3	6,023 gallons per year
Pool Cover Rebate	0	0	8	5	4	27,153 gallons per year
Rainwater Harvesting Rebate	119	122	163	117	93	4.38 gallons per gallon capacity per year
Watering Timer Instant Savings	-	-	-	3,778	3,384	Undetermined*
Watering Timer Rebate	12	15	8	28	22	Undetermined*
WaterWise Landscape Rebate	11	6	10	3	19	11 gallons per sq. ft. per year
WaterWise Rainscape Rebate	2	5	5	6	7	1.5 gallons per sq. ft. per year

*Potential water savings have varied significantly in different analyses.

Commercial Customer Programs

With almost 16,000 accounts comprising roughly 30 percent of AW’s annual sales, there is significant potential for water savings through commercial conservation initiatives. AW partners with commercial customers by offering financial incentives, educational resources, and personalized support. We assist businesses in their efforts to seamlessly incorporate sustainable water practices into their operations.

Bucks for Business

AW collaborates with industrial, commercial, and institutional customers to promote water conservation through the Bucks for Business performance-based incentive program. Bucks for Business supports the installation of water-efficient equipment and adoption of process upgrades that offset non-potable water demand. Examples include replacing single-pass cooling with highly efficient systems or air cooling, reusing high-quality rinse water, recovering and using air conditioning condensate, and utilizing stormwater for landscape irrigation and other non-potable purposes. Additionally, incentives are available for installation of water-saving equipment for commercial laundry facilities and car washes. AW provides a rebate of \$1.00 for every 1,000 gallons saved annually over a ten-year equipment lifespan or 50 percent of the cost, whichever is lower, with a maximum cap of \$100,000.

Participation in Bucks for Business has fluctuated over the years. Some incomplete applications have been due to construction delays. The highest level of participation was due to Austin Independent School District utilizing bond money to upgrade multiple facilities. While the number of applications may be low, the amount of savings for each project can be substantial. Two completed projects in 2023 are estimated to have saved 920,000 gallons.

TABLE 5. BUCKS FOR BUSINESS

Historical participation by fiscal year

Fiscal Year 2019	Fiscal Year 2020	Fiscal Year 2021	Fiscal Year 2022	Fiscal Year 2023
1	54*	3	0	2

*One applicant – Austin Independent School District – and 54 unique facilities and activities

Cartridge Pool Filter Rebate Program

AW provides an incentive of up to \$250 to homeowner associations and multi-family properties with pools to replace sand or diatomaceous earth pool filters with cartridge pool filters. This high-efficiency filtration technology consumes twelve times less water compared to conventional filters.

Commercial, Institutional, and Industrial Water Efficiency Audit Rebate

AW offers up to \$5,000 toward an independent water efficiency audit of industrial, commercial, or institutional facilities. The audit is used to recommend strategies for reducing water use and assess eligibility for applicable AW rebates to enhance and upgrade equipment. Eligibility applies to each separately metered facility surpassing an annual threshold of 100,000 gallons per year.

Commercial Kitchen Equipment Rebate

Commercial and institutional customers can apply for rebates to replace eligible food service equipment with more efficient, cost-saving Energy Star-rated models. Rebate amounts range from \$40 to \$5,000, depending on the type of equipment. Eligible equipment includes pre-rinse spray valves, spring-loaded food pedal controls for kitchen faucets, boiler less steam cookers, and various dishwashers.

Irrigation System Improvement Rebate

Commercial and multi-family customers can receive incentives for eligible irrigation system improvements, such as central computer irrigation controller systems, pressure regulating components, flow sensors, and conversion to multi-stream, multi-trajectory rotor nozzles.

Pressure Regulating Valve Rebate

Multi-family customers can apply for a rebate of \$150 per rental unit, up to a maximum of \$750 per property, for the installation of pressure reduction valves to lower indoor water pressure and help reduce water waste. Eligibility requirements include water pressure of 80 pounds per square inch or higher without a pressure reduction valve, installation by a licensed plumber, and compliance with all permitting requirements.

Rainwater Harvesting Rebate

Commercial customers are eligible for incentives of up to \$5,000 for installing rainwater collection tanks for outdoor watering. The rebate amount is determined by the overall capacity of the rainwater system with different rates for pressurized and non-pressurized systems.

Voluntary Reclaimed Water Connection Pilot Rebate

First introduced in 2021, this rebate helps commercial and multi-family customers located along a reclaimed water main to connect voluntarily. Rebates are offered for cooling tower conversions, landscape irrigation conversions, and other uses.

WaterWise Landscape Rebate

This rebate supports the conversion of healthy turf areas to native beds, permeable hardscapes, rock gardens, mulching, or non-irrigated beds. Commercial customers may receive up to \$100 for every 100 square feet, with a maximum amount of \$3,000. Applicants must comply with planting specifications to ensure the use of native and adaptive plants.

Regulatory Programs

Water Use Restrictions

AW's Conservation Division implements and enforces a comprehensive Water Conservation Code (Chapter 6-4 of the City Code of Ordinances) that applies to all retail water customers. This code includes a year-round Conservation Stage with baseline water use restrictions. In times of drought, additional stages and restrictions are described in the Drought Contingency Plan and Chapter 6-4 of the City Code.

One of the largest water savings and peak day water use reduction measures was adopted in 2016 with year-round Conservation Stage restrictions. It established a watering schedule that limits the use of automatic irrigation systems to no more than once a week for up to fifteen hours. Hose-end (manual) sprinklers are limited to no more than twice a week for up to thirty hours.

Conservation Stage also includes time-of-day restrictions that allow irrigation to occur only before 10:00 a.m. or after 7:00 p.m. on designated outdoor water use days unless a hand-held hose or bucket is used. Hand-held watering is permissible anytime.

TABLE 6. LANDSCAPE WATERING RESTRICTIONS IN CONSERVATION STAGE

Property Type	Watering Day
Public schools	Monday
Commercial, EVEN address, automatic and hose-end	Tuesday
Residential, ODD address, automatic and hose-end	Wednesday
Residential, EVEN address, automatic and hose-end	Thursday
Commercial, ODD address, automatic and hose-end	Friday
Residential, ODD address, hose-end	Saturday
Residential, EVEN address, hose-end	Sunday

The Water Conservation Code also contains prohibitions on water waste, which include failing to repair a controllable leak, operating an irrigation system with excessive pressure that creates misting, allowing water to spray onto or over an impervious surface, and allowing irrigation water to run off into the street or pond in parking lots or impervious surface.

If customers have a newly installed landscape (not required by governmental permit) that needs additional watering days to become established, they can apply for a variance from the mandatory watering schedule. To qualify for this variance, the landscape must be xeriscape, and the installed plants must be low or very low water-use xeric varieties selected from AW's approved plant list.

Additional water use restrictions during the Conservation Stage include commercial power/pressure washing equipment efficiency requirements, time-of-day limits on operating commercial patio misters, restaurants may serve water only upon request, and lodging facilities must offer towel/linen reuse programs.

Water Restrictions Enforcement

AW enforces the Water Conservation Code through routine patrols and investigating water waste reports received through the Austin 3-1-1 hotline.

Customers who have been issued a citation with associated penalties are given an opportunity to dispute the violation. The customer may request a Supervisor Review of case details to determine whether to uphold or dismiss the violation. Customers who do not agree with the outcome of the Supervisor Review will be scheduled for an Administrative Hearing. The Administrative Hearing is reviewed by a third-party hearing officer who determines whether to uphold or dismiss the violation. All citations are reviewed at an Administrative Hearing unless the customer waives their right to a hearing. Customers may have assessed penalties added to their utility bill or request separate billing.

