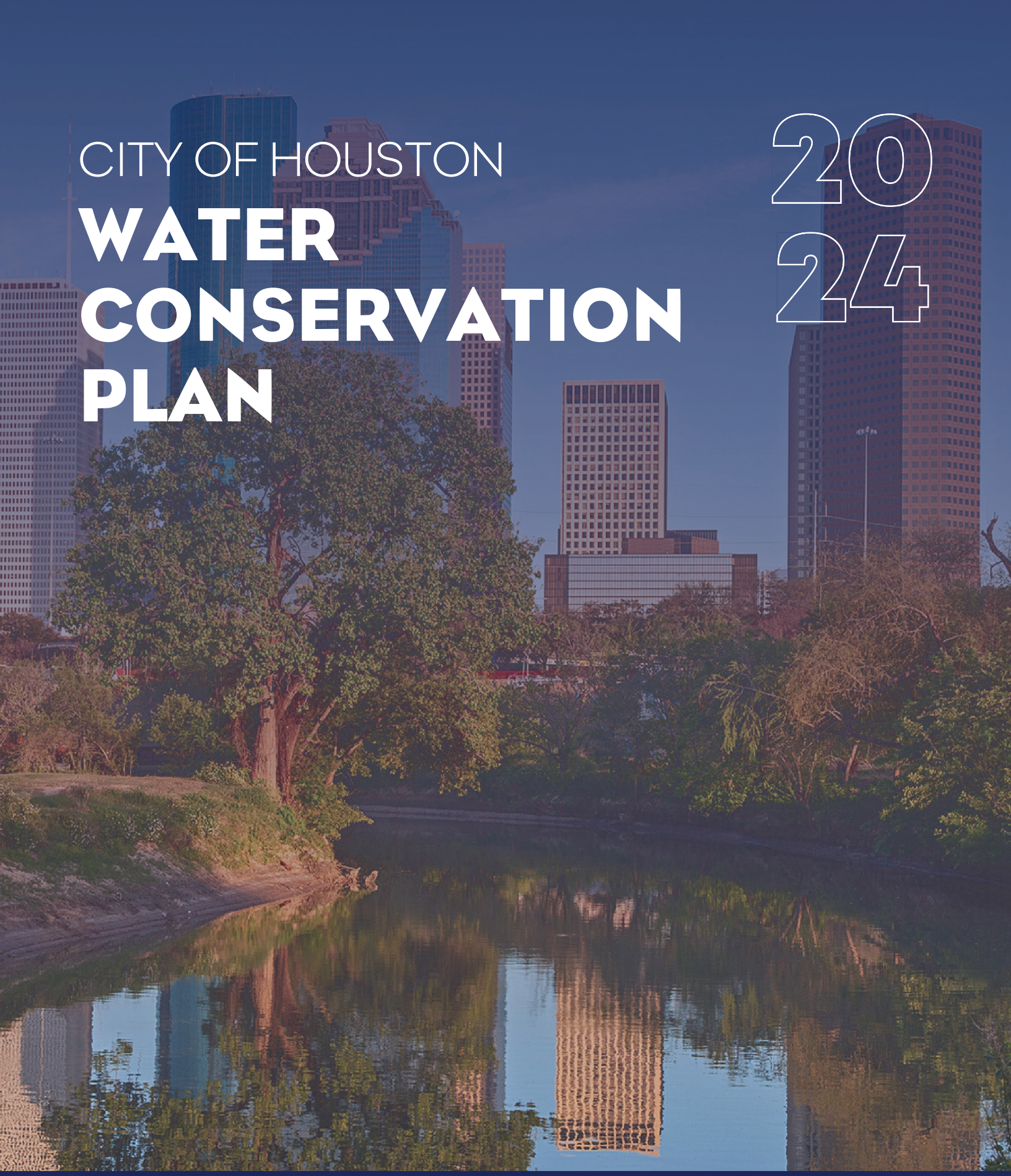

CITY OF HOUSTON

WATER CONSERVATION PLAN

2024

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HOUSTON PUBLIC WORKS

HOUSTON PUBLIC WORKS

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HOUSTON 2024 WATER CONSERVATION PLAN

1.0 INTRODUCTION

Houston provides water and wastewater service to its customers through the water service line of Houston Public Works (HPW). Houston strives to protect public health and the environment and provide superior customer service. Houston's goal is to provide all customers with drinking water that meets the State of Texas "superior" rating at pressures required to meet their daily needs.

Houston is a large regional water supplier that provides both retail and wholesale service. As of 2024, Houston supplies treated water to 2.6 million residents and an additional 2.9 million people through 69 wholesale water contracts. By 2060, the combined total is expected to reach 7.6 million people.

The State Water Plan, which details how Texas will address our state's growing water needs, calls for serious statewide conservation efforts to meet a quarter of Texas' future water needs. Region H, the fast growing, mainly urbanized region in which Houston is located, has specific conservation goals articulated in the region's plan. Houston has implemented, and will continue to develop, a wide range of water conservation programs to educate and engage customers about the importance of water and what they can do to protect and preserve this essential resource.

1.1 OBJECTIVES

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation plans. The TCEQ guidelines and requirements are included in **Appendix B**. HPW has developed this Water Conservation Plan (Plan) in accordance with TCEQ guidelines and requirements. This Plan will continually reassess opportunities to improve water efficiency and conservation based on new or updated information as available.

Water supply has always been a key issue in the development of Texas. In recent years, increasing population and economic development in southeast Texas have led to growing demands for water supplies. Local and less expensive sources of water supply are already developed and additional supplies to meet future demands will be expensive and difficult to secure. Severe drought conditions in the recent past highlight the importance of the efficient use of existing supplies to make them last as long as possible.

The purpose of the Plan is to ensure water use efficiency within an organization. The Plan is a strategy or combination of strategies for:

- Reducing the loss or waste of water;
- Reducing the consumption of water;
- Improving, or maintaining the efficiency in the use of water; or
- Increasing recycling and reuse of water.

These goals address both water conservation (using less water) and water efficiency (improving processes to use the least amount of water needed for a process). Applying strategies to achieve these goals in Houston's Plan may reduce the pressure on the existing system by

reducing water demand through water conservation measures, lower the operating costs of the existing system, extend the life of existing infrastructure which saves money, and delay the need for developing expensive alternative water sources.

To achieve its goals of maximizing water conservation and efficiency, it is necessary to develop and implement a water conservation plan that goes beyond basic compliance with TCEQ guidelines and requirements.

This Plan reflects HPW's commitment to water conservation and efficiency strategies—including best management practices established by the Water Conservation Implementation Task Force and Water Conservation Advisory Council (WCAC), which were incorporated, where practicable, in the development of water conservation measures.

The WCAC regularly reviews, updates, and creates additional best management practices through a collaborative process. The Texas Water Development Board (TWDB) published *The Complete Guide: BMPs for Municipal Water Providers* and *The Complete Guide: BMPs for Wholesale Water Providers* in 2017, both of which were consulted for this plan. Water efficiency and conservation approaches may be adjusted based on new or updated information, and as best management information becomes available on the TWDB website at https://www.twdb.texas.gov/conservation/BMPs/index.asp.

The Houston 2024 Water Conservation Plan replaces the previous plan dated July 1, 2019.

During the period of the 2019 Plan, programs implemented by HPW were impacted by the COVID-19 pandemic. Specifically, programs and projects that were public facing were heavily curtailed through 2020 and the first half of 2021. The objectives of this Plan are as follows:

- To reduce water consumption from the levels that would prevail without conservation efforts;
- To reduce the loss and waste of water;
- To improve efficiency in the use of water;
- To encourage efficient outdoor water use;
- To document the level of recycling and reuse in the water supply; and
- To extend the life of current water supplies by reducing the rate of growth in demand.

The 2024 Plan seeks to address the three Pillars of Water Equity as identified in the US Water Alliance briefing paper, "An Equitable Water Future." The three pillars of water equity are:

- Ensure all people have access to clean, safe, affordable water service;
- Maximize the community and economic benefits of water infrastructure investments; and
- Foster community resilience in the face of a changing climate.

The challenges to water equity as identified by the US Water Alliance in the briefing paper are:

- Aging and inadequate infrastructure;
- Affordability;
- Fragmentation; and
- Climate impacts.

HPW employed the three pillars of water equity as a framework to update the 2024 Plan and may achieve significant conservation savings to help extend the life of existing water supplies while ensuring affordability of water.

1.2 DEFINITIONS

Bucket: A container which holds no more than five gallons to be used singly by one person.

Commercial water use: Water use which is integral to the operations of commercial, non-profit, and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

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

Contamination: The presence of any foreign substance (organic, inorganic, radiological or biological) in water which tends to degrade its quality to constitute a health hazard or impair the usefulness of the water such that the water system cannot be used.

Customer: Any person, company, organization, or municipality using water supplied by the City of Houston.

Director: The City of Houston Public Works Director or designee.

Drought: A prolonged period of abnormally low precipitation that adversely affects growing or living conditions.

Impervious surface: Any structure, street, driveway, sidewalk, patio, or other surface area covered with brick, asphalt paving, tile or other impervious or nonporous material.

Industrial water use: The use of water in processes designed to convert materials of lower value into forms having greater usability and value.

Institutional water customer: Public, educational, or other organizations devoted to a particular cause or program including all levels of government agencies, schools, colleges, and healthcare facilities such as nursing homes and hospitals.

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

Landscape irrigation (system): A system of fixed pipes, emitters, and/or heads that apply water to landscape plants or turfgrass, including, but not limited to, inground and permanent irrigation systems, and/or hose-end sprinklers.

Landscaping plant(s): Any member of the horticultural kingdom Plantae, including any tree, shrub, vine, herb, flower, succulent, ground cover, or grass species that grows or has been planted outdoors for such purpose.

Landscape watering: The application of water to landscape trees, shrubs, plants, or grass to promote the health and/or growth of existing landscape plants.

Non-essential water use: Water use that is neither essential nor required for the protection of public health, safety, and welfare.

Person or User: The provisions of the plan shall apply to all persons, users, and property utilizing water provided by the City of Houston. The terms "person" and "user" as used in the plan includes individuals, corporations, partnerships, associations, and all other legal entities.

Production capability: The volume/amount a public water supplier can produce utilizing the current water resources and infrastructure.

Resilience: Resilience refers to the ability of an individual, community, or system to respond and adapt to crises, and to treat them as opportunities for transformation and improvement. It encompasses the capacity of all people, including vulnerable communities, to respond to shock and trauma of all kinds. In the context of water, resilience is discussed in terms of vulnerability to climate impacts and natural disasters.

Reservoir: The City of Houston raw water holding facilities, including Lake Livingston, Lake Conroe, Lake Houston, and Allen's Creek Reservoir.

Restriction device: A pipe or valve which has an orifice designed to restrict the flow of water from a water supply line through a water meter serving a customer.

Runoff: The draining away of water (or substances carried in it) from the surface of an area of land, a building or structure, etc.

Swimming pool: Any structure, basin, chamber, tank, or large tub, including hot tubs, containing water for swimming purposes, diving, or recreational bathing, and having a depth of two feet or more at any point.

Vulnerable communities: Vulnerable communities face historic or contemporary barriers to economic and social opportunities and a healthy environment. The principal factors in community vulnerability are income, race or ethnicity, age, language ability, and geographic location. This may include low-income people, certain communities of color, immigrants, seniors, children, people with disabilities, people with limited English-speaking ability, rural communities, tribal communities, people living in unincorporated areas, people living in public housing, and currently or formerly incarcerated people.

Water emergency: A water system failure due to weather, electrical or mechanical failure, contamination of source, extremely low river water allotment, or act of God or force majeure.

Water equity: Equity refers to just and fair inclusion—a condition in which everyone has an opportunity to participate and prosper. Water equity occurs when all communities have access to safe, clean, affordable drinking water and wastewater services; are resilient in the face of floods, drought, and other climate risks; have a role in decision-making processes related to water management in their communities; and share in the economic, social, and environmental benefits of water systems.

Water stress: Water stress occurs when individuals and communities face difficulty in accessing water services. It can include inadequate access to drinking water, wastewater, and stormwater services for everyday needs, whether due to lack of infrastructure, difficulty paying for services, or poor water quality. Water stress encompasses water-related climate impacts such as floods, droughts, and rising sea levels. Facilities like wastewater treatment plants can

cause stress to residential communities in the surrounding areas. Water stress also affects people that rely on water for their livelihood, such as farming communities.

Watering schedule: Permissible days for outdoor water use based upon odd and even numbered addresses or other determining guidance.

Water supply: Amount of water available to meet the immediate unrestricted customer demands based on the available water resources and infrastructure.

Wholesale water user: Potable water provided to a person, political subdivision, or municipality who is not the ultimate user of the water.

1.3 ABBREVIATIONS

Table 1-1: Abbreviations

Abbreviation	Full Nomenclature
AMI	Advanced Metering Infrastructure
AWWA	American Water Works Association
AWE	Alliance for Water Efficiency
BMP	Best Management Practices
CEC	Citizens' Environmental Coalition
EPA	Environmental Protection Agency
EPAct	Environmental Protection Act
FOG	Fats, Oils, Grease
GPCD	Gallons per Capita per Day
GPF	Gallons of Water per Flush
GPM	Gallons per Minute
HPARD	Houston Parks and Recreation Department
HETs	High Efficiency Toilets
HPW or Houston	Houston Public Works
ICI	Industrial, Commercial, and Institutional
ICIM	Industrial, Commercial, Institutional, and Multifamily
ILI	Infrastructure Leakage Index
LEED	Leadership in Energy and Environmental Design
MGD	Million Gallons per Day
MUD	Municipal Utility District
PACE	Property Assessed Clean Energy Program
RWH/CR	Rainwater Harvesting and Condensate Reuse
RWPG	Regional Water Planning Group
TAC	Texas Administrative Code
TEK	Texas Essential Knowledge and Skills
TCEQ	Texas Commission on Environmental Quality
TWDB	Texas Water Development Board
UARL	Unavoidable Annual Real Losses
W.A.T.E.R.	Water Aid to Elderly Residents
WCAC	Water Conservation Advisory Council
WCTT	Water Conservation Tracking Tool

2.0 REGULATORY BASIS FOR WATER CONSERVATION PLAN

2.1 TCEQ RULES GOVERNING CONSERVATION PLANS

TCEQ rules governing development of water conservation plans for public water suppliers are contained in *Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code*, which is included in **Appendix B**. For these rules, a water conservation plan is defined as "a strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water." The elements in the TCEQ water conservation rules covered in this conservation plan are listed below.

There are three instances when a water conservation plan should be submitted to the TWDB:

- entities applying for or currently receiving financial assistance of greater than $500,000 from the TWDB;
- entities with 3,300 connections or more; or
- entities that have surface water rights through TCEQ.

Additionally, TCEQ rules governing development of the conservation plans for public water suppliers are contained in *Title 30 Part 1, Chapter 288, Subchapter B, Rule §288.20 of the Texas Administrative Code*, which is included in **Appendix B**. For these rules, a drought contingency plan is defined as "a strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies. A drought contingency plan may be a separate document identified as such or may be contained within another water management document(s)." Houston's Drought Contingency and Emergency Water Management Plan is in **Appendix D**.

2.1.1 Minimum Conservation Plan Requirements

The minimum requirements in the Texas Administrative Code for Water Conservation Plans for Public Water Suppliers are covered in this report as follows:

- 288.2(a)(1)(A) – Utility Profiles – Section 4.0 and Appendix C
- 288.2(a)(1)(B) – Record Management System – Section 6.1.3
- 288.2(a)(1)(C) – Specific, Quantified Goals – Section 5.0
- 288.2(a)(1)(D) – Accurate Metering – Section 6.2.3
- 288.2(a)(1)(E) – Universal Metering – Section 6.2.3
- 288.2(a)(1)(F) – Determination and Control of Water Loss – Section 6.2.3
- 288.2(a)(1)(G) – Public Education and Information Program – Section 6.1.5
- 288.2(a)(1)(H) –Water Rate Structure – Section 6.1.2
- 288.2(a)(1)(I) – Reservoir System Operation Plan – Section 4.1
- 288.2(a)(1)(J) – Means of Implementation and Enforcement – Section 5.2
- 288.2(a)(1)(K) – Coordination with Regional Water Planning Groups – Section 5.3 and Appendix F
- 288.2(c) – Review and Update of Plan – Section 9.0

2.1.2 Conservation Additional Requirements (Population over 5,000)

The Texas Administrative Code includes additional requirements for water conservation plans for drinking water supplies serving a population over 5,000:

- 288.2(a)(2)(A) – Leak Detection, Repair, and Water Loss Accounting – Section 6.2
- 288.2(a)(2)(B) – Requirement for Water Conservation Plans by Wholesale Customers – Section 6.1.8

2.1.3 Additional Conservation Strategies

The Texas Administrative Code lists additional conservation strategies, which may be adopted by suppliers but are not required. Additional strategies adopted by the City of Houston include the following:

- 288.2(a)(3)(A) – Conservation Oriented Water Rates – Section 6.1.2
- 288.2(a)(3)(B) – Ordinances, Plumbing Codes and Rules on Water-Conserving Fixtures – Section 6.1.8
- 288.2(a)(3)(C) – Replacement of Retrofit of Water-Conserving Fixtures – Section 6.2.5
- 288.2(a)(3)(D) – Reuse and Recycling of Wastewater – Section 6.2.4
- 288.2(a)(3)(E) – Pressure Control and Reduction – Section 6.1.3
- 288.2(a)(3)(F) – Considerations for Landscape Water Management Regulations – Section 6.1.4
- 288.2(a)(3)(G) – Method to Monitor Plan Effectiveness/Efficiency – Section 5.2
- 288.2 (a)(3)(H) – Other Water Conservation Practices – Section 6.1

In addition to being a public water supplier under TCEQ rules, the City of Houston also acts as a wholesale provider so TCEQ water conservation rules for wholesale providers are also addressed.