AW has a progressive penalty structure for water waste violations, with penalty amounts increasing with drought stages and violation frequency. In 2023, AW implemented a City Council-approved equity-based penalty structure with increased penalties for high water users. When assessing a water conservation fine, staff review the customer's average water usage for the three most recent summer months to determine which tier the customer falls into:

- Top 1% of average usage
- Top 3% of average usage
- Top 5% of average usage
- Top 10% of usage
- Below the 90th percentile of use

For more information regarding the enforcement process and current penalties, please visit [Austin Water's website](#).

Water-Use Efficiency Assessment Programs

Commercial facilities comprise roughly 30 percent of the city's overall water consumption. Efficient water use by the commercial sector is vital to future sustainability. AW administers three programs that require the submission of mandatory water efficiency reports:

Commercial Facility Irrigation Assessment

Since 2014, industrial, commercial, and institutional facilities situated on one acre or larger must assess permanently installed irrigation systems once every two years. Third-party AW Authorized Irrigation Inspectors conduct these station-by-station inspections to identify potential water waste violations. In Fiscal Year 2023, nearly 3,500 facilities were required to submit biannual assessments with an average compliance rate of 93 percent.

Cooling Tower Efficiency Program

Established in 2017, this program ensures that cooling towers operate in a manner that promotes water conservation. Facilities must adhere to baseline cycle-of-concentration standards and include efficiency components. Annual inspections confirm compliance. In Fiscal Year 2023, more than 300 facilities were required to submit their annual assessments with an average compliance rate of 80 percent.

Commercial Facility Wash Assessment

This program, initiated in 2012, sets water-efficient standards for vehicle wash equipment for commercial, multi-family, and municipal facilities. Facilities must conduct annual efficiency evaluations. In Fiscal Year 2023, more than 200 facilities with vehicle washes were required to submit annual assessments with an average compliance rate of 83 percent.

Commercial customers failing to submit required compliance documentation may face a Water Conservation Fee of \$758 assessed to their utility account for each month they are out of compliance.

Metering and Water Loss

Metering Devices

AW meters all customer water connections, and our meters meet American Water Works Association accuracy standards. Before each customer connection is metered, each meter is tested by the manufacturer and by AW's Meter Operation (WMO) division. After installation, large meters are tested annually by WMO and through a contracted service provider. Any meter that fails accuracy testing before installation is sent back to the manufacturer, and post-installation failures are expeditiously repaired or replaced. AW is scheduled to complete the My ATX Water smart metering program in 2025. Once the program is completed, AW will have replaced the entire metered population.

Water Loss Control

Annual water loss percentages fluctuate with weather and demand conditions, with some variation due to data collection. AW conducts annual Water Loss Audits following Texas Water Development Board (TWDB) methodology and has made significant progress in improving data validity scores while implementing comprehensive water loss strategies.

To enhance water loss management, AW has contracted with a consulting firm to review the water loss program, perform a Level 1 Validation of the 2022 Water Loss Audit, review system meter accuracy validation, and provide recommendations for improvement. A final report is expected in the first quarter of 2024. One full-time position is dedicated to addressing water loss.

AW's efforts to control water loss include managing leaks, reducing non-revenue water, and improving data quality. The table below shows water loss volumes over the past five years.

TABLE 7. HISTORICAL WATER LOSS VOLUMES

Overall (millions of gallons), Per Person (gallons per capita daily, GPCD), and as an Infrastructure Leakage Index (ILI)

Year	Water Loss (million gallons)	Water Loss (gallons per capita daily)	Infrastructure Leakage Index (ILI)
2023	8,678	21.68	4.19
2022	8,500	21.56	3.89
2021	8,030	20.43	3.67
2020	8,880	23.08	4.22
2019	7,470	18.91	3.52

Leak Detection and Repair

AW conducts comprehensive leak detection to locate subsurface leaks in the water distribution system. Acoustic technology is utilized to inspect over 500 miles of water lines annually, while smart ball technology is employed to search for leaks inside large transmission mains. The "Renewing Austin" program targets aging water lines for replacement to enhance system reliability, focusing on mains with a history of leakage incidents. An accelerated leak response and repair program has also been implemented, with approximately 90 percent of emergency leaks responded to within three hours and most being repaired in one day or less,

Unaccounted-For Water Use (Non-Revenue Water Use)

AW has implemented a comprehensive plan to reduce non-revenue retail water use by routinely analyzing consumption data for zero-reads and suspicious usage patterns. Coordination with the City of Austin Utilities Revenue Measurement Control staff is conducted to investigate meter tampering and water theft. Reporting of theft from City hydrants is facilitated through the Austin 3-1-1 system.

My ATX Water Advanced Metering Infrastructure

My ATX Water, the City's advanced metering infrastructure program, was deployed in 2020 to replace analog meters with digital meters. The new meters record near real-time water use and provide information to both AW and customers. In the coming years, My ATX Water will allow AW to implement robust water loss strategies, including district metering, remote leak detection, and pressure monitoring. By the end of 2023, over 205,000 customer meters had been exchanged, with full deployment expected by the end of 2024.

As part of the My ATX Water deployment process, AW has identified and repaired hundreds of small meter and cut-off valve leaks, while alerting customers to pre-existing leaks on their service lines.

The My ATX Water portal allows customers to access their water usage data and sign up for customized notifications, including leak alerts and bill forecasting. Customers can also sign up for daily water use updates and water budgeting. In 2023, over 123,000 leak alerts and 81,000 bill-forecast notifications were sent out to customers; repairs and behavior modifications through these notifications are estimated to have saved 495.5 million gallons of water. Customers are also alerted to continuous flow events via email, text, or traditional mail.

DRAFT

Water Reuse

Reclaimed Water System

AW initiated its reclaimed water program in 1974, primarily to dispose of wastewater effluent. However, the program's objectives evolved over time to include providing a cost-effective source of non-potable water to conserve treated potable water, delay the need for treatment plant construction and expansions, postpone water contract payments, and address environmental concerns. Today, reclaimed water is utilized for irrigation of golf courses, ballfields, parks, and commercial properties. It is also utilized in cooling towers, manufacturing processes, and toilet flushing.

The reclaimed water system comprises four pump stations, two pressure zones, 72.8 miles of main pipelines, and six water storage facilities with a total storage capacity of 6.2 million gallons in the distribution system and 1.58 million gallons at the plants. Additionally, three public bulk water filling stations facilitate reclaimed water distribution. Currently, there are over 170 metered customers with an annual demand exceeding 1.4 billion gallons. An additional 12.9 miles of reclaimed main pipelines are either in the design phase or under construction.

TABLE 8. HISTORICAL USE OF RECLAIMED WATER (MILLION GALLONS)

FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
1,493	1,569	1,606	1,689	1,634

The Reclaimed Water Mandatory Connection Ordinance, adopted by Austin City Council in September 2021, mandates that any development project within 250 feet of a reclaimed water line must connect to the reclaimed water system for irrigation, cooling, toilet flushing, and other significant non-potable water uses. For large developments with 250,000 square feet or more of gross floor area, the connection mandate extends to 500 feet.

Onsite Water Reuse

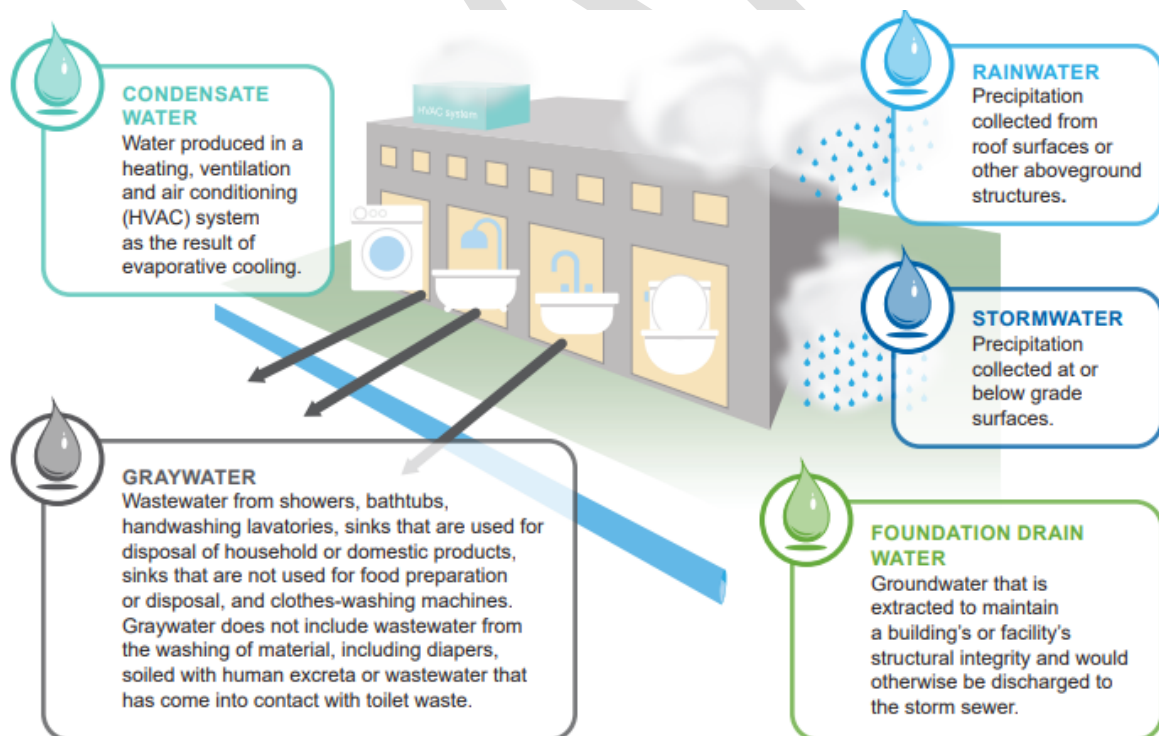
AW has been promoting onsite water reuse for over a decade, encouraging the utilization of non-potable water sources like rainwater, graywater, reclaimed water, and others for irrigation, cooling, and toilet flushing. Several changes to City Codes and Ordinances have facilitated this while ensuring public health and safety. Since September of 2017, new commercial and multi-family projects with cooling towers have been required to reuse condensate or utilize non-potable water to compensate for evaporative losses.

The Onsite Water Reuse System (OWRS) Program was initiated to implement code changes adopted in December 2020 that regulate the collection, treatment, and use of alternative water sources for non-potable uses in multi-family and commercial buildings. Effective April 1, 2024, the collection and treatment of rainwater or condensate for reuse in commercial and multi-family buildings of 250,000 gross square feet or greater is required. Additionally, the Onsite Water Reuse Incentive Program provides project reimbursements of up to \$500,000 for voluntarily incorporating onsite water reuse systems.

Water Benchmarking

Water benchmarking, a strategy derived from the 2018 Water Forward Plan, assists in reducing water demand in new commercial development projects by identifying conservation opportunities. Since 2021, applicants for commercial or multi-family projects of 250,000 gross square feet or greater must submit a Water Benchmarking Application to assess water usage and identify conservation opportunities. This initiative aims to establish and adhere to an annual water budget for development projects, with 439 applicants having undergone this process by December 31, 2023.

Following the effective date of the mandatory onsite reuse requirement, water benchmarking meetings will shift focus to ensuring compliance with onsite water reuse and reclaimed water connection ordinances.



Water Rates

AW implements a five-tiered inclining block rate structure for single-family residential customers, aiming to maintain affordability for essential water use while discouraging excessive consumption. This structure is one of the steepest in the nation and has successfully led to a significant decrease in water consumption at the highest tiers. Additionally, reduced rates are provided to customers eligible for the utility's Customer Assistance Programs (CAP).

For commercial and multi-family customers, water conservation during irrigation season is promoted through peak and off-peak rates. These rates are designed to incentivize water conservation during times of high demand.

TABLE 9. AUSTIN WATER VOLUMETRIC RATE STRUCTURE BY CUSTOMER CLASS
(Effective November 1, 2023)

Amount Used	Volumetric Unit Charge (per 1,000 gallons)	
	Single Family Residential	Residential Customer Assistance Program
0-2,000 gallons	\$3.00	\$1.23
2,001-6,000 gallons	\$4.99	\$3.65
6,001-11,000 gallons	\$8.65	\$6.00
11,001-20,000 gallons	\$13.18	\$11.51
Over 20,000 gallons	\$14.74	\$14.21
	Multi-Family	Commercial
Off Peak (November-June)	\$4.67	\$5.46
Peak (July-October)	\$5.15	\$5.86

Water Drought Rate Surcharge

During Stage 3 and Stage 4 drought-response, an additional fee is implemented for all retail and wholesale customer classes except CAP Customers.

TABLE 10. DROUGHT SURCHARGE

Drought Stage	Surcharge
Stage 3	\$1.00 per 1,000 gallons
Stage 4	\$3.00 per 1,000 gallons

Goals for Water Use and Water Loss

AW's long-term water supply strategy is outlined in the Water Forward Integrated Water Resource Plan and focuses on increasing efficiency and maximizing the local water supply. To achieve these goals, AW is implementing various activities:

- **Incentives.** AW has been offering water-saving incentives to customers since 1983. The utility continuously evaluates customer programs and incentives to develop new ways of engagement, particularly in the commercial sector where significant water-savings potential exists.
- **My ATX Water.** Austin's smart meter system, My ATX Water, provides an opportunity to engage customers with information about their water usage, promote conservation, and notify them of potential leaks. Completion of My ATX Water infrastructure in 2024 is expected to enhance water-saving efforts.
- **New construction requirements.** AW aims to incorporate water-saving practices into new construction projects, including single-family homes and large commercial/multi-family structures. This includes requirements such as landscape transformation for new single-family homes, involving better soil, water efficient plants, limited automatic irrigation systems, and encouraging the use of alternative water for landscapes.
- **Reclaimed water.** AW plans to expand the reclaimed water system to improve system reliability and increase the number of customers connected to reclaimed water.

In addition to these initiatives, AW has set water use goals based on gallons per capita daily (GPCD) targets. These goals reflect reductions in water use resulting from year-round conservation measures and programming, rather than solely relying on drought response efforts. The GPCD goals are calculated using an annual water use per capita reduction of 0.75% between 2024 and 2029, and 1.25% between 2029 and 2034.

TABLE 11. HISTORICAL TOTAL GALLONS PER CAPITA DAILY (GPCD) VALUES

Calendar Year	GPCD
2019	126
2020	127
2021	124
2022	131
2023	129
Average	127

TABLE 12. HISTORICAL RESIDENTIAL GALLONS PER CAPITA DAILY (GPCD) VALUES

Calendar Year	GPCD
2019	60
2020	64
2021	64
2022	67
2023	65
Average	64

TABLE 13. FIVE AND TEN-YEAR GOALS FOR WATER CONSERVATION

	Historic 5-year Average	Baseline	2029 Goal	2034 Goal
Total GPCD¹	127	127	123	116
Residential GPCD²	64	64	62	58

¹Total GPCD = (Total Gallons in System ÷ Permanent Population) ÷ 365

²Residential GPCD = (Gallons Used for Residential Use ÷ Residential Population) ÷ 365

AW recognizes that water loss, like water use, is subject to fluctuations due to weather, demand conditions, and improvements in data collection. To address this issue, the utility conducts annual Water Loss Audits following Texas Water Development Board (TWDB) methodology. These audits have led to significant progress in reducing non-revenue water and improving data validity. AW has also allocated dedicated resources, including one full-time position, specifically to address water loss.