The TCEQ rules governing development of water conservation plans for wholesale water suppliers are contained in *Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.5* of the Texas Administrative Code, which is included in Appendix B. The elements in the TCEQ water conservation rules for wholesale water suppliers addressed in this Plan are listed below.

2.1.4 Minimum Conservation Plan Requirements for Wholesale Water Suppliers

The minimum requirements in the Texas Administrative Code for water conservation plans for wholesale water suppliers are covered in this Plan as follows:

- 288.5(1)(A) – Description of Service Area – Section 4.0 and Appendix C
- 288.5(1)(B) – Specific, Quantified Goals – Section 5.0
- 288.5(1)(C) – Measure and Account for Water Diverted – Section 6.2.3
- 288.5(1)(D) – Monitoring and Record Management System – Section 6.1.3
- 288.5(1)(E) – Program of Metering and Leak Detection and Repair – Section 6.2.3
- 288.5(1)(F) – Requirement for Water Conservation Plans by Wholesale Customers – Section 6.1.8
- 288.5(1)(G) – Reservoir System Operation Plan – Section 4.1
- 288.5(1)(H) – Means of Implementation and Enforcement – Section 5.2

- 288.5(1)(I) – Documentation of Coordination with Regional Water Planning Groups – Section 5.3 and Appendix F
- 288.5(3) – Review and Update of Plan – Section 7.0

2.1.5 Additional Conservation Strategies for Wholesale Water Suppliers

The Texas Administrative Code lists additional water conservation strategies that can be adopted by a wholesale supplier but are not required. Additional strategies adopted by the City of Houston include the following:

- 288.5(2)(D) – Other Water Conservation Practices – Section 3.2 and Section 6.1

3.0 BEST MANAGEMENT PRACTICES

3.1 GUIDANCE AND METHODOLOGY FOR REPORTING ON WATER CONSERVATION AND WATER USE

In addition to TCEQ rules regarding water conservation, this Plan incorporates elements of the *Guidance and Methodology for Reporting on Water Conservation and Water Use* (the Guidance) developed by TWDB and TCEQ, in consultation with the WCAC. The Guidance was developed in response to a charge by the 82nd Texas Legislature to develop water use and calculation methodology and guidance for preparation of water use reports and water conservation plans in accordance with TCEQ rules. HPW has considered elements of the Guidance in preparation of this Plan.

3.2 TWDB WATER CONSERVATION PLANNING TOOL

The TWDB has developed a Municipal Water Conservation Planning Tool for utilization by utilities to evaluate various best management practices. The tool is pre-loaded with data submitted by utilities as part of the water use surveys and has a library of best management practices with water savings and associated cost. HPW utilized the tool in development of the per capita goals in this Plan and for comparing cost and savings. HPW encourages each of its Wholesale Customers to utilize the tool, to the extent practical, for water conservation planning.

3.3 ANALYSIS OF BEST MANAGEMENT PRACTICES

Historically, HPW has tracked the implementation and effectiveness of water conservation plans through the Water Conservation Annual Report, Utility Profile, and Water Loss Audit Report, which are submitted to the TWDB every year.

In 2019, HPW began using the American Water Works Association (AWWA) Utility Benchmarking Tool as an additional tracking method. The Utility Benchmarking Tool tracks utility performance data and calculates performance indicators in areas such as organizational development, business operations, customer service, and water and wastewater operations. Per the AWWA, these indicators are designed to help utilities improve operational and managerial effectiveness. Benchmarking utility performance indicators will allow Houston to track performance and compare results with peers to identify areas for improvement.

Houston water conservation efforts are ongoing with innovative programs developed and evaluated annually. Programs are designed and budgets developed based on planned

participation. Where applicable, programs are evaluated in terms of annual water savings, project life, and cost per unit of water saved. These programs serve as tools for achieving both short-term and long-term reductions in per capita consumption and are selected based on their potential for reducing water use at the lowest cost per unit of water saved. These tools and programs are discussed in more depth in Section 6.

Annually, HPW calculates consumption and tracks changes for customer use in gallons per customer per day. This information is used to gauge the effectiveness of programs to achieve the consumption reductions desired and, if performance is below target, to alter, change or introduce new conservation programs. Programs are based on TCEQ and TWDB best management practices (BMPs) as outlined below:

- Programs that have been implemented in the past (benefits continue);
- Programs currently in implementation;
- Programs scheduled for implementation; and
- Programs currently under consideration for implementation.

To update the Plan, HPW evaluated the best management practices outlined in the *Water Conservation Best Management Practices Guides for Municipalities and Wholesale Providers*. **Table 3-1** lists water conservation strategies required or recommended as BMPs for municipal water utilities by the TCEQ and TWDB. **Table 3-1** indicates whether they are currently employed or whether they will be considered to meet future per capita reduction goals. It is important to remember that previously implemented programs, such as toilet and washing machine replacement programs, will continue to have a significant impact on per capita water use well after the program phases out.

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Table 3-1: Water Conservation Best Management Practices Implementation Schedule (continued)						
BMP	**Best Management Practices (BMP) Description**	**Implementation Schedule**				**Notes**
		Code	**Before 2024**	**Before 2029**	**Before 2034**	
Municipal BMPs						
Conservation Analysis and Planning						
2.1	Conservation Coordinator		✓			A conservation position was added as part of the creation of a Water Conservation Division within Houston Water.
2.2	Cost-Effectiveness Analysis for Municipal Water Users		✓			Use multiple analysis tools across Houston Water
2.3	Water Survey for Single-Family and Multi-Family Customers			✓		Future Consideration for Single-Family Surveys
2.4	Customer Characterization			✓		Future Consideration
Financial						
3.1	Water Conservation Pricing	✓	✓			Future Consideration for additional customer classes
3.2	Wholesale Agency Assistance Programs		✓			
Systems Operations						
4.1	Metering of All New Connections and Retrofit of Existing Connections		✓	✓		About 80,000 Sensus point devices have been installed as of 2023. Plan to replace all meters over time.
4.2	System Water Audit and Water Loss		✓			$4.2B toward water and wastewater projects using CAP 5-year funding
Landscaping						
5.1	Athletic Field Conservation			✓		Future Consideration
5.2	Golf Course Conservation			✓		Future Consideration for two municipal golf courses managed by Houston and three municipal courses managed by private companies.
5.3	Landscape Irrigation Conservation and Incentives		✓			Promotes WaterMyYard.org App for weekly watering needs and Houston Chapter of the Native Plant Society website for planting needs. Outdoor conservation tips on HPW website.

Table 3-1: Water Conservation Best Management Practices Implementation Schedule (continued)						
BMP	Best Management Practices (BMP) Description	Implementation Schedule				Notes
		Code	Before 2024	Before 2029	Before 2034	
Municipal BMPs						
5.4	Park Conservation		✓			Future Consideration
5.5	Residential Landscape Irrigation Evaluations			✓		Future Consideration, as part of water survey or as stand alone
5.6	Outdoor Watering Schedule			✓		Future Consideration for Drought Contingency Only
Education and Public Awareness						
6.1	Public Information		✓			Continue current programs
6.2	School Education		✓			Continue current programs
6.3	Public Education and Outreach		✓			Continue current programs
6.4	Partnerships with Nonprofit Organizations		✓			See examples of active partnerships in multiple public education and awareness events and programs.
Rebate, Retrofit, Incentive Programs						
7.1	Conservation Programs for Industrial, Commercial, and Institutional Accounts		✓			Offered to 50 customers – will evaluate for future
7.2	Residential Clothes Washer Incentive Program		✓			Pilot Program faucets, showerheads, toilets, and clothes washers will inform future programs.
7.3a	Plumbing Code Residential Toilet Replacement Programs	✓				Adopted Per City Plumbing Code.
7.3b	Additional Residential and Commercial Toilet Replacement Programs		✓			Pilot Program for faucets, showerheads, toilets, and clothes washers.; Giveaway programs for showerheads, aerators, and dye leak detection tabs; Consider program for multifamily properties.
7.4a	Plumbing Code Showerhead, Aerator and Toilet Flapper Retrofit	✓				Adopted Per City Plumbing Code
7.4b	Additional Showerhead, Aerator and Toilet Flapper Retrofit Program		✓			Pilot Program for faucets, showerheads, toilets, and clothes washers.; Giveaway programs for faucet aerators and dye leak detection tabs.

Table 3-1: Water Conservation Best Management Practices Implementation Schedule (continued)						
BMP	**Best Management Practices (BMP) Description**	**Implementation Schedule**				**Notes**
		Code	**Before 2024**	**Before 2029**	**Before 2034**	
Municipal BMPs						
7.5	Water Wise Landscape Design and Conversion Programs		✓			Not recommended
7.6	Industrial, Commercial, Institutional, and Multifamily (ICIM) Custom Conservation Rebates		✓			PACE loan program began in 2015
7.7	Plumbing Assistance Programs for Economically Disadvantaged Customers			✓		Future Consideration based on pilot program
Conservation Technology						
8.1	New Construction Graywater					Not recommended
8.2	Rainwater Harvesting and Condensate Reuse		✓			Rain Barrel sales began in 2012; Evaporation Credit Program for Cooling Towers
8.3	Water Reuse		✓			Onsite Irrigation and Plant Washdown
Regulatory and Enforcement						
9.1	Prohibition on Wasting Water	✓				Drought Continency Plan will require by Ordinance
9.2	Conservation Ordinance Planning/Development			✓		Future Consideration for irrigation ordinances
9.3	Enforcement of Irrigation Standards			✓		Future Consideration for watering restriction schedules, especially during drought
Wholesale BMPs						
2.1	Customer Contract Requirement to Develop and Implement Water Conservation / Drought Contingency Plans		✓			Required after official adoption of the plan and according to Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code.
2.2	Technical Assistance and Outreach		✓			
3.1	Cost-Share Program					
3.2	Collective Purchase and Direct Distribution of Water Conservation Equipment					

4.0 DESCRIPTION OF SERVICE AREA AND UTILITY PROFILE

4.1 DESCRIPTION OF SERVICE AREA

Houston is the largest city in Texas, home to 2.6 million residents as of 2023. HPW, the largest water/wastewater utility in the state, supplies an additional 2.9 million people through contract and wholesale customers outside the city limits.

Houston is an active participant in the Region H Regional Water Planning Group (RWPG). Region H includes all or part of 15 counties: Austin, Brazoria, Chambers, Fort Bend, Galveston, Harris, Leon, Liberty, Madison, Montgomery, Polk (partial), San Jacinto, Trinity (partial), Waller, and Walker.

Houston is a regional water supplier. It operates three water supply reservoirs, three water purification plants, 146 groundwater wells, 55 groundwater plants, 8 re-pressurization plants, and more than 7,660 linear miles of distribution pipeline across a four-county area consisting of more than 650 square miles, making HPW's water system one of the most complex water systems in the nation.

Eighty-five percent of Houston's municipal water supply is derived from their three water purification plants, which have a combined production capacity of up to 640 million gallons per day (MGD). These plants are the Northeast Water Purification Plant (rated at 80 MGD), located at Lake Houston and serves the northern region of Houston's service area; the East Water Purification Plant (rated at 360 MGD), located east of I-610 and west of Greens Bayou and serves the central region of HPW's service area; and the Southeast Water Purification Plant (rated at 200 MGD), located north of Clear Lake and serves the southeastern region of Houston's service area. These plants meter all water produced and pressurize water at between 80 and 90 psi.

The remaining 15% of HPW's municipal water supply is provided by 146 groundwater wells, which have a combined production capacity of up to 200 MGD. Three of the wells are permitted by the Lone Star Groundwater Conservation District, three by the Fort Bend Subsidence District, and the remaining 140 wells by the Harris-Galveston Subsidence District.

In 2023, retail and wholesale usage were 167.7 billion gallons of treated water, averaging 456.6 MGD.

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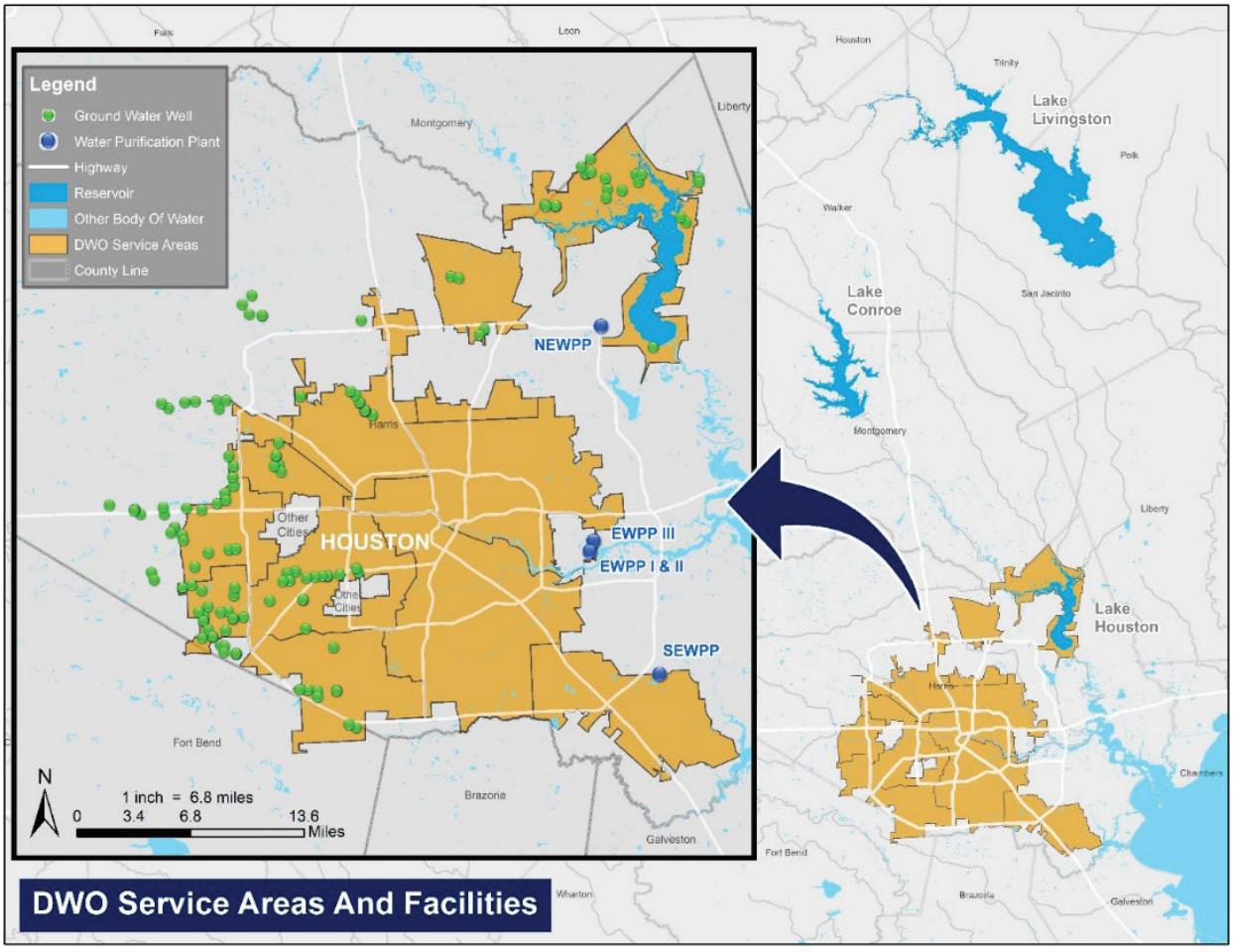
Figure 4-1 shows Houston's retail water service area, water sources, and water treatment plants.

Figure 4-1: City of Houston Water Service Area and Facilities



**Source: Houston Public Works*

HPW provides untreated, treated, and reclaimed water to wholesale customers by contract. As of 2023, Houston has 161 wholesale contracts, 68 with cities, municipal utility districts (MUD), and regional water authorities for treated water service. In 2023, these treated water contract customers used 83.3 billion gallons, averaging 228.2 MGD.

HPW has raw water reservoirs, including Lake Livingston, Lake Conroe, and Lake Houston. **Table 4-1** outlines HPW's permitted raw water diversions.