The five-year averages for Water Loss gallons per capita per day (GPCD) and Infrastructure Leakage Index (ILI) are calculated using data from calendar years 2019 through 2024. These averages were calculated by subtracting sales to wholesale customers from water produced and billed to the total retail population.

TABLE 14. FIVE AND TEN-YEAR GOALS FOR WATER LOSS REDUCTION

	Historic 5-year Average	Baseline	2029 Goal	2034 Goal
Water Loss GPCD¹	21	21	19	17
Infrastructure Leakage Index²	4.07	4.07	3.57	3.31

¹Water Loss GPCD = (Total Water Loss ÷ Permanent Population) ÷ 365

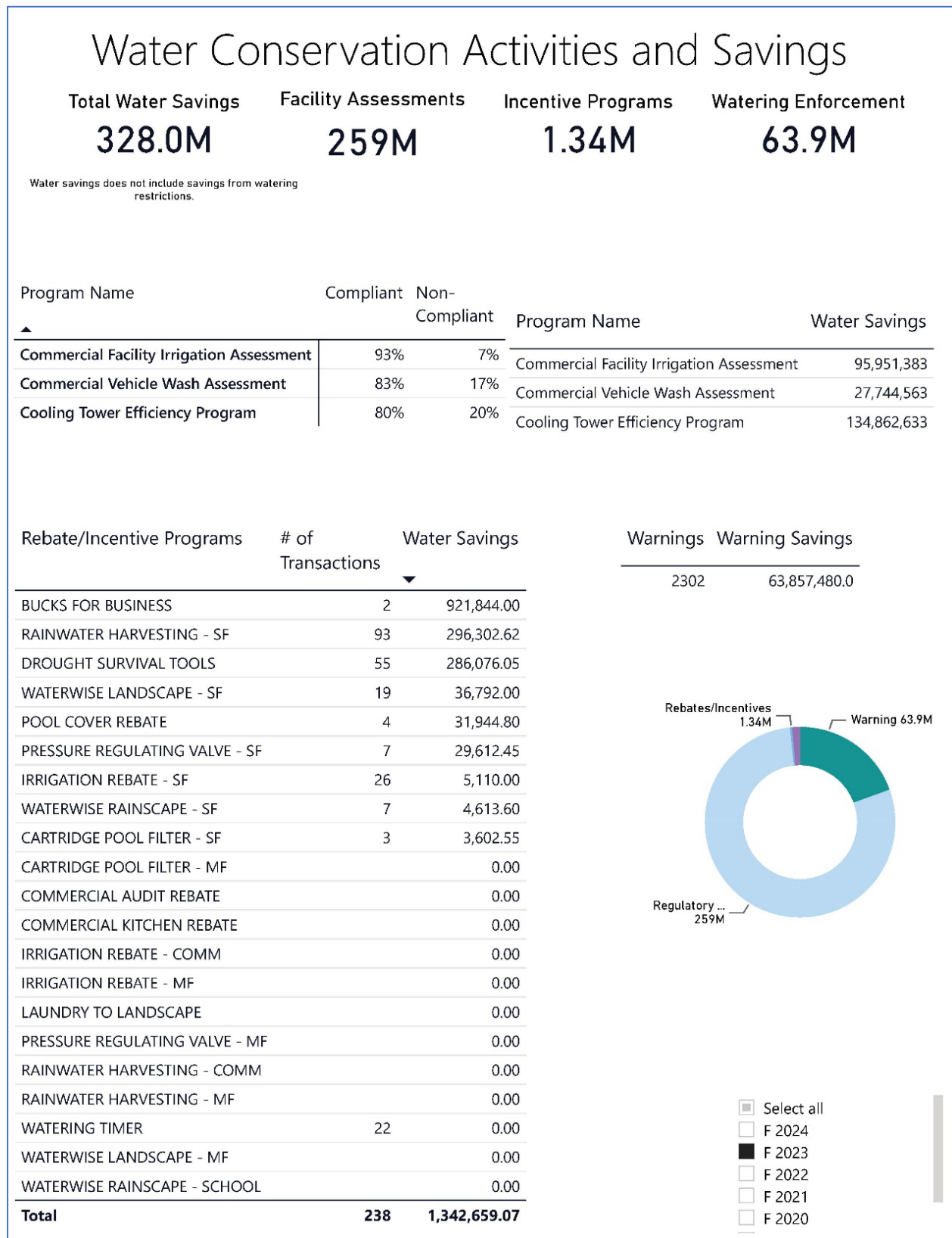
²Infrastructure Leak Index is a performance measure that expresses system real losses as a multiple of the calculated Unavoidable Real Losses

AW recognizes that traditional metrics such as water loss percentage and losses per capita per day may not accurately reflect performance when evaluating water loss. These metrics can be influenced by total consumption and population dynamics, leading to potentially misleading trends. As a result, AW considers them to be poor performance measurements for assessing water loss.

Program Tracking, Evaluation and Quantification

To effectively track, evaluate, and quantify the impact of conservation activities and incentive programs, AW quantifies actual or estimated water savings for each program (Figure 2). While some estimates are based on national studies and utility research, AW increasingly relies on regression analysis using local Austin-specific data for more accurate assessments.

The utility utilizes business intelligence tools to monitor performance in achieving conservation goals. These provide staff with dashboards and reports for real-time insights. Through annual audits of incentive programs, AW evaluates various aspects such as application trends, approved projects, estimated savings, cost-effectiveness, market saturation, administrative efficiency, and equity considerations. This information guides decisions on program optimization, expansion, or termination to ensure maximum impact and efficiency in water conservation efforts.

FIGURE 2. WATER CONSERVATION SAVINGS REPORT


Utility Profile

Contact Information

Name:	City of Austin Water Utility
Address:	625 East 10 th Street, Suite 615, Austin, TX 78701
Telephone:	512-972-1000
Water right:	14-5471
Regional Water Planning Group:	Region K, Lower Colorado
Conservation Coordinator:	Kevin Kluge, Water Conservation Division Manager
Contact Information:	512-972-0400, kevin.kluge@austintexas.gov

Population and Service Area Data

The service area for the City of Austin includes both retail customers and wholesale customers. Within this service area, there are several wholesale customer service areas that extend beyond the city's boundaries. These extensions occur due to various factors such as infrastructure design and layout, operational limitations, or specific water supply demands.

CURRENT SERVICE AREA SIZE IN SQUARE MILES

Retail	Wholesale	Total
548	Wholesale Service: 33 Emergency Service Only: 13 Total: 46	592

HISTORICAL SERVICE AREA POPULATION

	Retail	Wholesale	Total
Water service	1,096,486	53,770	1,150,256
Wastewater service	1,075,255	44,367	1,119,622

HISTORICAL POPULATION SERVED

Year	Water - Retail	Water - Wholesale	Wastewater*
2023	1,096,486	53,770	1,054,662
2022	1,080,270	59,686	1,003,476
2021	1,077,269	58,540	977,053
2020	1,053,756	56,822	947,943
2019	1,083,596	54,966	917,416

*Wastewater-served population includes retail and wholesale estimates

PROJECTED SERVICE AREA POPULATION

Year	Water Retail	Water Wholesale	Wastewater
2030	1,050,239	51,393	1,071,212
2040	1,280,236	62,648	1,305,802
2050	1,510,239	67,521	1,533,707
2060	1,731,187	77,399	1,758,088
2070	1,963,397	87,781	1,993,907

Sources and Methods Used for Estimates

The size of AW's service area was determined through a Geographic Information System (GIS) process, which identified parcels served by the utility. Historical and current population served by AW is estimated by the City Demographer, who provides annual updates on the population within the city's limited and full-purpose jurisdictions, as well as the population of surrounding counties. These estimates are based on demographic data and other relevant factors to provide an accurate representation of the population served by AW. Projected population served by AW is estimated using growth rate projections developed by the City Demographer. These projections are typically based on historical population trends, demographic factors, and anticipated changes in the service area. The growth rate projections developed for the Water Forward planning project in 2016 serve as the basis for estimating the future population served by AW. Appendix C includes a map that illustrates AW's retail service area, emergency water service area, wholesale service area, and areas covered by the Certificate of Convenience and Necessity (CCN).

Water Supply and Demand

SYSTEM INPUT

Year	Water produced (gallons)	Purchased or Imported (gallons)	Exported Water (gallons)	Total System Input
2023	54,899,509,000	0	2,731,521,000	52,167,988,000
2022	55,991,985,393	0	3,010,560,408	52,981,424,985
2021	51,744,870,440	0	2,653,337,857	49,091,532,583
2020	52,290,058,519	1,175,510	2,592,908,265	49,698,325,764
2019	50,495,469,807	867,000	2,544,498,300	47,951,838,507
Historic Average	53,084,378,632	408,502	2,706,565,166	50,378,221,968

Water Supply System

Designed capacity of system (gallons): 335 MGD

Storage capacity

Elevated storage (gallons): 15.5 MG

Ground storage (gallons): 156.6 MG

PROJECTED WATER DEMAND

Year	Population	Gallons
2025	1,193,506	45,597,853,424
2026	1,215,276	46,311,723,171
2027	1,237,128	47,036,769,102
2028	1,259,052	47,773,166,190
2029	1,281,118	48,521,092,144
2030	1,303,169	49,280,727,460
2031	1,325,228	50,052,255,455
2032	1,347,329	50,835,862,319
2033	1,369,462	51,631,737,156
2034	1,391,616	52,440,072,031

Source Data for Projected Water Demand

Projected water supply demands for the City's service area over the next ten years are based on population trends, historical water use, economic growth, and expected conservation savings. Projected diversions were estimated using baseline future water demands and estimated Water Forward strategy savings. Baseline future water demands were developed from an average of 2013, 2014, and 2015 water consumption, and represent future conditions based on demographic projections of population, housing, and employment in Austin, along with projected passive conservation. A climate adjustment factor was applied to the baseline future water demands. Savings from Water Forward strategies, which would be expected to reduce demand for potable water, were subtracted from the climate-adjusted baseline demand to generate projected diversions.

High Volume Customers

ANNUAL WATER USE FOR TOP FIVE HIGHEST VOLUME RETAIL CUSTOMERS IN 2023

Customer Name	Usage (gallons)	Treated or Raw Water
Samsung	2,438,050,700	Treated
University of Texas	829,212,600	Treated
NXP USA, INC	732,270,900	Treated
Cypress Semiconductor	389,030,200	Treated
Tesla Inc.	329,646,500	Treated

ANNUAL WATER USE FOR WHOLESALE CUSTOMERS IN 2023

Water & Wastewater Customers	Contract Amount (acre-feet)	Usage (acre-feet)	Treated or Raw Water
City of Manor	1,680	Less than 1	Treated
City of Rollingwood	1,120	355	Treated
City of Sunset Valley	716	343	Treated
Shady Hollow MUD	554	622	Treated
North Austin MUD #1	No contractual limitation	1,029	Treated
Northtown MUD	No contractual limitation	950	Treated
Southwest Water Company – Mid-Tex	1,274	265	Treated
Wells Branch MUD	No contractual limitation	1,245	Treated
Water Only Customer	Contract Amount (acre-feet)	Usage (acre-feet)	Treated or Raw Water
Aqua Texas - Morningside	52	5	Treated
Aqua Texas - Nighthawk WSC	43	41	Treated
Aqua Texas - Rivercrest	1,120	474	Treated
Creedmoor-Maha WSC	839	251	Treated
High Valley WSC	683	15	Treated
Marsha WSC	55	37	Treated
Travis County WCID #10	3,360	2,743	Treated
Village of San Leanna	325	14	Treated
Water Emergency	Contract Amount (acre-feet)	Usage (acre-feet)	Treated or Raw Water
Travis County MUD #4	No contractual limitations	0	Treated
Travis County WCID 17	No contractual limitations	0	Treated
Southwest Water Company - Windermere	No contractual limitations	0	Treated

System Data

CURRENT NUMBER OF ACTIVE RETAIL CONNECTIONS

	Metered	Non-metered	Total
Residential	233,511	0	233,511
<i>Single-Family</i>	226,679	0	226,679
<i>Multi-Family</i>	6,832	0	6,832
Commercial	18,151	0	18,151
Industrial (Large Volume)	10	0	10
Institutional	700	0	700
Agriculture	0	0	0
Other (Wholesale)	50	0	50

NUMBER OF NEW RETAIL CONNECTIONS FOR THE PAST THREE CALENDAR YEARS

	Metered	Non-metered	Total
Residential	7,410	0	7,410
<i>Single-Family</i>	7,157	0	7,157
<i>Multi-Family</i>	253	0	253
Commercial	-83	0	-83
Industrial (Large Volume)	0	0	0
Institutional	0	0	0
Agriculture	0	0	0
Other (Wholesale)	0	0	0

HISTORICAL WATER SALES (GALLONS)

	2019	2020	2021	2022	2023
Residential	24,625,694,500	26,485,611,800	25,806,553,700	28,320,264,200	27,809,231,000
<i>Single-Family</i>	14,660,931,000	15,833,103,100	14,824,750,200	16,574,970,200	16,058,699,400
<i>Multi-Family</i>	9,964,763,500	10,652,508,700	10,981,803,500	11,745,294,000	11,750,531,600
Commercial	11,101,200,600	9,953,614,400	10,806,494,300	11,262,707,700	11,529,513,600
Industrial (Large Volume)	3,382,623,800	3,423,463,400	3,291,878,400	3,601,480,900	3,607,375,300
Institutional	1,216,558,500	857,728,200	1,388,446,600	1,106,477,700	1,125,001,500
Wholesale	2,544,498,300	2,541,050,100	2,600,271,100	2,950,349,200	2,731,630,163
Agricultural	0	0	0	0	0
TOTAL	42,870,575,700	43,261,467,900	43,893,644,100	47,241,279,700	46,802,751,563

Water Use Data

MONTHLY DIVERSIONS FOR ALL WATER USES (ACRE-FEET)

	2019	2020	2021	2022	2023
January	10,496	11,390	11,266	11,817	12,257
February	9,875	10,634	11,670	10,880	10,988
March	11,335	11,564	12,144	12,675	13,236
April	11,476	11,274	12,652	13,660	12,864
May	12,453	13,086	12,515	14,939	13,657
June	12,471	14,518	13,785	16,654	15,337
July	15,036	16,376	14,486	18,938	18,370
August	17,772	17,178	15,302	17,735	19,576
September	16,610	13,686	16,068	15,988	16,962
October	14,993	14,664	14,192	16,080	14,997
November	11,878	13,106	12,560	12,733	12,687
December	11,627	11,865	12,334	12,676	12,251
Total	156,021	159,342	158,974	174,777	173,181

TOTAL AMOUNT OF WATER DIVERTED FOR MUNICIPAL USE (ACRE-FEET)

Year	Total Water Pumpage
2019	156,021
2020	159,342
2021	158,974
2022	174,777
2023	172,911

Water Supply Sources

AW receives 100 percent surface water from the Colorado River through a combination of run-of-river water rights granted by the State of Texas and a water supply contract with the Lower Colorado River Authority (LCRA). In 1999, the City of Austin secured a firm water supply totaling 325,000 acre-feet per year (AF/yr) through a key water supply contract with LCRA, utilizing stored water in the Highland Lakes and other sources to support Austin's run-of-river water rights, which are among the oldest in the basin. Under this 1999 agreement, which amended a previous 1987 agreement, Austin prepaid the LCRA for reservation and use fees. Future water use payments to LCRA will be triggered when Austin's annual average use for two consecutive calendar years exceeds 201,000 AF/yr. This has provided a conservation incentive for Austin, as the year after this trigger is reached, the City will begin paying for water diversion amounts above 150,000 AF/yr. The term of the 1999 agreement extends through the year 2050, with an option for the City to renew the agreement for an additional 50-year period through the year 2100. In 2007, the City entered into a supplemental water supply agreement with LCRA for an additional 250,000 AF/yr of firm water to be planned and purchased at a future time, likely incrementally, to meet future needs.