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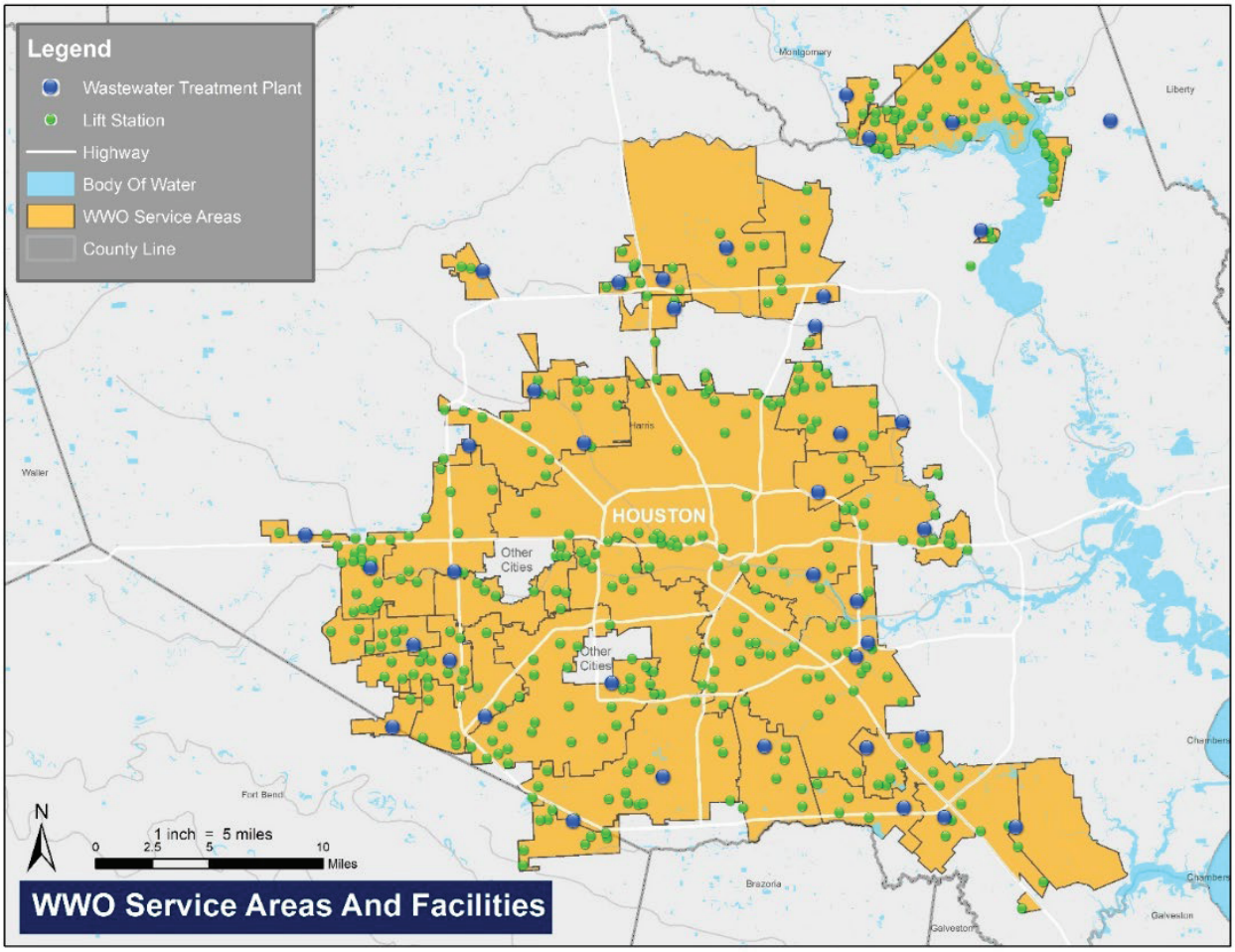
Table 4-1: Adjudicated Water Rights					
Water Right #	Permitted Use	Source	Quantity		Priority Date
			Acre Ft/Yr.	MGD	
10-4965	Multiple Use	Lake Houston (1)	112,000	100	May 7, 1940
		Lake Houston (1)	56,000	50	February 26, 1944
	Subtotal		**168,000**	**150**	
10-4963	Multiple Use	Lake Conroe (2)	66,667	59.5	January 12, 1959
10-5807	Multiple Use	Lake Houston	14,100	12.6	December 3, 2008
10-5808	Multiple Use	San Jacinto River	40,000	35.7	September 22, 2009
10-5826	Multiple Use	Multiple Bayous	130,000	116	March 26, 2004
10-5827	Reuse	Multiple Bayous	290,462	259.1	May 14, 2004
08-4261	Multiple Use	Lake Livingston	444,000	396.4	September 23, 1959
	Multiple Use	Lake Livingston	458,800	409.6	September 23, 1959
	Subtotal		**902,800**	**806**	
	Municipal	Wallisville	10,000	8.9	September 23, 1959
	Industrial	Wallisville	28,000	25	September 23, 1959
	Subtotal		**38,000**	**33.9**	
	Multiple Use	Southern Canal (3)	31,600	28.2	December 30, 1913
	Multiple Use	Southern Canal (3)	13,400	12	December 30, 1913
	Subtotal		**45,000**	**40.2**	
08-4277	Irrigation	Dayton Canal	33,000	29.5	July 2, 1913
	Irrigation	Dayton Canal	5,000	4.5	August 25, 1969
	Subtotal		**38,000**	**34**	
12-5851	Multiple Use	BRA SYSOP	33,333		October 15, 2004
TOTALS			**1,766,362**	**1,546.90**	
1	*Municipal, Industrial and Irrigation (Multiple Use)*				
2	*Houston's 2/3 undivided share by use*				
3	*Run-of-river right included in Certificate of Adjudication No. 08-4261 with Lake Livingston and Wallisville. Purchased 1969.*				

4.2 TREATMENT CAPACITY

The City's service area is currently served by 3 surface water treatment plants and 55 groundwater plants. The approved surface water treatment capacity for the three surface water plants is 535 MGD, while the approved groundwater treatment capacity is 370 MGD. These plants are shown in **Figure 4-1**.

The City has a wastewater treatment capacity of 563.7 MGD with a total of 38 treatment facilities and 3 sludge plants. **Figure 4-2** shows the location of the City's wastewater treatment facilities.

Figure 4-2: City of Houston Wastewater Service Area and Facilities



**Source: Houston Public Works*

Appendix C contains Houston's most recent Water Utility Profile based on the formats recommended by TCEQ for both retail suppliers and wholesale suppliers.

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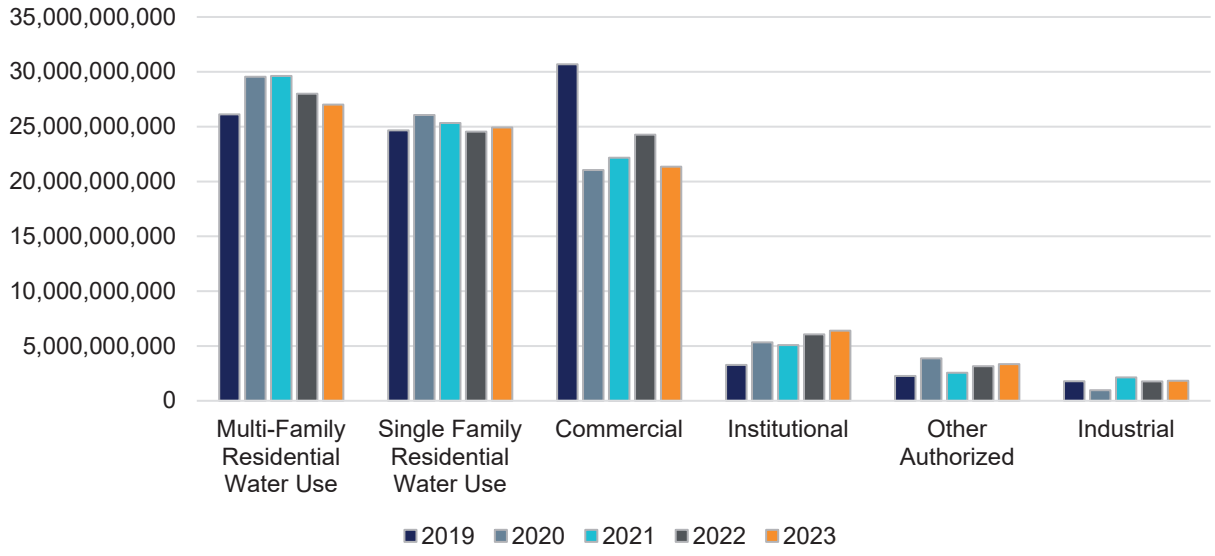
Figure 4-3 shows the categories of water use for HPW. The Other category includes water authorized for other uses, including back flushing, line flushing, storage tank cleaning, fire department use, municipal government offices, or municipal golf courses/parks.

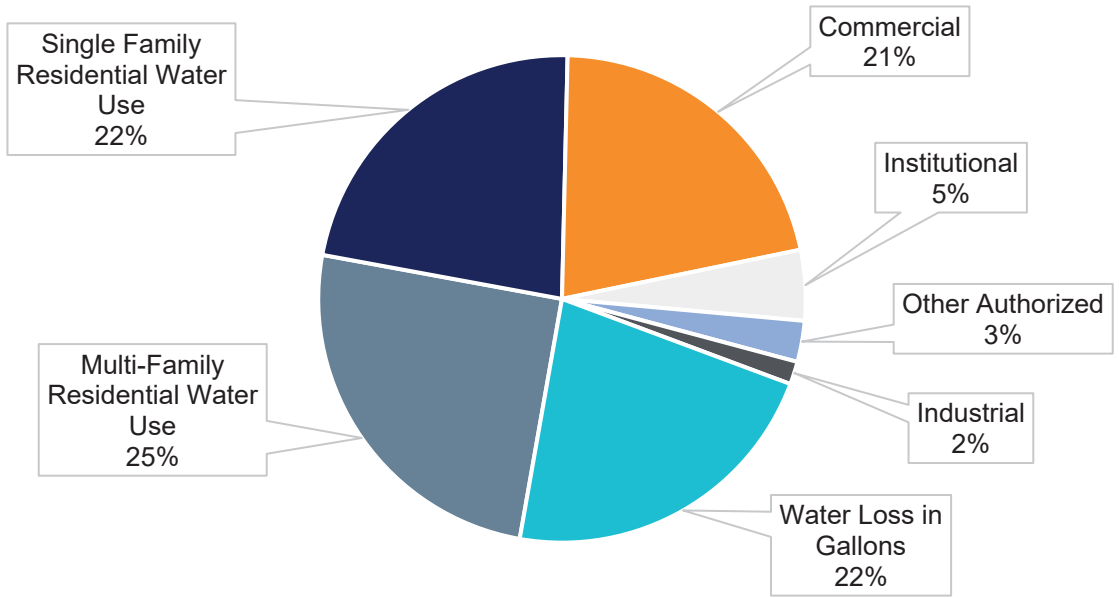
Figure 4-3: Houston Water Consumption by Use Category



Source: TWDB Water Conservation Annual Reports

Figure 4-4 illustrates the percentage of water used per category, averaged for the period from 2019-2023.

Figure 4-4: Percentage of Water Consumption by Category
(Based on 2019-2023 Average Yearly Consumption in Gallons)



Source: TWDB Water Conservation Annual Reports

5.0 SPECIFICATION OF WATER CONSERVATION GOALS

5.1 TCEQ WATER CONSERVATION GOALS

TCEQ rules require the adoption of specific water conservation goals for a water conservation plan. The goals for this Plan include the following:

- Maintain the 5-year moving average total per capita and residential per capita water use below specified amount in **Table 5-1**.
- Maintain the level of water loss in the system below the specified amount in **Table 6-2**.
- Maintain a program of universal metering and meter replacement and repair as discussed in Section 5.2.
- Maintain the Infrastructure Leakage Index (ILI), as described in Section 6.1.3, below the specified amount in **Table 6.2**.
- Raise public awareness of water conservation and encourage responsible public behavior by a public education and information program as discussed in Section 6.1.
- Increase efficient water usage and decrease waste in lawn irrigation by enforcement of reasonable irrigation and landscape water management regulations described in Section 7.3, 7.4, and 7.5.

5.2 GPCD GOALS

The 2022 TWDB State Water Plan required the 16 regional water planning groups to set per capita water use goals for municipal water users. Texas has 16 RWPGs, one for each designated regional water planning area (A–P). The RWPGs have many responsibilities; however, they have a limited scope and authority, and are non-regulatory The bottom-up approach to the state long-range water planning process was designed to focus RWPGs on the identification of water needs (potential shortages) and feasible water management strategies to ensure there are adequate water supplies in times of drought. RWPGs are tasked to develop 50-year Regional Water Plans that serve the entire region and take into consideration the water needs of all water use categories within the region. Regional Water Plans must reflect and respond to changes in population, water supplies, technological improvements, economic shifts, project viability, and state policy.

HPW works with the Region H Water Planning Group to help develop the water conservation plan documents. This Plan is consistent with RWPG methodology and structure. A letter documenting that a copy of the Water Conservation Plan was sent to the Chair of the Region H Water Planning is attached in **Appendix F**.

The Gallons per Capita per Day (GPCD) measure provides a numeric goal for water utilities to evaluate success of water conservation strategies. **Total GPCD** includes water use by residential, industrial, commercial, and institutional (ICI) customers. **Residential GPCD** includes the water use of only the residential population housed in single family and multi-family housing. It includes both indoor and outdoor water use.

The State and Regional Water Plans include each water entity setting goals for reducing water consumption over a five- and ten-year period.

Houston's goals are shown in **Table 5-1** and **Figure 5-1**. The determination of specific water conservation targets relies on several factors, including planned BMPs, past water consumption trends, data from relevant literature, and insights gained from the practices of other utilities. These targets encompass the collective contributions of all programs and components toward achieving water savings.

HPW completes a TCEQ-required **Water Conservation Annual Report** that includes various water conservation strategies that have been implemented, including the date of implementation. Additionally, the report includes progress made on the five- and ten-year per capita water use goals from this Plan, including the amount of water saved. If the goals are not being met, Houston must document why not in the report.

The GPCD goals in **Figure 5-1** and **Table 5-1** are based on a reduction calculation of **0.4 GPCD** for each year for the five- and ten-year periods.

Table 5-1: Projected GPCD Goals (5-Year Rolling Average)

Description	Units	2023	2029	2034
Total GPCD[a.]	GPCD	126	124	122
Residential GPCD[b]	GPCD	59	58	57

a. Total GPCD = (Total Gallons in System ÷ Permanent Population) ÷ 365
b. Residential GPCD = (Gallons Used for Residential Use ÷ Residential Population) ÷ 365

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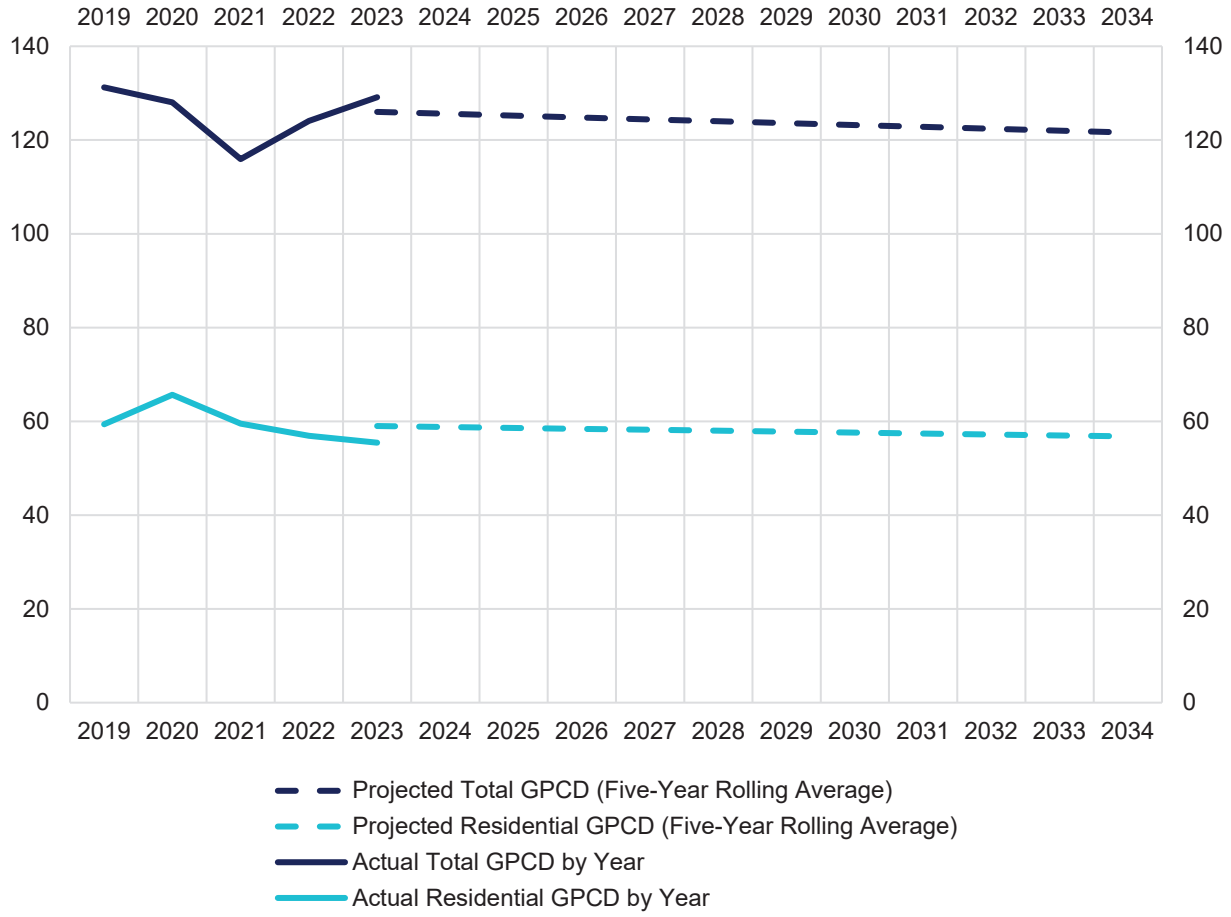
Figure 5-1 shows historic total and residential GPCD since 2019 and projected total and residential GPCD for a ten-year period.

Figure 5-1: Houston Water Historic and Projected GPCD
(Total and Residential)



**Source: TCEQ Water Conservation Annual Reports*

About half the regional planning groups selected 140 GPCD as part of the 2022 State Water Plan. HPW has already achieved the State Water Plan goal of 140 GPCD. Houston has the advantage of living in one of the Texas regions typically receiving abundant rainfall. In Texas, landscape irrigation makes up a substantial portion of water use, especially for residential customers. With sufficient rainfall resulting in less use of water for irrigation, Houston can achieve a lower GPCD easier than most Texas Cities.

As shown in **Figure 5-1**, the Total GPCD and Residential GPCD for 2019-2023 do not follow the same track. In 2020, COVID-19 resulted in an increase in residential water use and a decrease in ICI water use. The Total GPCD increase in 2023 was affected by a combination of weather conditions, including extreme drought, lower than average precipitation, and higher than average temperatures.