Treatment and Distribution System

For over a century, AW has remained dedicated to delivering clean, safe, reliable, high-quality, sustainable, and affordable water to its customers. The utility owns and operates three major surface water treatment plants (WTPs) – Davis and Ullrich, which draw water from Lake Austin, and Handcox, which draws water from Lake Travis. Currently, these WTPs have a combined water treatment capacity of 335 million gallons per day (MGD), including 14 MG of elevated and 158 MG of ground storage capacity. Less than 3 percent of filter backwash is recycled to the head of the plants. The system comprises 3,929 miles of water mains, 9 major pressure zones, 47 water pumping stations and local boosters, and 38 city-maintained reservoirs with 176 million gallons of effective storage capacity.

Austin Water Treatment Plants and Capacity

Plant	Year Constructed	Treatment Capacity (MGD)
Davis	1954	118 ^a
Ullrich	1969	167 ^b
Handcox	2014	50 ^c
Total		335

^a Expanded in 1963, 1977, 1987, and 1999.

^b Modernized in 1993 to meet the higher standards of the Safe Drinking Water Act and expanded in 1987 and 2000. Capacity expansion from 100 to 167 MGD completed in 2008.

^c Capacity can be expanded to 300 MGD over time.

Wastewater System Data

AW's wastewater system serves approximately 97 percent of the people served by Austin's water system. The treated volume includes those wholesale customers that receive wastewater service by the City. The table below shows the monthly volume of wastewater treated at Walnut Creek and South Austin Regional Wastewater Treatment Plants over the past five years.

MONTHLY VOLUME OF WASTEWATER TREATED (IN THOUSAND GALLONS)

	2019	2020	2021	2022	2023
January	3,708,765	2,800,844	3,044,414	2,899,674	2,999,137
February	2,680,303	2,861,340	2,836,168	3,240,818	2,997,903
March	2,965,722	3,058,785	3,155,101	3,051,613	3,014,295
April	3,323,406	2,974,798	3,020,344	3,055,210	3,353,414
May	4,032,151	3,260,018	3,871,683	3,177,750	3,619,955
June	3,116,667	2,832,939	3,827,024	2,919,609	3,137,860
July	2,997,113	2,726,402	3,283,108	2,953,290	2,932,356
August	2,791,708	2,829,107	3,195,987	3,100,582	2,934,889
September	2,689,971	3,128,329	2,858,197	2,969,567	2,970,899
October	2,811,429	2,638,340	3,286,881	2,860,915	3,274,428
November	2,554,556	2,593,189	3,035,373	3,082,337	3,162,091
December	2,739,583	2,751,468	3,016,548	3,181,447	3,208,378
Total	36,411,374	34,455,558	38,430,828	36,492,812	37,605,605

Use of Treated Effluent

Walnut Creek Wastewater Treatment Plant uses approximately 2.2 million gallons per day of treated effluent for plant washdown and chlorination/dechlorination. The South Austin Regional (SAR) Wastewater Treatment Plant uses approximately 1.2 million gallons per day of treated effluent for plant washdown and chlorination/dechlorination. Hornsby Bend uses an additional 0.5 million gallons per day of treated effluent from SAR. Irrigation at Hornsby is drawn from an on-site pond system, not treated effluent.

Reclaimed Water System

AW's reclaimed water program traces its origins back to 1974 when the Williamson Creek Wastewater Treatment Plant began providing effluent for irrigation at the nearby Jimmy Clay Golf Course. Since then, the reclaimed system has experienced significant growth. Currently, more than 63 miles of reclaimed water mains and water lines run beneath Austin streets, marked by distinctive purple pipes.

Utilizing reclaimed water alleviates demand for drinking water, particularly in applications such as irrigation, cooling towers, ornamental ponds, manufacturing, and toilet flushing. Reclaimed water is clear, odorless, and treated to meet the requirements for various non-potable uses. Reclaimed water, an integral part of Austin's water conservation efforts, annually saves an average of 1.4 billion gallons of drinking water.

The City's Water Reclamation Initiative, initiated in 1990, accelerated expansion of the reclaimed water system to meet current and future non-potable water demands. Key milestones in this expansion include:

- **2010:** The activation of the 51st Street Tower, catering to the central Austin area.
- **2011:** Expansion of the reclaimed system to Austin Bergstrom International Airport, saving 25 million gallons of drinking water annually.
- **2012:** Establishment of reclaimed water "filling stations" to facilitate the use of reclaimed for irrigation, road construction, dust control, and utility location.
- **2015:** Requirement for new commercial developments or redevelopments within 250 feet of a reclaimed water main to connect for irrigation, cooling, and other significant non-potable water uses.
- **2017:** Completion of the Capitol Complex Reclaimed Water Main Project, serving the vicinity in and around the State Capitol.
- **2018:** The Junction 420 Main serving downtown Austin was completed.

TYPE OF WATER REUSE AND RECYCLING ACTIVITIES IMPLEMENTED, 2023

Type of reuse activity	Total annual volume (in thousand gallons)
On-site irrigation	666.2
Plant wash down	0
Chlorination/de-chlorination	0
Industrial	601,593.8
Landscape irrigation (park, golf courses)	903,159.7
Agriculture	0
Discharge to surface water	359.2
Evaporation Pond	0
Other	46,897.3
Total	1,552,676.2

Appendices

Appendix A. Water Conservation Plan Requirement Checklist

[TWDB-1968 Water Conservation Plan Guidance Checklist UPDATED \(11\).pdf](#)

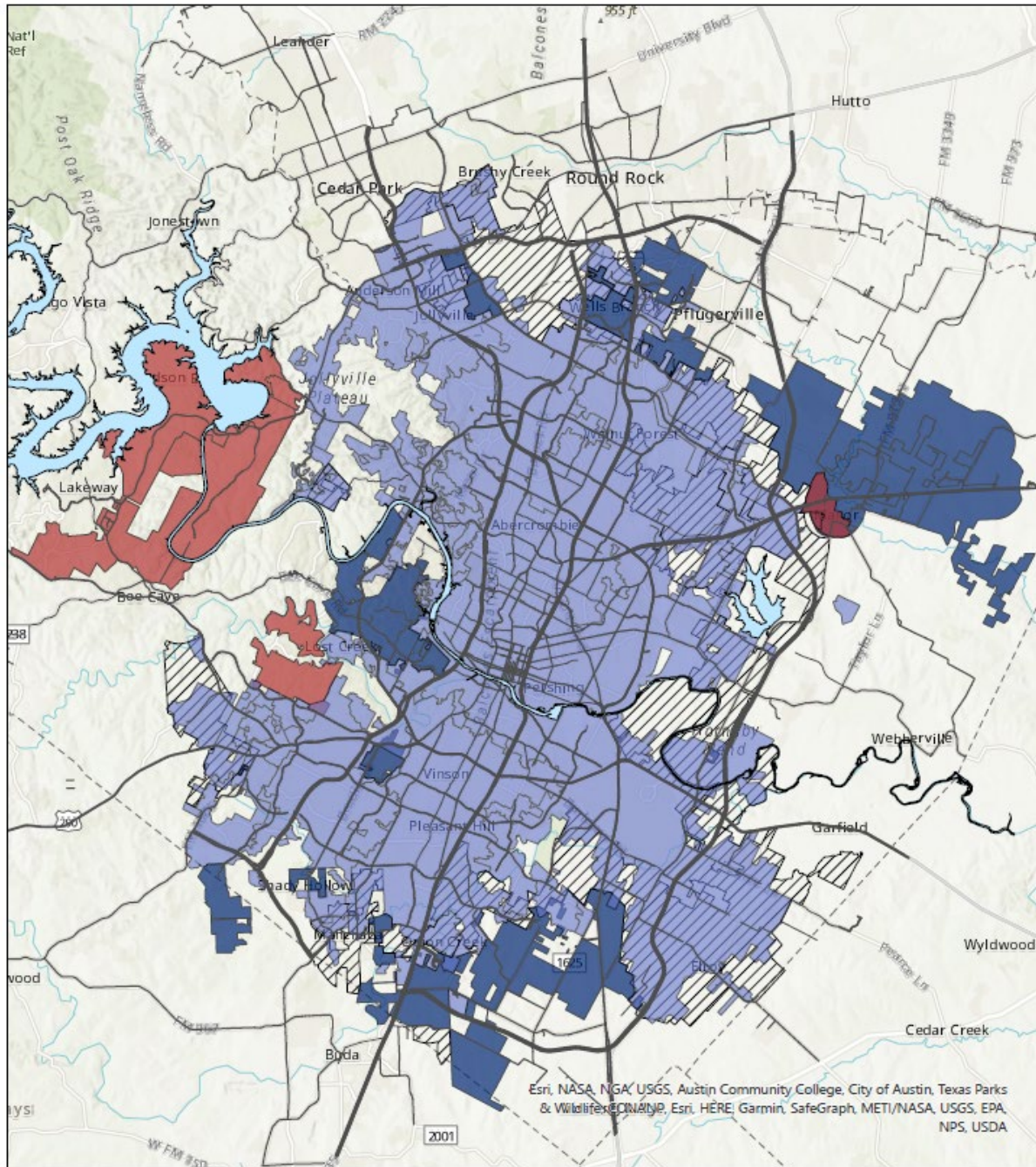
Water Conservation Plan Requirements	Report Location
Water Conservation Utility Profile, TWDB-1965	Page 30
Conservation Coordinator	Page 30
5- and 10-year goals in GPCD	Page 28
Achieving Targets	Page 26 and 27
Tracking Targets and Goals	Page 28
Production Meter(s)	Page 20
Universal Metering Program	Page 20
Water Loss Control Program	Page 21
Leak Detection Program	Page 21
Public Education and Information	Page 9
Water Rate Structure	Page 25
Signed Official Ordinance	Page 49, Appendix H
Regional Water Planning Group Notification	Page 50, Appendix I

Appendix B. Drought Contingency Plan

Draft or final approved DCP

DRAFT

Appendix C. Water Service Area Map



- AW Retail Service
- AWU Emergency Water Customers
- AWU Wholesale Water Customer
- AW Water CCN

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City of Austin
Austin Water
November 2023



Austin Water Service Area Map

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Appendix D. Wastewater Treatment Plants and Permits

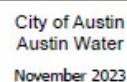
Plants 1 through 8 are permitted to discharge to a stream. Plants 9 through 12 are not permitted to discharge to the waters of the state.

Permitted flows are expressed as monthly averages unless specified otherwise. Effluent quality is expressed as monthly average (unless specified otherwise) and written after the permitted average flow in the following order: 5-day Carbonaceous Biochemical Oxygen Demand (CBOD₅)/Total Suspended Solids (TSS)/Ammonia-Nitrogen (NH₃-N)/Total Phosphorus (TP), when applicable. For Balcones, Onion Creek, Lost Creek, River Place and Thoroughbred Farms, the effluent limit is on 5-Day Biochemical Oxygen Demand (BOD₅), and not on CBOD₅.

- 1) Walnut Creek Wastewater Treatment Plant, TPDES Permit No. WQ0010543011, EPA ID No. TX0046981, RN101607901, 75 MGD (annual average), 10/15/2 (monthly average) and 5/5/2 (annual average) to the Colorado River
- 2) South Austin Regional Wastewater Treatment Plant, TPDES Permit No. WQ0010543012, EPA ID No. TX0071889, RN101607794, 75 MGD (annual average), 10/15/2 (monthly average) and 5/5/2 (annual average) to the Colorado River
- 3) Wild Horse Ranch Wastewater Treatment Plant, TPDES Permit No. WQ0010543013, EPA ID No. TX0124800, RN103014577, 0.75 MGD, 5/5/2/1 to a tributary of Gilleland Creek
- 4) Taylor Lane Wastewater Treatment Plant, TPDES permit No. WQ0010543014, EPA ID No. TX0129950, RN105331755, 0.1 MGD, 5/5/2/1 to Gilleland Creek
- 5) Pearce Lane Wastewater Treatment Plant, TPDES Permit No. WQ0010543015, EPA ID No. TX0132934, RN106066715, 0.15 MGD, 5/5/2/1 to a tributary of Dry Creek
- 6) Thoroughbred Farms Wastewater Treatment Plant, TPDES Permit No. WQ0014459001, EPA ID No. TX0067466, RN101265254, 0.065 MGD, 20/20 to Dry Creek
- 7) Dessau Wastewater Treatment Plant, TPDES Permit No. WQ0012971001, EPA ID No. TX0097870, RN102077328, 0.5 MGD, 10/15/3 to a tributary of Harris Branch
- 8) Brushy Creek Regional Wastewater Treatment Plant (Co-permittee with City of Round Rock, City of Cedar Park, and Brazos River Authority), TPDES Permit No. WQ010264002, EPA ID No. TX0101940, RN10082260, 21.5 MGD (annual average), 10/15/2, to Brushy Creek
- 9) Balcones Water Reclamation Plant, TCEQ Permit No. WQ0011363001, RN102095114, no discharge, irrigation of golf course, 0.292 MGD/10
- 10) Lost Creek Water Reclamation Plant, TCEQ Permit No. WQ0011319001, RN100641653, no discharge, irrigation of golf course, 0.42 MGD, 10/15
- 11) River Place Water Reclamation Plant, TCEQ Permit No. WQ0011514001, RN100843283, no discharge, irrigation of golf course, 0.207 MGD, 5/5
- 12) Hornsby Bend Biosolids Management Plant, TCEQ Permit No. WQ0003823000, EPA ID No. TXL0050005, RN100816685, biosolids treatment plant, no discharge