Weather is a major factor in water use and can cause significant variations in water use from one year to the next. To smooth out the impacts of short-term, yearly weather changes due to prolonged periods of excessive heat and/or drought, HPW uses a five-year rolling average to determine GPCD goals and track progress.

6.0 PRACTICES TO MEET CONSERVATION GOALS

6.1 CURRENT CONSERVATION PROGRAMS

6.1.1 Conservation Analysis and Planning BMPs

Water Conservation Division and Conservation Coordinator (BMP 2.1)

As stated in BMP 2.1, the designation of a conservation coordinator is required by House Bill 1648, effective September 1, 2017, for all retail public water utilities with 3,300 service connections or more.

In 2019, Houston established a Water Conservation group within the Houston Water Planning branch. This group is directed by a Senior Division Manager who is responsible for implementing this Plan and developing programming that produces measurable outputs to help HPW reach its GPCD and water loss five-year and ten-year targets. This position is designated as the Water Conservation Coordinator.

Cost Effective Analysis (BMP 2.2)

As stated in BMP 2.2, cost effective analysis may allow HPW to determine the economic benefit of a decision to decide whether it is worth pursuing, continuing, or ending conservation programs and efforts. This allows prioritization of conservation programs balancing community impact with operational costs of running the program and benefits are limited to those that are measurable, which has potential to bias decision-making.

To address how much water-use conservation can be cost-effectively achieved, a team of researchers led by Dr. Timothy T. Loftus, Professor of Practice in Geography and Water Resource Strategist for the Meadows Center for Water and the Environment, developed a suite of water conservation program scenarios, tailored for Houston, that individually and collectively indicate a positive benefit-cost ratio. This project was funded by the City of Houston and the Houston-Galveston Subsidence District, as part of the District's 2019 Water Conservation Grant Program.

The Water Conservation Tracking Tool (WCTT), an MS-Excel-based model developed for the AWE, has been applied in developing conservation program scenarios. The model-based tool is designed to help a water service provider plan for and track water conservation program activity and results. The tool provides an analytical framework for estimating the effects that plumbing/appliance standards and planned conservation programs will have on future water use, utility costs, sales revenue, and average customer rates and bills. The tracking tool evaluates these effects in terms of costs and benefits from the perspectives of the utility (and its ratepayers) and program participants. Costs and benefits are calculated separately for each conservation measure evaluated and can be used to help screen measures and construct program portfolios. Scenarios are developed for residential meter-class accounts and commercial/institutional meter-class accounts. Separate scenarios are evaluated for residential indoor and outdoor water use.

To track conservation activities, Houston uses conservation software developed by a third-party vendor, the Goldwater Wholesaler Platform. This software platform allows HPW and its wholesale customers to visualize and quantify the impacts of specific conservation and efficiency programming on retail and wholesale customer consumption behavior. With this information, HPW and its wholesale contract customers make informed decisions regarding what programming to invest in, and more easily communicate the value of these programs to their ratepayers and elected officials.

Houston Water Planning is developing a digital twin platform to manage all aspects of water together, including water conservation and water loss.

This comprehensive approach to conservation is critical to a large regional water supplier like HPW, with benefits including:

- Creation of a single data and communication hub for information on conservation activities throughout the retail and wholesale system;
- Regional reduction of peak-day, peak-season, and long-term demand on Houston's water system using highly advanced conservation analytics;
- Avoidance of transmission, treatment, distribution, and wastewater costs due to coordinated conservation programming across the retail and wholesale system; and
- Deferment of plant expansion costs due to coordinated conservation programing across the retail and wholesale system.

6.1.2 Financial BMPs

Water Conservation Rates (BMP 3.1)

Per BMP 3.1, TCEQ requires municipal utilities to have a non-promotional water rate structure. HPW is reviewing additional financial relief programs and policies, water conservation programs, and recently underwent a rate restructuring. To cover increasing costs, water and sewer rates are adjusted each year in April. Houston has had an inclining rate structure where the unit price increases as water consumption increases. The utility uses pricing as both a demand management tool and a way to generate additional revenue.

Houston structures its retail and wholesale rates such that the utility achieves adequate cost recovery and satisfies legal requirements to reflect the cost of service for each type of customer while ensuring everyone pays their fair share.

The annual automatic adjustment is required by bond holders and partially addresses the rising cost of running HPW. The rate updates address the rising cost of service, including maintaining, replacing, and upgrading aging infrastructure, paying debts, and maintaining reserves. HPW last increased water and wastewater rates beyond the automatic annual rate adjustments in 2010. Every five years, HPW completes an in-depth Water and Wastewater Cost of Service Rate Study to ensure that water and Wastewater rates recover all the costs of services. In 2021, HPW completed a new Rate Study, which determined that water and wastewater rates must be increased to meet these rising costs.

City of Houston Ordinance 2021-515 passed by City Council on June 23, 2021, approved a revenue increase of 9% for water and 20% for wastewater, effective September 1, 2021. Rates

for all classes can be found at https://www.houstontx.gov/citysec/HPW/ratestable.pdf or in Appendix C.

Wholesale Agency Assistance Program (BMP 3.2)

Wholesale agency assistance program measures are designed to deliver assistance to its wholesale utility customers who purchase water and provide retail water service to customers. Under BMP 3.2, the wholesale agency will provide financial and/or technical support to wholesale purchasers to advance water conservation efforts both for the wholesale customer and its retail water customers. Financial support should consist of incentives or equivalent resources as appropriate and beneficial. All BMP programs that target retail water customers should be supported when they can be shown to be cost-effective in terms of avoided cost of water from the wholesaler's perspective.

Houston Water's Wholesale Water Conservation Program can be found at https://www.houstonpublicworks.org/wholesale-customers. HPW is committed to ensuring a reliable future water supply for Houston and its customer water utilities. The Wholesale Water Conservation Program is offered free to wholesale treated water customers and provides consulting services utilizing the Goldwater Dashboard planning tool. Using Goldwater's Wholesaler Platform, utilities can easily accomplish the following, free of charge:

- Track and quantify conservation savings;
- Assess progress for meeting conservation goals;
- Evaluate out different water savings and cost scenarios;
- Assist with compiling data for required annual reports and plans; and
- Receive a Findings Report to present to stakeholders.

These tools will make it easier to reduce overall and peak water demands and serve as an effective communication tool for stakeholders and decision-makers.

6.1.3 System Operations BMPs

Metering of All New Connections and Retrofit of Existing Connections (BMP 4.1)

One of the key elements in water conservation is careful tracking of water use and control of losses. Reducing nonrevenue water is one of the few conservation programs that directly impacts rates. Programs for universal metering, meter testing, meter repair, and periodic meter replacement have been developed using AWWA standards and are essential elements in the HPW program to control losses.
As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), the record management system for water pumped, water delivered, and water sold; estimates for water losses; and allows for the separation of water sales and uses into residential (single family, multifamily), commercial, institutional, and industrial categories. This information is included in the TCEQ-required Water Conservation Annual Report, as described in Section 6.1.8.

HPW meters all the connections in the distribution system. The connection distribution by water use category is included in **Table 6-1** below. Meters range in size from ¾ inches to 16 inches. All meters met AWWA accuracy standards when installed.

Table 6-1: Connection Distribution by Water Use Category	
Meter Type by Water Use Category	**Total Number**
Residential – Single Family	430,799
Residential – Multifamily	695,891
Industrial	276
Commercial	59,518
Institutional	4,443
Total	**1,190,927**

**Source: TWDB Water Use Survey 2023*

System Water Audit and Loss Control (BMP 4.2)

Per BMP 4.2, water loss audits and water loss programs are effective methods of accounting for all water usage by a utility. Performing a reliable water loss audit is the foundation of production-side water resource management and loss control in public drinking water systems. The structured approach of a water loss audit allows a utility to reliably track water uses and provides the information needed to address unnecessary water and revenue losses. The information from a water loss audit is valuable in setting performance indicators, goals, and priorities to cost-effectively reduce water losses.

A system water audit is used annually to monitor the total amount of non-revenue water. There are many variables influencing revenue and nonrevenue components of the City's water system, including meter inaccuracy, data discrepancies, unauthorized consumption, reported breaks and leaks, and unreported losses.

The TWDB requests that cities include water loss in GPCD, water loss per connection, and Infrastructure Leakage Index (ILI) in Water Audit Reports. These are performance indicators that can be used to determine the effectiveness of the water loss reduction program. See **Table 6-2** for Water Loss Goals.
HPW's water main replacement program is divided into two categories for purposes of capital improvement project programming: the water transmission system and the water distribution system.

1. Water Transmission System

The water transmission system includes large diameter pipelines (24 inches and larger) and valves that move high volumes of treated water throughout Houston's service area, and large diameter pipelines that move untreated surface water to the three water purification plants. HPW's water transmission system has approximately 4.55 million linear feet of large diameter pipelines ranging from 24 inches and larger.

The water transmission system also includes seven major repump stations that repressurize the transmission system, and 156 storage tanks that provide water volume to meet average and peak day demands. Projects undertaken by HPW in the transmission system portion of the water main replacement program include the rehabilitation and replacement of large diameter water lines, valves, pumps, and storage tanks.

2. Water Distribution System

The water distribution system includes the small diameter pipelines (less than 24 inches) that deliver treated water to homes and businesses. The water distribution system also includes customer meters and fire hydrants. HPW's water distribution system has approximately 32.6 million linear feet (6,170 miles) of small diameter pipeline, approximately 460,000 water meters, and more than 61,000 fire hydrants. Projects undertaken by HPW in the distribution system portion of the water main replacement program include repair and replacement of small diameter lines to help improve water quality and fire protection in neighborhoods.

In 2023, Houston performed emergency waterline repairs to battle the city's ongoing water leaks caused by the extreme drought and the city's aging infrastructure. More than 4,000 water leaks were repaired. Areas of the water distribution system in which numerous leaks and line breaks occur are targeted for replacement.

The Infrastructure Leakage Index (ILI) is a calculation of the theoretical lowest leakage possible divided by existing calculated leakage. This is developed as a unique value for every city and includes variables such as the distance from the curb stop to the meter boxes, the pressure in the system, and the number of service lines or connections per mile of water main.

Unavoidable Annual Real Losses (UARL) in 2023 were approximately 4.68 billion gallons. This is the theoretical lowest leakage currently possible with the existing infrastructure and service connection density. In 2023, Houston had an ILI of approximately 6.79. ILI is a reliable performance indicator for benchmarking the performance of a utility in operational management of real losses. An ILI of 5-8 can be found in areas where the cost to purchase and obtain/treat water is low, as are rates charged to customers; the reliability, capacity, and integrity of the water supply infrastructure make it relatively immune to supply shortages; and water resources are plentiful, reliable, and easily extracted. The goals for this Plan are set out in **Table 6-2.**

Table 6-2: Water Loss Goals

Description	Units	2023	2029	2034
Water Loss GPCD	GPCD[a]	37	35	33
Real Water Loss per Connection	Gals/Connection per Day[b]	78.8	74.9	70.9
Real Losses	ILI[c]	6.79	6.45	6.13

Source: HPW 2023 Water Audit Report

a. Water Loss GPCD = (Total Water Loss ÷ Permanent Population) ÷ 365

b. Total Water Loss per Connection per Day = Water Losses ÷ Number of service connections ÷ 365

c. ILI = Current Annual Real Losses ÷ Unavoidable Annual Real Losses (Number of service connections + length of watermains ÷ average pressure)

HPW tests approximately 78.36 miles of water main with two dedicated leak detection crews each year. Once leaks are detected, repair teams are deployed to address the leaks on normal business days. To further reduce real water losses, HPW will plan and develop a proactive water loss program. As part of this program, the city will implement the following actions:

- Conduct regular inspections of all water main fittings and connections;
- Use a water modeling program;
- Monitor individual pressure zones;
- Conduct continuous monitoring of water demand of all pressure planes;
- Install temporary leak noise detectors and loggers;
- Operate pressure zones based on topography; and
- Limit surges in pressure.

HPW has enhanced its mainline leak detection program using the (Advanced Metering Infrastructure (AMI) network. In 2023, HPW completed the installation of above ground AMI infrastructure. Multiple base stations are in place to ensure system redundancy. Approximately 80,000 Sensus SmartPoint devices have been installed on the inground metering infrastructure. Future applications are under development with manufacturers.

Another measure to control water loss as part of the routine operations of HPW is to encourage residents to call 311 City Helpline or to report leaks and other problems on MyCity Houston GIS Online. (https://houston311.powerappsportals.us/en-US/#). It allows residents and businesses to request, track, and explore information and report issues through several city departments, including HPW.

6.1.4 Landscaping BMPs

Winter Sprinkler Shut Off (BMP 5.3)

Per BMP 5.3, landscape irrigation conservation practices are an effective method of accounting for and reducing outdoor water usage while maintaining healthy landscapes and avoiding run-off. Using this BMP, the utility provides non-residential and residential customers with customer support, education, incentives, and assistance in improving their landscape water-use efficiency. Incentives include rebates for purchase and installation of water-efficient equipment.
HPW encourages the public to turn off automated water sprinkler systems from November 1-February 28 to save water and money. With shorter days and colder nights, turfgrass goes dormant during the winter. Dormant grass requires almost no supplemental irrigation since typical winter rainfall patterns are usually more than sufficient for lawn needs. Turning off irrigation systems helps conserve water and can help protect the system from damaging winter conditions.

6.1.5 Education and Public Awareness BMPs

Per BMP 6.1, public information programs, even though they may not be directly related to any equipment or operational change, can result in both short and long-term water savings. Behavioral changes by customers will only occur if a reasonable yet compelling case can be presented with sufficient frequency to be recognized and absorbed by customers. There are many resources that can be consulted to provide insight into implementing effective public information programs. Like any marketing or public information program, to be effective, water

conservation public information should be planned out and implemented in a consistent and continual manner.

Per BMP 6.2, effective school education programs should provide curriculum material appropriate to the grade level of the student, increasing in complexity from elementary school through high school. If such a curriculum does not already exist, local curriculum experts may be willing to help develop the desired materials.

Per BMP 6.3, effective water conservation education and outreach should be planned and implemented in a consistent and continual manner. Many low-cost or free resources are available which can be used to effectively conduct public outreach and education efforts.

Per BMP 6.4, organizations such as the Master Gardeners, Master Naturalists, Botanical Gardens, and environmental entities with water conservation sympathies are enlisted to use their volunteers to deliver water conservation education to their typical and expanded audiences. The volunteers are provided special training, and the organization may be subsidized based on audiences reached. The delivery vehicles are speaker bureaus, neighborhood events, school projects, and demonstration gardens but the volunteers may also respond to audit requests, rebate inspections, and conduct research.

The goal is education of customers about the overall picture of water resources in the community and how conservation is important for meeting the goals of managing and sustaining existing water supplies and avoiding or delaying building of new facilities. An equally important part of the program is to provide data and information on specific actions and measures the customers should take to implement these community goals. Showing customers that the results of those actions have made a difference encourages greater participation in conservation efforts.

There are a variety of tools that can be effectively used to communicate water conservation and public education and awareness. These include use of print, radio, and television media; billboards; direct distribution of materials; special events such as exhibits and facilities tours; and maintenance of an informative website.

Houston is building a robust water conservation public education program with implementation and enhancement of public education and awareness activities since 2019. **Table 6-3** illustrates the growth of the program since its inception in 2019. Following the table are descriptions of these efforts.

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Table 6-3: Public Education and Information Summary										
Type	2019		2020		2021		2022		2023	
	No.	Reach	No.	Reach	No.	Reach	No.	Reach	No.	Reach
Brochures Distributed		8,832	1	3,069	87	21,311	73	34,000	1	20,000
Utility Bill Inserts			1	41,323	5	200,000	2	900,000	2	650,000
Press Releases	2	50,000			3	67,59	5	11,250	2	4,500
TV PSAs					3	5,028,569			8	23,967,400
Radio PSAs					1	1792,00	4	3,026,700	5	3,079,247
Hispanic Media Outreach							60	759,663	17	1.060.763
Educational School Programs	17	1,465	5	472	10	363	26	5,934	111	108,620
Displays, Exhibits, and Presentations	21	1,060	4	105	25	1,473	33	1,822	34	1,755
Community Events	14	8,882	2	373	12	527	66	18,092	65	55,373
Email Blasts							10	2,600,000	11	2,356,000
Social Media - Facebook	6	5,419	14	10,452	2	33,372,032	52	697,868	78	73,105
Social Media - Twitter	3	24,752	12	84,505	25	67,428	55	154,444	105	165,863
Social Media - Instagram					1		5	541	45	43,472
Social Media - Nextdoor							2	16,408	4	180,667
Social Media - YouTube					12	1724	5	1,602	11	1,759,018
Paid Online Advertising					1	36,638,261	3	675,760	3	473,506
Facility Tours	98	3,751				193,378	2	30	2	25
Other					9		87	4,071,314	26	202,907
TOTALS	**161**	**104,161**	**39**	**140,299**	**196**	**75,711,025**	**492**	**12,994,911**	**530**	**33,141,458**

**Data provided by HPW and TCEQ Water Conservation Annual Reports*

Public Information (BMP 6.1)

Give Water a Break

https://www.houstonpublicworks.org/give-water-break

The **Give Water a Break** campaign is Houston's newest campaign to educate the public about water conservation during drought and provide information about year-round water conservation efforts. Through depictions of obvious wastefulness that diminishes Houston's water supply, it shows the audience the how, when, and why behind water conservation. The goal is to shift the public's mindset from "wasting water because I can" to "saving water because I should." In the summer of 2022, HPW ran this campaign in

both English and Spanish in anticipation of stage-one drought conditions. The campaign includes YouTube bumper ads, social media content, radio spots, and Hulu commercials, in addition to assets for general water conservation and winter advisories. HPW also provides links to YouTube featuring some of the Give Water a Break Campaign messaging videos. An example of the messages for this campaign are below.