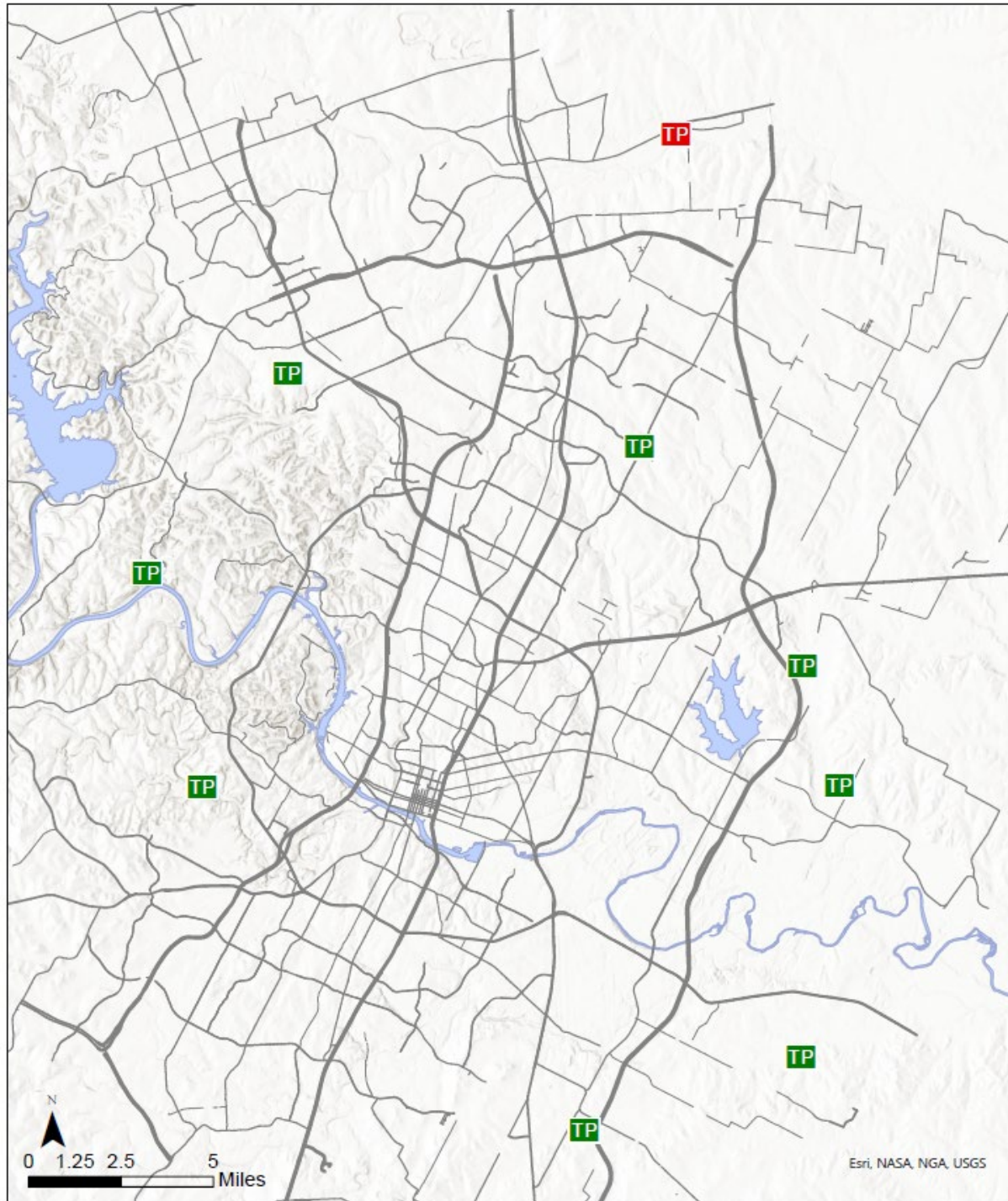
Austin's Large WWTP

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Appendix F. Map of Small Wastewater Treatment Plants



Austin's Small WWTP

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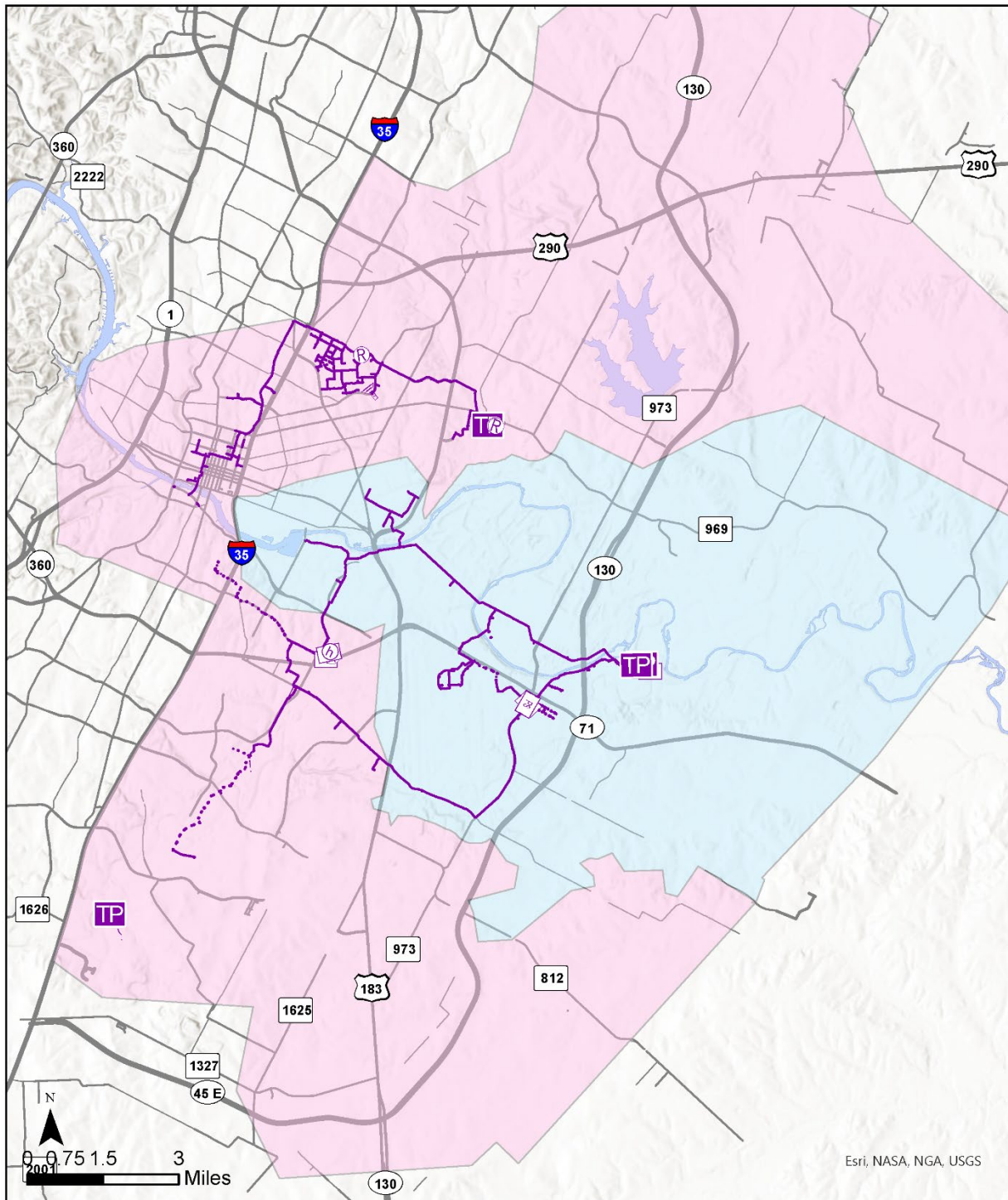


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Appendix G. Reclaimed Water System Map



ZONE_Name

- Central Low Service Area
 Central Service Area

Reclaimed Water
System

-  Pump Station
 Reservoir

TP Treatment Plant

- Reuse Main
 Proposed Reuse Main
 Abandoned Reuse Main

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March 2024



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Appendix H. Signed Resolution Showing Plan Adoption

Add signed Council Resolution

DRAFT

Appendix I. Notification of the Lower Colorado River Authority and Region K Water Planning Group

Add notifications here

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