Water Works Festival

https://www.houstonpublicworks.org/water-works-festival#4257225834-860024711

Each year, HPW hosts the **Water Works Festival** to engage and educate the public about the value of water. Emphasis is on topics such as water conservation, the water cycle, local water systems, species habitats, weather, water quality and ecology. Additionally, attendees can learn about the city's water supply, water purification plants, wastewater treatment systems, conservation efforts, drought plans, stormwater projects and more.

Gulf Coast Water Conservation Symposium

https://www.allianceforwaterefficiency.org/events/2024-gulf-coast-water-conservation-symposium

HPW is an active participant in the annual **Gulf Coast Water Conservation Symposium**, a one-day regional event presenting information to water utilities and customers about water conservation legislation, planning, education, smart conservation investment, implementation strategies, and industry best practices. HPW employees have served on the symposium's steering committee to plan the symposium, raised awareness of the event, and presented at the symposium.

Houston Runs on Water

https://www.houstonpublicworks.org/houston-runs-water

In 2021, HPW partnered with Texas Water Foundation on a statewide campaign—Texas Runs on Water. Houston was one of three regions to pilot the campaign. Recognizing the importance of local messaging, and the nuance of water concerns statewide, the campaign is intentionally constructed to allow local pride of place to exist within the umbrella campaign concept. In Houston, the campaign was adopted as **Houston Runs on Water**. The goal of the campaign is to inspire Houstonians to value their water. HPW also provides links to YouTube featuring some of the Houston Runs on Water campaign videos.

Fix-a-Leak Week

https://www.houstonpublicworks.org/fix-leak-week

From 2021-2023, HPW partnered with Dallas, Fort Worth, Round Rock, and Tarrant Regional Water District to offer two virtual Environmental Protection Agency (EPA) WaterSense Program **Fix-a-Leak Week** workshops (indoor and outdoor focused). Residents from all over the state could join the online seminars to learn how to fix simple plumbing problems, detect and patch leaks in their own home, and receive information about how to conserve water using water-efficient fixtures. HPW also provides links to YouTube featuring video recordings of Fix-a-Leak week Workshops.

Imagine a Day without Water

https://www.houstonpublicworks.org/imagine-day-without-water

Since 2019, HPW has been a proud partner of the U.S. Water Alliance. Each year since joining, HPW participates in the national education campaign—**Imagine a Day without Water**. The campaign is intended to raise awareness about the value of water and recognize what life would be like without it. HPW uses the event to educate and engage the community with interactive and educational contests, programs, special events, resolutions, and social media engagement all centered around how water is essential, invaluable, and in need of investment. As part of the national education campaign—Imagine a Day Without Water—HPW invites the community to participate in an Instagram Photo and Video Contest highlighting the importance of water. The 2023 year's theme was Beauty of Water. Participants are asked to submit photos and videos highlighting water's beauty, significance, and importance in daily lives. Examples include images of a coffee brewing in the morning, a family pet lapping up water, ripples on the surface of a lake, the ice in lemonade, and a dew drop on a blade of grass.

Walk for Water

https://events.watermission.org/site/TR?fr_id=2511&pg=entry

More than 2 billion people around the world lack access to safe drinking water. In many countries, women and children must walk over three miles to collect water for their families and communities. Often, water is not safe to drink. HPW and its partner, Grundfos, encourage the public to join in the fight against water insecurity all over the globe. **Walk for Water** spreads awareness about those around the world without access to clean drinking water and 100% of funds raised go directly to the nonprofit Water Mission to build safe water solutions in developing nations and disaster areas.

Water My Yard

https://www.watermyyard.org/

From March-October, HPW and Texas A&M AgriLife encourage the use of their **Water My Yard** app to know when to water. Residents can visit the website or download the free app (search Water My Yard). Residents can select to receive free texts, emails, or app notifications. This tool tells residents exactly how much water their lawn needs on a weekly basis (if any). This ensures they are not using too much water while maintaining a healthy yard. Water My Yard uses both local rainfall data and information about a resident's sprinkler system to provide the most accurate information.

The goal of the campaign is to effectively communicate when to water lawns for the health of the lawn, for customer financial savings, and to promote water conservation. HPW also provides links to YouTube featuring some of the Give Water a Break Campaign messaging videos and instructions on how to install and use the Water My Yard app.

Presentations

https://www.houstonpublicworks.org/presentations

The HPW team is available to provide presentations not only for schools, but also for other community members including clubs, homeowner associations, businesses, council districts, and other organizations. In-person and virtual presentations on topics listed below are offered.

- **Water Conservation**: Participants learn how to use and conserve water at home, school, and work. Activities will highlight how conservation affects our drinking water resources, water treatment demand, and future water needs and supplies.
- **Drought:** Presenters explain how the Drought Contingency and Emergency Water Plan fits into Houston's overall Water Conservation Plan, the stages of the Drought Contingency Plan, and how to help reduce demand and conserve water during a drought.
- **Protect Our Pipes**: Information on Fats, Oils and Grease (FOG) and how these materials clog our sewer lines when poured down drains and toilets is offered. Participants learn simple ways to prevent FOG from clogging sewer lines.
- **Water Quality**: An overview is provided regarding each phase of the drinking water treatment process and how water is delivered to homes, schools, and places of employment. Participants learn the difference between stormwater and wastewater.
- **Water Cycle**: Presenters explore the movement of water above and on the surface of the Earth, the sun's energy, and gain a basic understanding of the water cycle and its importance.
- **Watersheds and Wetlands**: Presenters identify and define the benefits of a watershed and wetlands and why they are important to our source water.

School Education (BMP 6.2)

HPW's education and outreach team gives presentations to Houston area students throughout the school year. The team is available to present to all grade levels, in individual classrooms or assemblies, and craft messages to include age-appropriate activities and content. Educators request a topic and activity from a wide variety of content from the Project WET curriculum. Students participate in hands-on activities that support the Texas Essential Knowledge and Skills (TEKS) standards. On average, the education and outreach team give presentations at more than 25 schools and school-related events each year.

Public Education and Outreach (BMP 6.3)

- Promote Houston's water conservation measures.
- Follow the three Pillars of Water Equity from the US Water Alliance.
- Include inserts on water conservation with water bills or mail outs at least twice per year, including material developed by staff and material obtained from the TWDB, TCEQ, and other sources.
- Encourage local media coverage of water conservation issues, including social media, and the importance of water conservation.
- Notify local organizations, schools, and civic groups that staff are available to make presentations on the importance of water conservation and ways to save water.
- Encourage residents and commercial customers to use the free WaterMyYard.org app to find out how much water the lawn needs. The app provides watering recommendations based on the weather, location, and irrigation system.

- Encourage residents and commercial customers to visit the Houston Chapter of the Native Plant Society's webpage (https://npsot.org/wp/houston/go-native/) for information about selecting native plants for landscaping.
- Provide water conservation tips about indoor and outdoor water usage on the HPW website (https://www.houstonpublicworks.org/residential-ustomers#230548828-1234108202).
- Encourage installation of WaterSense-labeled toilets. WaterSense-labeled products use less water and can save money. The City of Houston Plumbing Codes requires toilets to use no more than 1.28 gallons per flush. HPW provides a video for how to fix a leaky toilet.
- Encourage replacement of showerheads with a WaterSense-labeled showerhead. HPW offers free water-efficient (1.25 gpm) showerheads to residents. The City of Houston Plumbing Codes requires showerheads to use no more than 2.0 gallons per minute (gpm).
- Encourage replacement of old, inefficient faucets and aerators with WaterSense-labeled models to help residents save water and money.

Partnerships with Nonprofits (BMP 6.4)

Citizens' Environmental Coalition

In 2023, Citizens' Environmental Coalition (CEC) partnered with Green Mountain Energy Earth Day at Discovery Green and HPW Water Works Festival. CEC connects Houston's environmental community with a diverse range of programs, resources, and events. CEC provides opportunities for access to careers and advocacy opportunities that may not otherwise be available, to foster a sense of wonder and appreciation for local natural resources, and to ensure that work is collaborative and strategic. With 100 member organizations and individuals, CEC represents a diverse group of nonprofit organizations, governmental bodies, concerned community members, and activists.

Alliance for Water Efficiency

The Alliance for Water Efficiency (AWE) is a nonprofit dedicated to the efficient and sustainable use of water across North America. Based in Chicago, AWE advocates for water efficient products and programs, and provides information and assistance on water conservation efforts. AWE works with more than 500 member organizations, providing benefit to water utilities, business and industry, government agencies, environmental and energy advocates, universities, and consumers.

Adopt an Esplanade Program

Beautiful, well-maintained public spaces reflect community pride, enhance the urban environment, provide incentives to revitalize core neighborhoods and promote economic redevelopment. The City of Houston Adopt-An-Esplanade program plays a key role in this effort as a program designed to bring Houston neighborhoods together in committed, collaborative partnerships to improve and maintain city esplanades. The Houston Parks and Recreation Department administers the program and Keep Houston Beautiful provides volunteer coordination, community education, training, planning assistance, and loans tools and equipment for beautification and cleanup projects. Participants include civic groups, garden clubs, business owners, city and state agencies and corporate sponsors. The Houston Adopt-an-Esplanade Program provides a step-by-step guide designed to assist neighborhood organizations through the process of esplanade adoption and maintenance. Funding for the publication of this guide was provided by a grant from the Texas Forest Service. Texas Forest Service provides financial and technical assistance for urban forestry projects in Houston as well as the State of Texas.

Awards and Recognition

EPA WaterSense 2023 Partner of the Year Award: Houston has become a proactive partner in the EPA's WaterSense program and has been recognized for their partnership, including during the period since publication of the 2019 Plan. WaterSense partners contribute to the program's success by enhancing the market for water–efficient products, practices, and services. Each year WaterSense recognizes those partners who have gone beyond in supporting WaterSense. HPW promoted water efficiency across its service area and in other parts of Texas in 2022 to earn this award (https://www.epa.gov/watersense/watersense-awards#Houston23).

2022 and 2023 Wyland National Mayor's Challenge for Water Conservation: The City of Houston, along with four other major cities, was named the winner of its category in the 2022 and 2023 Wyland National Mayor's Challenge for Water Conservation. Houston took home the top prize for populations above 600,000, being designated as a Water-Wise City by the Wyland Foundation.

AVA Platinum Winner for Excellence in Concept, Design, and Digital Communication - Give Water a Break: Issued by the international AVA Digital Awards competition that recognizes excellence by creative professionals responsible for the planning, concept, direction, design and production of digital communication.

NACWA National Environmental Achievement Award- Give Water a Break: The Give Water a Break campaign was selected as a winner of the 2024 National Environmental Achievement Award in the Public Information & Education: Educational Program category.

Hermes Creative Awards- Give Water a Break: The Give Water a Break campaign received an honorable mention in the 2023 Hermes Creative Awards, an international competition that recognizes creative professionals for excellence in planning, designing and executing creative content and campaigns.

6.1.6 Rebate, Retrofit, and Incentive Programs BMPs

Industrial, Commercial, and Institutional (ICI) Building Assessments (BMP 7.1)

Under BMP 7.1, the utility identifies ICI customers and sorts them according to water usage. The utility should focus its ICI Conservation Program on the higher use customers and those sectors with the highest conservation potential. In addition to domestic water use by employees and customers, many industry-specific processes are captured in this BMP. Differences in this industry-specific category of water use result in unique opportunities for significant water savings within each utility service area. Similarities in overall water use by ICI customers create opportunities for an ICI Water Conservation Program which is the subject of this BMP.

HPW offers commercial customers the ability to save money on overhead costs through free utility assessments for commercial buildings. This program provided free professional water, electricity, and gas utility assessments to up to 50 commercial buildings throughout the 2023 calendar year. Each assessment included data analysis on utility use and a monthly breakdown of cost and consumption patterns. Recommended practices, guidance on potential cost savings, and rebate assistance are included as a part of this program. This program can find inefficiencies in a building's water consumption, energy, and natural gas use. Identifying these areas can reduce customers' overhead costs. Past participants have saved millions of gallons of water and tens of thousands of dollars in lower water and sewer costs.

Wastewater credits are also given to manufacturing customers whose water use is absorbed through a manufacturing process, such as production of beverages. Customers install at least one product line make-up meter which registers the water that is used solely in the manufacturing process. These customers then submit monthly readings of these sub-meters which are used to calculate their credits. The credits are calculated by multiplying the total consumption registered on their sub-meter(s) by the current sewer rate.

Customers with evaporative cooling towers can receive wastewater credits by installing a make-up meter that registers the water that goes into the cooling tower and a blowdown meter that registers water that is discharged into the sewer after it has been used in the cooling tower. Credits are calculated by deducting the monthly discharge through the blowdown meter from the consumption through the make-up meter. The result is then multiplied by the current sewer rate to determine the amount of the credit.

Property Assessed Clean Energy (PACE) Program (BMP 7.1)

Houston's commercial Property Assessed Clean Energy (PACE) program provides an additional tool for Houston property owners to finance energy efficiency, renewable energy, and water conservation projects. The State of Texas authorized municipal and county PACE Programs in 2013. Houston City Council adopted an ordinance establishing a Houston PACE program on November 4, 2015. As of February 1, 2017, PACE programs are available in ten Texas counties (Brazos, Cameron, El Paso, Fort Bend, Hays, Hidalgo, Nueces, Travis, Williamson, and Willacy) and two cities (Houston and Dallas).

PACE is a nationally renowned, voluntary financing program that allows owners of commercial, industrial, and multi-family residential properties (with five or more dwelling units) to obtain low-cost, long-term loans for water conservation, energy-efficiency improvements, and distributed generation.

In exchange for funds provided by a private lender to pay for the improvements, the property owner voluntarily requests that the local government place an assessment secured with a senior lien on the property until the assessment is paid in full. As PACE assessment payments are offset by the project's utility cost savings and the term of PACE assessments may extend up to the projected life of the improvement, improvements financed through a PACE program may generate positive cash flow upon completion without up-front, out-of-pocket costs to the property owner.

Fixture Replacement/Retrofit Programs (BMP 7.4)

Per BMP 7.4, plumbing retrofits usually include showerheads and kitchen and bathroom faucet aerators. Recent studies have shown that replacing toilet flappers is also an effective method of conserving water in the residential sector. Four types of high quality, low flow plumbing devices are to be installed under this program: showerheads rated at 2.0 Dd or less; kitchen faucet aerators of 2.2 gpm or less, bathroom faucet aerators of 1.5 gpm or less, and toilet flappers that flush the toilet at the design flush volume for that toilet model. The utility may meet the requirements of this BMP through enforceable ordinances and inspection programs requiring replacement of inefficient plumbing when ownership of the property transfers or by date certain no later than five years. The utility may meet the requirements of this BMP through enforceable ordinances and inspection programs requiring replacement of inefficient plumbing when ownership of the property transfers or by date certain no later than five years.

Currently, HPW provides faucet aerators and toilet dye leak tabs as promotional items but may consider expanding the program. This may require updating the Houston Plumbing Code to reduce the showerhead retrofits to 1.25 gpm and aerator replacements to 1.0 gpm.

Showerheads

The shower is the second-biggest water user in a household. The City of Houston Plumbing Codes requires showerheads to use no more than 2.0 gpm. HPW encourages residents to save money by switching to a low-flow showerhead, specifically to install WaterSense labeled water-efficient (1.25 gpm) showerheads. HPW also offers larger showerhead giveaway events.

Faucet Aerators

HPW offers free water saving faucet aerators to residents to replace current aerators with free 1.5 gallon per minute aerator to help reduce indoor water consumption. The new aerator features dual-threading to fit both male- and female-threaded faucets (aerator's thread sizes: male 15/16"-27, female 55/64"-27) and uses only 1.5 or 2.0 gpm, saving valuable hot water.

Toilet Tank Leak Detecting Tablets

Leaks inside your toilet can waste up to 200 gallons of water per day. Toilet leaks can be hard to find and are normally caused by a bad flapper valve, flapper valve seal, a bad ballcock valve, an improperly positioned float arm or a defective overflow tube. HPW offers residents free leak detection dye tablets to help identify silent toilet leaks

Water-wise Building Standards (BMP 7.5)

Per BMP 7.5, the utility offers financial incentives for landscape conversion to a water-wise landscape or requires by ordinance that all new landscapes incorporate water wise principles. Water-wise landscaping involves not only plant selection but also follows optimum landscaping principles listed below. Financial incentive programs that promote water-wise landscaping contain an educational component involving the seven principles of water-wise landscaping. Water-wise landscaping material often consumes whatever quantity of water the customer supplies, so careful follow-up is necessary to ensure that excess irrigation does not take place. Incentives should be designed to be rescinded if water use returns to previous levels or exceeds the projected water budget for the new landscape.

In 2011, Houston revised its plumbing and building codes. A section on low-impact development was added to Houston's Infrastructure Design Manual. Low-impact development can reduce the amount of treated water used for irrigation by utilizing stored rainwater and slowing runoff through use of green stormwater infrastructure improvements. Houston will continue to rigorously enforce its plumbing and building codes and encourage the use of low-impact development practices. A copy of Houston's plumbing and building codes is available at: https://www.houstonpermittingcenter.org/building-code-enforcement.html.

Native Plants Programs (BMP 7.5)

The Houston Parks and Recreation Department's (HPARD) Natural Resources Management Program began its native plant propagation program in May 2016 to produce locally collected native grasses and wildflowers for installation into Houston's prairie restoration sites. Seeds are hand-collected from remnant and restored prairies around the Houston area and propagated by staff and volunteers in Houston's greenhouse. After one to two years of growing, the plants are

installed in one of HPARD's five prairie restoration sites throughout the city during community volunteer events. The program currently produces over 10,000 one-gallon pots per year of more than 90 distinct species that are available for use in habitat restoration projects.

Since 2019, HPARD has partnered with the Houston Arboretum and Houston Audubon to offer an annual Spring Native Plant Sale (https://houstonarboretum.org/events/). Most plants available at nurseries are not native to the Houston area. The annual plant sale gives citizens the opportunity to purchase native plants that are adapted to the region's climate, which means they can tolerate Houston's weather extremes that can range from prolonged periods of heavy rainfall to dry spells. In addition, many of these plants attract birds, butterflies, bees, and other pollinators. The sale includes native grasses, shrubs, trees, and flowers (including milkweed).

Water Aid To Elderly Residents (W.A.T.E.R) Fund (BMP 7.7)

The premise of BMP 7.7 is by making plumbing improvements and repairs to potable water leaks in a home that might otherwise go without, customers are assisted in reducing their overall consumption, thereby lowering bills and simultaneously conserving water for the utility.
In addition to making repairs to potable water leaks, the BMP may also include automatic replacement of high-flow fixtures found in a qualifying home. When high-flow toilets and showerheads are automatically replaced in addition to leak repair, the savings from the BMP will increase.

HPW is motivated to better understand and address water and sewer service affordability through a customer assistance program called the Water Aid to Elderly Residents (W.A.T.E.R) Fund. The fund is designed to provide financial assistance to senior citizens and others needing help paying water and wastewater bills. It is funded entirely through voluntary donations from customers, charities, and businesses, and 100% of the contributions go toward assistance. The City pays all administrative costs.

The Fund assists low-income senior citizens (60+) who are residential utility customers of Houston and live in single-family dwellings. Limited assistance is also available to disabled or low-income customers. Preference shall be given to those who have met the US Health and Human Services Poverty Guidelines for three (3) months or longer. Applicants can receive up to $100 every six (6) months towards their water bills. If the water bill is less than this amount, qualified seniors may use any remaining portion in the following months to pay those bills. At the end of six (6) months, customers may reapply for further assistance.

Utility Relief Program (BMP 7.7)

In March of 2021, the Houston City Council unanimously passed a one-time ordinance implementing a utility relief program that adjusted affected water bills, suspended fees for past due payments, and suspended utility disconnections for households with unexpectedly high water and wastewater consumption related to the intense Winter Storm Uri in February 2021. An estimated 25% of customers experienced a leak because of freezing temperatures, power outages, freezing pipes, and varying pressure issues. Typically, customers need to demonstrate proof of repairs for the regular leak adjustment program, but in this situation, they granted automatic adjustment for single-family residential customers and allowed multi-family and commercial customers to apply for the adjustment.

Plumbing Assistance for Economically Disadvantaged Customers (BMP 7.7)

The Plumbing Assistance Programs for Economically Disadvantaged Customers BMP is focused on making plumbing repairs in single-family homes owned by economically disadvantaged customers. Utilities and socio-economists have both observed that economically disadvantaged homeowners are less likely to make water-saving repairs due to the cost, and that some repairs may be altogether cost prohibitive for economically disadvantaged customers. Additionally, it is often the case that customers incurring high water bills because of major leaks have difficulty not only in paying for the higher water bills, but also in paying for the cost of the repair. By making the necessary repairs, customers may experience lower, more manageable bills and become more reliable customers with respect to paying their bills.

Part of the AWE affordability assessment for HPW was a Direct Installation Pilot where a subset of homes would receive installation of high efficiency toilets, showerheads, faucets, and clothes washing machines at no cost to the household.

In 2023, HPW partnered with the City of Houston Housing and Community Development Department—Single Family Division, to install high efficiency faucets, showerheads, toilets, and clothes washers. This partnership will help rehabilitate low-income residences and provide additional data to inform the next steps for HPW.

6.1.7 Conservation Technology BMPs

Rain Barrel Program (BMP 8.2)

Per BMP 8.2, rainwater harvesting and condensate reuse (RWH/CR) conservation programs are an effective method of reducing potable water usage while maintaining healthy landscapes and avoiding problems due to excessive run-off. Using this BMP, the utility provides customers with support, education, incentives, and assistance in proper installation and use of RWH/CR systems. RWH/CR systems will be most effective if implemented in conjunction with other water efficiency measures including water-saving equipment and practices.

Rainwater harvesting is based on ancient practices of collecting–usually from rooftops–and storing rainwater close to its source, in cisterns or surface impoundments, and using it for nearby needs. ICI users have found it to be cost effective to collect the condensate from large cooling systems by returning it into their cisterns as well. Facilities with large cooling demands will be in the best position to take advantage of condensate reuse, which due to its quality can potentially be used in landscape irrigation, as cooling tower makeup water, or in some industrial processes.

The variability in rate and occurrence of precipitation events requires that rainwater or condensate be used with maximum efficiency. Incentives may include rebates for purchase and installation of water-efficient equipment.

Rain barrels capture water from a roof and hold it for later use such as on lawns, gardens, or indoor plants. Collecting roof runoff in rain barrels reduces the amount of water that flows from properties. Rain barrels conserve water and provide free water for use in landscapes. Twice a year, Houston Water and the Green Building Resource Center cohost a Rain Barrel Sale (https://www.houstonpublicworks.org/rain-barrel-program). At these events, residents can purchase 50-gallon rain barrels at a municipal discounted price. The sales began in 2012, initially hosted by the Mayor's Sustainability Office. In 2014, the Green Building Resource

Center took over hosting the event activities, and in 2020, HPW began cohosting the event to leverage efforts and further incentivize the program. In 2021, HPW expanded the program to include subsidies (additional discounts) to rain barrels for Houston water customers (when funding is available). HPW aims to make residential water harvesting more accessible and affordable.

6.1.8 Regulatory Enforcement BMPs

Conservation Ordinance Planning and Development (BMP 9.2)

BMP 9.2 is designed to provide guidance in developing and implementing a successful conservation ordinance that addresses permanent year-round water savings. Short-term cutbacks based on temporary drought conditions is not the focus of the practice but should be considered to address short term conditions. The most successful conservation ordinances have support from a community with a knowledgeable and engaged customer base, whether through education and awareness or a voluntary conservation program. A community that is considering this BMP should first determine what goals they wish addressed, such as long-term resources, peak or seasonal demand, capacity issues, or reduced wastewater flows and then analyze end uses to help identify what may have the greatest potential for water savings. Stakeholders associated with those end uses should be brought into the process as early as possible. A reliable source for additional information and approaches to identifying opportunities for water conservation is the TWDB's *Guidance and Methodology for Reporting on Water Conservation and Water Use*.

Infrastructure Design Manual (BMP 9.2)

A copy of Houston's Infrastructure Design Manual is available on Houston's website at https://edocs.publicworks.houstontx.gov/documents/design_manuals/idm.pdf.

Leadership in Energy and Environmental Design (BMP 9.2)

In 2004, the Houston City Council adopted Resolution No. 2004-15 establishing the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Green Building Rating System™ as a standard for new or replacement city-owned facilities and for major renovation of city-owned buildings and facilities with over 10,000 square feet of occupied space. LEED™ provides a complete framework for assessing building performance and meeting sustainability goals. Based on well-founded scientific standards, LEED™ emphasizes state of the art strategies for various energy and environmental aspects of a building, including water savings. Examples of past, present and future LEED™ projects for city owned facilities can be found at https://www.houstontx.gov/generalservices/leed.html. More information about the standard is available at https://www.houstontx.gov/generalservices/leed.html.

State and Federal Standards Adopted (BMP 9.2)

The 1992 federal Energy Policy Act (EPAct) required water-conserving fixtures in new construction and renovations. The standards call for flows of no more than 2.2 gallons per minute (gpm) for faucets, 2.5 gpm for showerheads, and 1.6 gallons per flush for toilets.

In 2009, Texas House Bill 2667 mandated that toilet and urinal manufacturers phase in High Efficiency Toilets (HETs), starting with 50% of in-state sales by January 1, 2010, and 100% by January 1, 2014. An HET is defined as a toilet that uses no more than 1.28 gallons of water per flush (GPF), or 20 percent less than the 1.6-GPF models mandated by the EPAct. These state

and federal standards ensure that all new construction and renovations in the City are equipped with water-conserving fixtures. Houston implements and enforces the regulatory aspects of this Plan through existing codes and ordinances. These include Building and Plumbing Codes (www.houstonpermittingcenter.org/code-enforcement), Chapter 47–Water and Sewers, of the City of Houston Code of Ordinances (http://www.houstontx.gov/codes/index.html), and LEED™ Certification of City-owned facilities (Resolution No. 2004-15) (http://www.usgbc.org/Docs/Archive/General/Docs1981.pdf).

6.2 REQUIREMENT FOR WATER CONSERVATION PLANS BY WHOLESALE CUSTOMERS

As of 2023, HPW has 161 wholesale contracts, 68 of which are with cities, municipal utility districts, and regional water authorities for treated water service. In 2023, these treated water contract customers used 83.3 billion gallons, averaging 228.2 MDG. Wholesale customers is contractually obliged to develop, implement, and update Water Conservation Plans or conservation measures using the applicable requirements of TCEQ Water Conservation Plans, Drought Contingency Plans, Guidelines and Requirements, Texas Administrative Code 30 TAC Chapter 288(a)(2)(C). The City's Water Conservation and Drought Contingency Plans are available to wholesale customers to aid with the development of their plans.

The City requires that each wholesale customer provide a copy of their Water Conservation Plan and required water system audit (as required by the TWDB water audit reporting requirement as specified by House Bill 3338) to the City of Houston. This is required in any new contracts developed with wholesale customers as specified in 30 TAC Chapter 288.

6.3 POTENTIAL CONSERVATION PROGRAMS

6.3.1 Conservation Analysis and Planning BMPs

Water Survey For Single-Family and Multi-Family Customers (BMP 2.3)

A Water Survey Program can be an effective method of reducing both indoor and outdoor water usage. Under this BMP, the utility conducts a survey of single-family and multi-family customers to provide information to them about methods to reduce indoor water use through replacement of inefficient showerheads, toilets, aerators, clothes washers, and dishwashers. If the customer has an automatic irrigation system, the survey includes an evaluation of the schedule currently used and recommends any equipment repairs or changes to increase the efficiency of the irrigation system.

Future Consideration: HPW currently offers a limited water survey program for ICI customers and may consider expanding the program to include residential and multi-family customers. Once the scope of services is determined, there are three options for conducting the survey: train utility staff to conduct an onsite survey; hire an outside contractor to conduct the onsite surveys; or provide a printed or online survey for customers to complete on their own. When conducting an onsite survey for a customer with an automatic irrigation system that is managed by an irrigation or maintenance contractor, it is beneficial to have the contractor present for the irrigation system survey.

Customer Characterization (BMP 2.4)

One of the newer BMPs is Customer Characterization, the practice of analyzing a utility's customer data trends towards the purpose of realizing targeted water savings. Undertaking a Customer Characterization allows the utility to better understand how water is used within its service area, to recognize the differences between various subsects within its customer base, and to facilitate positive experiences between the utility and the customer that inform both parties of their respective values and familiarize high water users with ways to reduce their usage.

Just as the motivations for deploying an AMI program will be different across utilities, each utility's purpose for embarking on Customer Characterization will be different, and the analysis should be crafted with their specific goal(s) in mind. Customer Characterization is one of the most effective tools for tailoring a utility-wide conservation program, because it yields actionable insight and stimulates community conversation.

In May 2023, AWE partnered with HPW to assess water and sewer service affordability for single-family households. The assessment included:

- A review of HPW's affordability efforts;
- An assessment of water affordability at the census tract level using single-family customer consumption data;
- An assessment of the tiered rate structure and water usage;
- An estimate of how water conservation strategies can impact water affordability; and recommendations throughout for HPW to consider as potential ways to improve water and sewer service affordability for low-income residents

Future Consideration: HPW has begun analyzing its customer data trends towards the purpose of realizing targeted water savings. Undertaking a Customer Characterization allows the utility to better understand how water is used within its service area, to recognize the differences between various subsects within its customer base, and to facilitate positive experiences between the utility and the customer that inform both parties of their respective values and familiarize high water users with ways to reduce their usage.

6.3.2 Financial BMPs

Water Conservation Pricing (BMP 3.1)

Per BMP 3.1, Water Conservation Pricing is the use of rate structures that discourage the inefficient use or waste of water. Conservation pricing structures include increasing unit prices with increased consumption such as inverted block rates, base rates, and excess use rates such as water budget rates, and seasonal rates. Seasonal rate structures may include additional charges for upper block (outdoor) usage or excess-use surcharges for commercial customers to reduce demand during summer months. The goal of conservation pricing is to develop long run consumption patterns consistent with cost. Under this BMP, utilities should consider establishing rates based upon long-run marginal costs, or the cost of adding the next unit of capacity to the system. An established cost of service methodology should be followed whenever rates are developed or proposed for change.

Future Consideration: HPW may use data analysis tools described in previous sections to determine if changes to conservation pricing structure for other customer classes are warranted in the future.

6.3.3 Systems Operations BMPs

Metering of All New Connections and Retrofit of Existing Connections (BMP 4.1)

Proper installation of meters by size and type is essential for good utility management. Using and maintaining the most accurate meter for each type of connection will generate adequate revenues to cover the expenses of the utility, equity among customers, reduce water waste and reduce flows to wastewater facilities. AWWA provides several resources listed in the reference section of this BMP. The purpose of this BMP is to ensure that all aspects of meter installation, replacement testing and repair are managed optimally for water use efficiency.

Future Consideration: HPW has enhanced its mainline leak detection program using the AMI network. Future applications are under development with manufacturers. Functionalities will include pressure sensing, hydrant flow monitoring, and water quality sensing, among others.

A more intense audit will consist of one or any combination of the following actions:

- *Evaluation of the automated meter read system;*
- *Investigation of problematic meters;*
- *Investigation of how the amount of water is estimated in the flushing program;*
- *Investigate how water loss is estimated due to main breaks;*
- *Coordination with Fire Department to determine water usage by Fire Departments;*
- *Fire service monitoring for all businesses; and*
- *Testing of suspect metering devices.*

System Water Audit and Water Loss Control (BMP 4.2)

This BMP is intended for all utilities. This practice should be considered by a utility that would like to analyze the benefits of reducing its water loss, unbilled authorized consumption, and other nonrevenue water; does not conduct a water loss audit on an annual basis; wants to determine if under-registering meters are impacting its revenues or wants to reduce main breaks and leaks. To maximize the benefits of this BMP, a utility should use the information from its water loss audit to revise meter testing and repair practices, reduce unauthorized water use, improve accounting for unbilled water, and implement effective water loss management strategies.

Future Consideration: Over the next five years, HPW plans to use capital improvement project funding and operations maintenance funding for replacement and repairs in the water transmission system.

6.3.4 Landscaping BMPs

Athletic Field, Golf Course, and Park Conservation (BMP 5.1, 5.2, 5.4)

This BMP is intended for all Municipal Water User Groups (“utility”) which manage irrigated athletic field(s) and/or serve a customer with irrigated athletic field(s). Athletic fields, irrigated

parks, recreation centers, fountains, or pools, and golf courses often involve a visible use of water during the day, which comes under scrutiny by the public and water resource managers both because of large water demand to maintain them, and because of the perception that the water use may be excessive. The specific measures listed as part of these BMPs can be implemented individually or as a group. Utilities may already be implementing one or more of these elements and they may want to adopt additional elements outlined in this document.

Future Consideration: Golf courses are often good candidates for reuse water or other alternative sources of water. Two municipal golf courses managed by Houston and three municipal courses managed by private companies could be targeted for this BMP.

Residential Landscape Irrigation Evaluations (BMP 5.5)

The Residential Landscape Irrigation BMP is intended for use by a municipal water user or water utility with a large majority of customers utilizing automatic in-ground irrigation systems. Outdoor irrigation constitutes about 60 percent or more of water used by households during the summer months, and much of that water is wasted due to overwatering and broken or maladjusted components. Helping customers identify these issues can amount to large water savings and a positive customer service image for the utility.

Future Consideration: Residential landscape irrigation evaluations may be offered as a stand-alone program or as part of the residential water survey program if implemented. Evaluations can be done by training existing staff or by contracting the service.

Outdoor Watering Schedule (BMP 5.6)

This BMP is intended for all utilities and is considered an essential component of a comprehensive outdoor water conservation program. Utilities across Texas are already familiar with the concept of water restrictions. However, utilities typically only impose water restrictions as a drought management strategy and maintain these limitations on outdoor water use for a temporary period. To promote continued water savings year-round regardless of drought conditions, this BMP provides a guiding framework for the adoption of mandatory, permanent outdoor watering schedules. Although all utilities can benefit from the implementation of outdoor watering schedules, utilities with high seasonal usage will see the greatest impact on outdoor water demands.

Utilities should consider combining the planning for and adoption of maximum outdoor watering schedules with other outdoor landscape education and incentive programs. Some of the programs that pair well with permanent outdoor watering schedules include robust education on regionally appropriate landscape practices, irrigation efficiency, and budgeting landscape water seasonally. These additional efforts are essential to achieving the maximum water savings from this BMP.

Future Consideration: HPW will investigate the feasibility of implementing seasonal or year-round time-of-day and day-of-week watering restrictions, potentially for drought contingency. Ordinances would be required for implementation of this BMP.

6.3.5 Rebate, Retrofit, and Incentive Program BMPs

Fixture Replacement/Retrofit Programs (BMP 7.4)

Per BMP 7.4, plumbing retrofits usually include showerheads and kitchen and bathroom faucet aerators. Recent studies have shown that replacing toilet flappers is also an effective method of conserving water in the residential sector. Four types of high quality, low flow plumbing devices are to be installed under this program: showerheads rated at 2.0 gpm or less; kitchen faucet aerators of 2.2 gpm or less, bathroom faucet aerators of 1.5 gpm or less, and toilet flappers that flush the toilet at the design flush volume for that toilet model. The utility may meet the requirements of this BMP through enforceable ordinances and inspection programs requiring replacement of inefficient plumbing when ownership of the property transfers or by date certain no later than five years. The utility may meet the requirements of this BMP through enforceable ordinances and inspection programs requiring replacement of inefficient plumbing when ownership of the property transfers or by date certain no later than five years.

Future Consideration: Currently, HPW provides faucet aerators and toilet dye leak tabs as promotional items but may consider expanding the program as part of residential water survey programs and/or plumbing assistance programs. This may require updating the City of Houston Plumbing Code to reduce the showerhead retrofits to 1.25 gpm and aerator replacements to 1.0 gpm.

7.0 ADOPTION OF WATER CONSERVATION PLAN, PERIODIC REVIEW, AND UPDATE OF PLAN

Opportunity for public comment on the plan was provided at the Houston City Council Committee meeting on May __, 2024. **Appendix K** contains a copy of the resolution from the May __, 2024, City Council meeting at which this Plan was adopted.

TCEQ requires that water conservation plans be reviewed and, if necessary, updated every five years to coincide with the regional water planning process. This Plan will be updated as required by TCEQ and, in addition, will be continually reassessed for opportunities to improve water efficiency and conservation based on new or updated information.

APPENDIX A

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LIST OF REFERENCES

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APPENDIX B

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES ON MUNICIPAL WATER CONSERVATION PLANS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES ON MUNICIPAL WATER CONSERVATION PLANS

TITLE 30 **ENVIRONMENTAL QUALITY**
PART 1 **TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

CHAPTER 288 **WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS**

SUBCHAPTER A **WATER CONSERVATION PLANS**

RULE §288.1 **Definitions**

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Agricultural or Agriculture--Any of the following activities:
(A) cultivating the soil to produce crops for human food, animal feed, or planting seed or to produce fibers;
(B) the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or non-soil media by a nursery grower;
(C) raising, feeding, or keeping animals for breeding purposes or for the production of food or fiber, leather, pelts, or other tangible products having a commercial value;
(D) raising or keeping equine animals;
(E) wildlife management; and
(F) planting cover crops, including cover crops cultivated for transplantation, or leaving land idle for the purpose of participating in any governmental program or normal crop or livestock rotation procedure.
(2) Agricultural use--Any use or activity involving agriculture, including irrigation.
(3) Best management practices--Voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific period.
(4) Conservation--Those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses.
(5) Commercial use--The use of water by a place of business, such as a hotel, restaurant, or office building. This does not include multi-family residences or agricultural, industrial, or institutional users.
(6) Drought contingency plan--A strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies. A drought contingency plan may be a separate document identified as such or may be contained within another water management document(s).
(7) Industrial use--The use of water in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, and the development of power by means other than hydroelectric but does not include agricultural use.
(8) Institutional use--The use of water by an establishment dedicated to public service, such as a school, university, church, hospital, nursing home, prison, or government facility. All facilities dedicated to public service are considered institutional regardless of ownership.

(9) Irrigation--The agricultural use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water from a public water supplier.
(10) Irrigation water use efficiency--The percentage of that amount of irrigation water which is beneficially used by agriculture crops or other vegetation relative to the amount of water diverted from the source(s) of supply. Beneficial uses of water for irrigation purposes include, but are not limited to, evapotranspiration needs for vegetative maintenance and growth, salinity management, and leaching requirements associated with irrigation.
(11) Mining use--The use of water for mining processes including hydraulic use, drilling, washing sand and gravel, and oil field re-pressuring.
(12) Municipal use--The use of potable water provided by a public water supplier as well as the use of sewage effluent for residential, commercial, industrial, agricultural, institutional, and wholesale uses.
(13) Nursery grower--A person engaged in the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or nonsoil media, who grows more than 50% of the products that the person either sells or leases, regardless of the variety sold, leased, or grown. For the purpose of this definition, grow means the actual cultivation or propagation of the product beyond the mere holding or maintaining of the item prior to sale or lease, and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.
(14) Pollution--The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.
(15) Public water supplier--An individual or entity that supplies water to the public for human consumption.
(16) Regional water planning group--A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, §16.053.
(17) Residential gallons per capita per day--The total gallons sold for residential use by a public water supplier divided by the residential population served and then divided by the number of days in the year.
(18) Residential use--The use of water that is billed to single and multi-family residences, which applies to indoor and outdoor uses.
(19) Retail public water supplier--An individual or entity that for compensation supplies water to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants when that water is not resold to or used by others.
(20) Reuse--The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.
(21) Total use--The volume of raw or potable water provided by a public water supplier to billed customer sectors or nonrevenue uses and the volume lost during conveyance, treatment, or transmission of that water.
(22) Total gallons per capita per day (GPCD)--The total amount of water diverted and/or pumped for potable use divided by the total permanent population divided by the days of the year. Diversion volumes of reuse as defined in this chapter shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals.
(23) Water conservation coordinator--The person designated by a retail public water supplier that is responsible for implementing a water conservation plan.

(24) Water conservation plan--A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).
(25) Wholesale public water supplier--An individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others, or an individual or entity that conveys water to another individual or entity, but does not own the right to the water which is conveyed, whether or not for a delivery fee.
(26) Wholesale use--Water sold from one entity or public water supplier to other retail water purveyors for resale to individual customers.

Source Note: The provisions of this §288.1 adopted to be effective May 3, 1993, 18 TexReg 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective August 15, 2002, 27 TexReg 7146; amended to be effective October 7, 2004, 29 TexReg 9384; amended to be effective January 10, 2008, 33
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TITLE 30 ENVIRONMENTAL QUALITY
PART 1 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CHAPTER 288 WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS

SUBCHAPTER A WATER CONSERVATION PLANS

RULE §288.2 Water Conservation Plans for Municipal Uses by Public Water Suppliers

(a) A water conservation plan for municipal water use by public water suppliers must provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.
(1) Minimum requirements. All water conservation plans for municipal uses by public water suppliers must include the following elements:

(A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;
(B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) - (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph:

(i) residential;
(I) single family;

(II) multi-family;
(ii) commercial;
(iii) institutional;
(iv) industrial;
(v) agricultural; and,
(vi) wholesale.

(C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. The goals established by a public water supplier under this subparagraph are not enforceable;

(D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;

(F) measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);

(G) a program of continuing public education and information regarding water conservation;

(H) a water rate structure which is not "promotional," i.e., a rate structure which is cost-based, and which does not encourage the excessive use of water;

(I) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies; and

(J) a means of implementation and enforcement which shall be evidenced by:

(i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and

(ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(K)documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:

(A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;

(B) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

(3) Additional conservation strategies. The water supplier shall select any combination of the following strategies, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by

the water supplier if the commission determines that the strategy is necessary to achieve the goals of the water conservation plan:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

(B) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

(C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;

(D) reuse and/or recycling of wastewater and/or graywater;

(E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;

(F) a program and/or ordinance(s) for landscape water management;

(G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and

(H) any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.

(c) A public water supplier for municipal use shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The public water supplier for municipal use shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

Source Note: The provisions of this §288.2 adopted to be effective May 3, 1993, 18 TexReg 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384; amended to be effective December 6, 2012, 37 TexReg 9515

TITLE 30 ENVIRONMENTAL QUALITY
PART 1 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CHAPTER 288 WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS

SUBCHAPTER A WATER CONSERVATION PLANS

RULE §288.5 Water Conservation Plans for Wholesale Water Suppliers

A water conservation plan for a wholesale water supplier must provide information in response to each of the following paragraphs. If the plan does not provide information for each requirement, the wholesale water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for wholesale water suppliers must include the following elements:

(A) a description of the wholesaler's service area, including population and customer data, water use data, water supply system data, and wastewater data;

(B) specific, quantified five-year and ten-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. The goals established by wholesale water suppliers under this subparagraph are not enforceable;

(C) a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply;

(D) a monitoring and record management program for determining water deliveries, sales, and losses;

(E) a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system;

(F) a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of this chapter. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this chapter;

(G) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin. The reservoir systems operations plans shall include optimization of water supplies as one of the significant goals of the plan;

(H) a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(I) documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional conservation strategies. The water wholesaler shall select any combination of the following strategies, in addition to the minimum requirements of paragraph (1) of this section if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

(B) a program to assist agricultural customers in the development of conservation pollution prevention and abatement plans;

(C) a program for reuse and/or recycling of wastewater and/or graywater; and

(D) any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(3) Review and update requirements. The wholesale water supplier shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

Source Note: The provisions of this §288.5 adopted to be effective May 3, 1993, 18 TexReg 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384; amended to be effective December 6, 2012, 37 TexReg 9515

APPENDIX C

WATER RATE ORDINANCE

HOUSTON PUBLIC WORKS

TABLE OF WATER AND WASTEWATER RATES
September 1, 2021

In accordance with Section 4 of Ordinance No. 2021-515, the following are the final rates and charges for water and wastewater services for Fiscal Years Ending (FYE) 2022 – 2026 as adopted by Houston Public Works, and as recommended by the Amended Rate Study dated August 2021. These final rates and charges do not in any case deviate from the scheduled dates or exceed the maximum rates and charges for any customer type authorized by Ordinance No. 2021-515. Upon publication of this document on the City Secretary's website as of September 1, 2021, the rates and charges set forth below are final and shall be implemented in accordance with their respective effective dates without further action of City Council.

As noted in Ordinance No. 2021-515, Section 5.2 of the Master Ordinance and Ordinance No. 2010-305, collectively, require certain automatic annual adjustments to the water and wastewater rates based on inflationary indices described therein. Those automatic adjustments were not altered by Ordinance 2021-515 and will continue to occur annually as required by the Master Ordinance.

Signed DocuSigned by: Carol Haddock A93C410B72B3453... _____
Carol Ellinger Haddock, P.E.
Director, HPW

Table 1 - Water Monthly Service Charges and Future Adjustments						
Meter Size	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
Month of Increase	*Sept. 2021*	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
	Charges	*Future Adjustments*				
5/8-inch	$6.25	+$0.32	+$0.19	+$0.17	+$0.14	+$0.03
3/4-inch	6.25	+0.32	+0.19	+0.17	+0.14	+0.03
1-inch	8.80	+0.40	+0.32	+0.28	+0.25	+0.05
1 1/2-inch	12.43	+0.52	+0.50	+0.45	+0.42	+0.06
2-inch	14.61	+0.59	+0.60	+0.56	+0.52	+0.07
3-inch	32.76	+1.20	+1.49	+1.40	+1.34	+0.17
4-inch	63.27	+2.21	+2.99	+2.81	+2.72	+0.32
6-inch	147.88	+5.02	+7.14	+6.72	+6.56	+0.75
8-inch	184.20	+6.21	+8.93	+8.41	+8.19	+0.95
10-inch	244.84	+8.23	+11.90	+11.22	+10.94	+1.26
12-inch	341.44	+11.43	+16.64	+15.69	+15.31	+1.76
TCEQ Fee per connection	0.21	+0.00	+0.00	+0.00	+0.00	+0.00

Table 2 - Water Monthly Service Charges and Future Adjustments: Special Customer Types						
Meter Size	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
Month of Increase	*Sept. 2021*	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
	Charges	*Future Adjustments*				
Transient:						
1-inch	$95.00	+$11.96	+$7.75	+$12.88	+$7.71	+$12.84
2-inch	185.00	+20.00	+15.00	+25.00	+15.00	+25.00
3-inch	460.00	+51.36	+37.69	+62.86	+37.78	+62.99
Resale:						
5/8- and 3/4-inch	$24.05	+$0.20	+$0.09	+$0.06	+$0.03	+$0.00
1-inch	39.00	+0.27	+0.12	+0.10	+0.07	+0.04
1 1/2-inch	60.40	+0.31	+0.19	+0.16	+0.13	+0.11
2-inch	73.25	+0.33	+0.22	+0.20	+0.17	+0.15
3-inch	180.00	+0.83	+0.51	+0.50	+0.48	+0.46
4-inch	360.00	+1.00	+1.00	+1.00	+1.00	+1.00
6-inch	859.00	+1.76	+2.34	+2.40	+2.45	+2.49
8-inch	1075.00	+0.25	+2.91	+3.00	+3.08	+3.13
Metered Fire:						
5/8-inch	$4.70	+$0.23	+$0.08	+$0.05	+$0.09	+$0.01
3/4-inch	4.70	+0.23	+0.08	+0.05	+0.09	+0.01
1-inch	6.15	+0.27	+0.11	+0.09	+0.18	+0.07
1 1/2-inch	8.20	+0.35	+0.16	+0.14	+0.31	+0.14
2-inch	9.45	+0.38	+0.19	+0.17	+0.38	+0.19
3-inch	20.00	+0.48	+0.44	+0.41	+1.01	+0.58
4-inch	37.00	+1.37	+0.85	+0.84	+2.07	+1.21
6-inch	85.00	+3.00	+2.00	+2.00	+5.00	+3.00
8-inch	105.00	+4.30	+2.49	+2.50	+6.26	+3.77
10-inch	140.00	+4.87	+3.32	+3.33	+8.36	+5.05
Unmetered Fire:						
5/8- and 3/4-inch	$6.70	+$0.21	+$0.05	+$0.05	+$0.04	+$0.00
1-inch	9.55	+0.23	+0.07	+0.09	+0.09	+0.02
1 1/2-inch	13.60	+0.29	+0.09	+0.14	+0.17	+0.07
2-inch	16.05	+0.30	+0.11	+0.16	+0.22	+0.10
3-inch	36.00	+0.87	+0.23	+0.42	+0.59	+0.37
4-inch	70.00	+1.35	+0.44	+0.84	+1.24	+0.79
6-inch	165.00	+2.00	+1.00	+2.00	+3.00	+2.00
8-inch	205.00	+3.05	+1.24	+2.50	+3.76	+2.52
10-inch	275.00	+1.60	+1.65	+3.33	+5.03	+3.38
12-inch	380.00	+5.79	+2.30	+4.66	+7.05	+4.75

Table 3 - Single Family Residential Water Volume Rates and Future Adjustments						
Rate Block	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
Month of Increase	*Sept. 2021*	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
	Rates	*Future Adjustments*				
Customers with usage up to 3,000 gallons per month:						
First 1 kgal	$1.00	+$0.20	+$0.10	+$0.20	+$0.15	+$0.10
Next 1 kgal						
Next 1 kgal						
** Single family residential customers who use 3,000 gallons or less per month receive a conservation credit.*						
Customers with Usage over 3,000 gallons per month:						
First 1 kgal	$5.50	+$0.60	+$0.40	+$0.50	+$0.50	+$0.50
Next 1 kgal						
Next 1 kgal						
Next 1 kgal						
Next 1 kgal						
Next 1 kgal						
Next 6 kgal	8.00	+0.65	+0.45	+0.65	+0.55	+0.70
Next 8 kgal	11.00	+0.65	+0.35	+0.80	+0.50	+0.70
Over 20 kgal	15.00	+0.65	+0.35	+0.65	+0.35	+0.50

Table 4 - Sample Single Family Residential Water Bills and Future Adjustments						
Billed Usage	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
Month of Increase	*Sept. 2021*	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
	Bill Amount	*Increase to Bill Amount*				
Meter Charge + TCEQ Fee	$6.46	+$0.32	+$0.19	+$0.17	+$0.14	+$0.03
1,000 gallons	7.46	+0.52	+0.29	+0.37	+0.29	+0.13
2,000 gallons	8.46	+0.72	+0.39	+0.57	+0.44	+0.23
3,000 gallons	9.46	+0.92	+0.49	+0.77	+0.59	+0.33
4,000 gallons	28.46	+2.72	+1.79	+2.17	+2.14	+2.03
5,000 gallons	33.96	+3.32	+2.19	+2.67	+2.64	+2.53
6,000 gallons	39.46	+3.92	+2.59	+3.17	+3.14	+3.03

Table 5 - Retail Water Volume Rates and Future Adjustments							
Customer Type	**Rate Block**	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
		Sept. 2021	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
		Rates	*Future Adjustments*				
Multifamily Residential	All Usage	$5.45	+$0.49	+$0.36	+$0.45	+$0.47	+$0.42
Commercial/ Industrial	All Usage	5.55	+0.60	+0.40	+0.60	+0.57	+0.52
Irrigation	Block 1	---	---	---	---	---	---
	Block 2	---	---	---	---	---	---
	All Usage	10.00	+0.45	+0.27	+0.45	+0.44	+0.39
Transient	All Usage	10.00	+0.45	+0.27	+0.45	+0.44	+0.39
Resale	All Usage	10.00	+0.45	+0.27	+0.45	+0.44	+0.39
Emergency Backup	All Usage	10.00	+0.45	+0.27	+0.45	+0.44	+0.39
Metered Fire	All Usage	10.00	+0.45	+0.27	+0.45	+0.44	+0.39

Table 6 - Wholesale Water Volume Rates and Future Adjustments							
Customer Type	**Rate Block**	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
		Sept. 2021	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
		Rates	*Future Adjustments*				
Contract w/Airgap	Minimum	$3.35	+$0.35	+$0.02	+$0.11	+$0.17	+$0.10
	Excess	0.85	+0.05	+0.02	+0.08	+0.05	+0.05
Contract w/o Airgap	Minimum	4.05	+0.15	+0.02	+0.05	+0.15	+0.15
	Excess	0.85	+0.05	+0.02	+0.08	+0.05	+0.05
GRP Areas 1 & 2	All Usage	2.68	+0.28	+0.02	+0.08	+0.14	+0.08
GRP Area 3	All Usage	1.01	+0.11	+1.12	+0.07	+0.10	+0.06
Contract Untreated	All Usage	0.8500	0.0000	0.0000	0.0000	0.0000	0.0000

Table 7 - Wastewater Monthly Service Charges and Future Adjustments						
Meter Size	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
Month of Increase	*Sept. 2021*	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
	Charges	*Future Adjustments*				
5/8-inch	$10.00	+$1.50	+$1.00	+$1.10	+$0.60	+$0.60
3/4-inch	10.00	+1.50	+1.00	+1.10	+0.60	+0.60
1-inch	12.45	+1.79	+2.15	+1.61	+0.96	+1.08
1 1/2-inch	15.93	+2.23	+3.78	+2.25	+1.57	+1.49
2-inch	18.03	+2.47	+4.76	+2.62	+1.96	+1.70
3-inch	35.46	+4.60	+12.60	+5.92	+4.63	+4.03
4-inch	64.76	+8.16	+25.37	+11.87	+9.09	+7.97
6-inch	146.02	+18.05	+60.80	+28.36	+21.47	+18.89
8-inch	180.90	+22.29	+76.01	+35.43	+26.79	+23.58
10-inch	239.14	+29.38	+101.40	+47.26	+35.66	+31.40
12-inch	331.92	+40.65	+141.85	+66.09	+49.79	+43.87
16-inch	805.89	+98.31	+348.49	+162.30	+122.00	+107.56

Table 8 - Wastewater Monthly Service Charges and Future Adjustments: Special Customer Types						
Meter Size	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
Month of Increase	*Sept. 2021*	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
	Charges	*Future Adjustments*				
Industrial with Surcharge:						
Industrial Program	$100.00	+$200.00	+$200.00	+$200.00	+$200.00	+$250.00
Sewer Only:						
Single Family Res.	$36.00	+$5.00	+$4.00	+$5.00	+$5.00	+$5.00
Duplex	72.00	+10.00	+8.00	+10.00	+10.00	+10.00
Multifamily Res.	36.00	+5.00	+4.00	+5.00	+5.00	+5.00
Commercial	72.00	+10.00	+8.00	+10.00	+10.00	+10.00
Industrial	72.00	+10.00	+8.00	+10.00	+10.00	+10.00

Table 9 - Single Family Residential Wastewater Volume Rates and Future Adjustments						
Rate Block	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
Month of Increase	*Sept. 2021*	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
	Rates	*Future Adjustments*				
First 1 kgal	$4.00	+$0.50	+$0.30	+$1.00	+$0.75	+$0.40
Next 1 kgal						
Next 1 kgal						
Next 1 kgal	10.50	+0.75	+0.25	+0.75	+0.30	+0.70
Next 1 kgal						
Over 5 kgal						

Table 10 - Sample Single Family Residential Wastewater Bills and Future Adjustments						
Billed Usage	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
Month of Increase	*Sept. 2021*	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
	Bill Amount	*Increase to Bill Amount*				
Meter Charge only	$10.00	+$1.50	+$1.00	+$1.10	+$0.60	+$0.60
1,000 gallons	14.00	+2.00	+1.30	+2.10	+1.35	+1.00
2,000 gallons	18.00	+2.50	+1.60	+3.10	+2.10	+1.40
3,000 gallons	22.00	+3.00	+1.90	+4.10	+2.85	+1.80
4,000 gallons	32.50	+3.75	+2.15	+4.85	+3.15	+2.50
5,000 gallons	43.00	+4.50	+2.40	+5.60	+3.45	+3.20
6,000 gallons	53.50	+5.25	+2.65	+6.35	+3.75	+3.90

Table 11 - Retail Wastewater Volume Rates and Future Adjustments							
Customer Type	**Rate Block**	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
		Sept. 2021	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
		Rates	*Future Adjustments*				
Multifamily Residential	All Flow	$7.40	+$0.66	+$0.29	+$0.90	+$0.53	+$0.60
Commercial	All Flow	7.40	+0.66	+0.29	+0.90	+0.53	+0.60
Industrial (no surcharge)	First 2 kgal	---	---	---	---	---	---
	Over 2 kgal	---	---	---	---	---	---
	All Usage	7.40	+0.66	+0.29	+0.90	+0.53	+0.60
Industrial with Surcharge	All Flow	8.00	+0.60	+0.10	+0.65	+0.25	+0.25
	BOD (per lb)	0.4437	+0.0512	+0.0376	+0.0638	+0.0402	+0.0386
	TSS (per lb)	0.3384	+0.0347	+0.0122	+0.0349	+0.0184	+0.0180
	Ammonia (per lb)	0.6253	+0.0549	-0.0126	+0.0351	+0.0079	-0.0080

Table 12 - Wholesale Wastewater Volume Rates and Future Adjustments							
Customer Type	**Rate Block**	**FYE 2022**		**FYE 2023**	**FYE 2024**	**FYE 2025**	**FYE 2026**
		Sept. 2021	*April 2022*	*April 2023*	*April 2024*	*April 2025*	*April 2026*
		Rates	*Future Adjustments*				
Capital without Collection System	All Flow	$1.65	+$0.00	+$0.00	+$0.00	+$0.00	+$0.00
Capital with Collection System	All Flow	3.00	+0.12	+0.00	+0.05	+0.01	+0.00
No Capital with Collection System	All Flow	6.25	+0.00	+0.15	+0.67	+0.40	+0.44
Connection-based	All Connections	25.00	+0.30	+1.42	+2.87	+1.71	+1.93

APPENDIX D

CITY OF HOUSTON UTILITY PROFILE BASED ON TEXAS COMMISSION ON ENVIRONMENTAL QUALITY FORMAT

Texas Water Development Board

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

Fill out this form as completely as possible.
If a field does not apply to your entity, leave it blank.

CONTACT INFORMATION

Name of Utility: City of Houston

Public Water Supply Identification Number (PWS ID): TX1010013

Certificate of Convenience and Necessity (CCN) Number: 99144

Surface Water Right ID Number: 2925-B, 4261-B, 4277-A, 4963-A, 4965-A, 5807, 5808, 5826

Wastewater ID Number: See Attachment

Completed By: Amanda Siebels Title: Senior Division Manager

Address: 611 Walker City: Houston Zip Code: 77006

Email: Amanda.Siebels@houstontx.gov Telephone Number: 832-395-2721

Date: 5/1/2024

Regional Water Planning Group: H Map

Groundwater Conservation District: Harris, Fo Map

Check all that apply:

- [x] Received financial assistance of $500,000 or more from TWDB
- [x] Have 3,300 or more retail connections
- [x] Have a surface water right with TCEQ

Texas Water Development Board

Section I: Utility Data

A. Population and Service Area Data

1. Current service area size in square miles: 650
(Attach or email a copy of the service area map.)

2. Provide historical service area population for the previous five years, starting with the most current year.

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Service
2019	2,343,365	2,529,487	2,260,590
2020	2,320,268	2,529,487	2,273,397
2021	2,529,611	2,735,764	2,286,203
2022	2,529,611	2,912,072	2,299,010
2023	2,565,968	2,858,778	2,311,817

3. Provide the projected service area population for the following decades.

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Service
2020	2,320,268	2,526,487	2,273,397
2030	2,798,278	3,031,784	2,728,076
2040	3,073,268	3,334,962	3,000,884
2050	3,349,540	3,635,109	3,270,963
2060	3,626,591	3,924,918	3,532,641

4. Describe the source(s)/method(s) for estimating current and projected populations.

Retail Water Service- TWDB
WW Retail and subscriber customer - HGSD projected population
Wholesale customer demands were projected using HGSD data and a per capita demand of 150 gpcd using the same peaking factors developed for retail customers in each of the treated water service areas.

Texas Water Development Board

B. System Input

Provide system input data for the previous five years.

Total System Input = Self-supplied + Imported – Exported

Year	Self-supplied Water in Gallons	Purchased/Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2019	165,091,410,891	0	52,843,883,168	112,247,527,723	131
2020	163,943,857,000	0	55,506,469,000	108,437,388,000	128
2021	161,131,328,713	0	54,091,003,000	107,040,325,713	116
2022	173,564,665,347	0	58,991,835,000	114,572,830,347	124
2023	182,267,080,000	0	61,314,334,000	120,952,746,000	129
Historic 5-year Average	169,199,668,390	0	56,549,504,834	112,650,163,557	126

C. Water Supply System (Attach description of water system)

1. Designed daily capacity of system 907,000,000 **gallons** per day.
2. Storage Capacity:
   Elevated 11,650,000 **gallons**
   Ground 175,330,000 **gallons**

3. List all current water supply sources in gallons.

Water Supply Source	Source Type*	Total Gallons
Gulf Coast Aquifer	Ground	27,696,913,000
San Jacinto (Run of River)	Surface	26,068,114,551
Lake Houston	Surface	23,889,382,229
Lake Livingston	Surface	244,204,793,712
Reuse	Surface	480,383,365
	Choose One	

*Select one of the following source types: *Surface water, Groundwater, or Contract*

4. If surface water is a source type, do you recycle backwash to the head of the plant?
   - (●) Yes 723,000 estimated **gallons** per day
   - ( ) No

Texas Water Development Board

D. Projected Demands

1. Estimate the water supply requirements for the next ten years using population trends, historical water use, economic growth, etc.

Year	Population	Water Demands (gallons)
2025	2,632,342	120,292,764,716
2026	2,665,529	121,420,177,008
2027	2,698,716	122,537,898,696
2028	2,731,903	123,645,929,780
2029	2,765,090	124,744,270,260
2030	2,798,278	125,832,965,104
2031	2,825,777	126,656,976,694
2032	2,853,276	127,472,958,576
2033	2,880,775	128,280,910,750
2034	2,908,274	129,080,833,216

2. Describe sources of data and how projected water demands were determined. Attach additional sheets if necessary.

Projected retail population and demand determined by TWDB, HGAC and City of Houston Water Infrastructure Planning.

Texas Water Development Board

E. High Volume Customers

1. List the annual water use, in gallons, for the five highest volume **RETAIL customers**. Select one of the following water use categories to describe the customer; choose Residential, Industrial, Commercial, Institutional, or Agricultural.

Retail Customer	Water Use Category*	Annual Water Use	Treated or Raw
CITY OF HOUSTON	Institutional	3,063,723,000	Treated
HISD	Institutional	682,296,000	Treated
HARRIS COUNTY	Institutional	497,110,000	Treated
UNIVERSITY OF HOUSTON	Institutional	412,449,000	Treated
MEMORIAL HERMANN	Commercial	309,569,000	Treated

*For definitions on recommended customer categories for classifying customer water use, refer to the online Guidance and Methodology for Reporting on Water Conservation and Water Use.

2. If applicable, list the annual water use for the five highest volume **WHOLESALE customers**. Select one of the following water use categories to describe the customer; choose Municipal, Industrial, Commercial, Institutional, or Agricultural.

Wholesale Customer	Water Use Category*	Annual Water Use	Treated or Raw
Equistar Chemicals LP (37812)	Industrial	11,093,499,000	Raw
North Harris Co. Regional Wate	Municipal	9,497,501,000	Raw
West Harris Co. Regional Water	Municipal	8,845,452,000	Treated
Deer Park Refining Partnership	Industrial	7,348,982,000	Raw
City of Pasadena	Municipal	6,800,007,000	Treated

*For definitions on recommended customer categories for classifying customer water use, refer to the online Guidance and Methodology for Reporting on Water Conservation and Water Use.

F. Utility Data Comment Section

Provide additional comments about utility data below.

none

Texas Water Development Board

Section II: System Data

A. Retail Connections

1. List the active retail connections by major water use category.

Water Use Category*	Active Retail Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Residential – Single Family	430,799	0	430,799	36%
Residential – Multi-family (units)	695,891	0	695,891	58%
Industrial	276	0	276	0%
Commercial	59,518	0	59,518	5%
Institutional	4,443	0	4,443	0%
Agricultural	0	0	0	0%
TOTAL	1,190,927	0	1,190,927	

*For definitions on recommended customer categories for classifying customer water use, refer to the online Guidance and Methodology for Reporting on Water Conservation and Water Use.

2. List the net number of new retail connections by water use category for the previous five years.

Water Use Category*	Net Number of New Retail Connections				
	2019	2020	2021	2022	2023
Residential – Single Family	2,137	3,009	2,857	823	6,745
Residential – Multi-family (units)	485	-375	655,115	-654,938	679,845
Industrial	199	-232	186	-182	118
Commercial	-2,028	-1,701	12,951	-5,710	8,305
Institutional	12,842	8,618	129	-184	257
Agricultural	0	8,083	-8,083	0	0
TOTAL	13,635	17,402	663,155	-660,191	695,270

*For definitions on recommended customer categories for classifying customer water use, refer to the online Guidance and Methodology for Reporting on Water Conservation and Water Use.

Texas Water Development Board

B. Accounting Data

For the previous five years, enter the number of gallons of RETAIL water provided in each major water use category.

Water Use Category*	Total Gallons of Retail Water				
	2019	2020	2021	2022	2023
Residential - Single Family	24,661,840,000	26,060,404,000	25,329,441,000	24,543,987,000	24,927,473,000
Residential – Multi-family	26,125,381,000	29,550,316,000	29,621,006,000	27,995,586,000	27,005,071,000
Industrial	1,778,745,000	966,351,000	2,131,771,000	1,770,954,000	1,821,450,000
Commercial	30,691,172,000	23,854,234,000	22,161,525,000	24,262,804,000	21,343,436,000
Institutional	3,277,037,000	5,325,849,000	5,077,866,000	6,062,976,000	6,391,710,000
Agricultural	0	0	0	0	0
TOTAL	86,534,175,000	85,757,154,000	84,321,609,000	84,636,307,000	81,489,140,000

*For definitions on recommended customer categories for classifying customer water use, refer to the online Guidance and Methodology for Reporting on Water Conservation and Water Use.

C. Residential Water Use

For the previous five years, enter the residential GPCD for single family and multi-family units.

Water Use Category*	Residential GPCD				
	2019	2020	2021	2022	2023
Residential - Single Family	39	31	27	27	27
Residential – Multi-family	31	35	32	31	29

D. Annual and Seasonal Water Use

1. For the previous five years, enter the gallons of treated water provided to RETAIL customers.

Month	Total Gallons of Treated Retail Water				
	2019	2020	2021	2022	2023
January	6,454,688,000	6,610,213,000	5,970,806,000	6,475,616,000	6,884,323,000
February	5,462,518,000	5,903,606,000	5,728,054,000	6,450,942,000	5,866,171,000
March	5,828,995,000	6,726,692,000	6,528,552,000	5,625,396,000	5,813,174,000
April	6,393,375,000	5,589,786,000	6,542,402,000	6,219,038,000	6,338,070,000
May	6,112,948,000	6,752,349,000	6,818,811,000	6,849,384,000	6,418,321,000
June	7,558,709,000	6,603,317,000	6,827,775,000	7,694,085,000	7,119,427,000
July	7,423,778,000	7,744,867,000	6,632,287,000	7,865,490,000	7,608,429,000
August	8,079,511,000	7,336,518,000	7,111,544,000	7,840,217,000	7,757,184,000
September	8,004,061,000	7,266,112,000	7,389,339,000	7,126,497,000	8,431,357,000
October	7,148,386,000	7,236,581,000	6,762,099,000	7,815,176,000	7,812,363,000
November	6,476,445,000	6,369,760,000	6,474,734,000	7,249,281,000	6,899,445,000
December	6,382,729,000	6,671,670,000	6,522,341,000	6,438,668,000	6,362,935,000
TOTAL	81,326,143,000	80,811,471,000	79,308,744,000	83,649,790,000	83,311,199,000

2. For the previous five years, enter the gallons of raw water provided to RETAIL customers.

Month	Total Gallons of Raw Retail Water				
	2019	2020	2021	2022	2023
January	6,195,027,000	5,795,471,000	6,942,986,000	7,507,085,000	6,648,180,000
February	5,904,593,000	5,914,254,000	7,063,398,000	7,002,612,000	5,846,112,000
March	5,655,717,000	6,120,944,000	5,587,908,000	6,319,999,000	5,231,318,000
April	6,442,367,000	6,752,291,000	6,546,774,000	7,344,818,000	6,843,825,000
May	6,273,123,000	6,150,034,000	7,347,859,000	7,369,963,000	6,666,126,000
June	6,702,007,000	6,636,487,000	8,082,318,000	7,248,982,000	7,318,156,000
July	6,564,580,000	7,245,081,000	8,490,328,000	7,976,269,000	7,256,200,000
August	7,123,061,000	7,399,164,000	7,931,602,000	7,997,026,000	7,511,647,000
September	6,707,427,000	7,573,666,000	7,870,630,000	7,528,047,000	7,986,798,000
October	6,304,847,000	6,696,877,000	7,533,866,000	7,110,761,000	7,598,371,000
November	6,004,424,000	7,050,392,000	7,484,607,000	6,949,552,000	7,083,390,000
December	6,049,248,000	7,021,033,000	7,126,316,000	6,817,847,000	6,684,929,000
TOTAL	75,926,421,000	80,355,694,000	88,008,592,000	87,172,961,000	82,675,052,000

3. Summary of seasonal and annual water use.

Water Use	Seasonal and Annual Water Use					Average in Gallons
	2019	2020	2021	2022	2023	
Summer Retail (Treated + Raw)	43,451,646,00	42,965,434,(	45,075,854,0(	46,622,069,0(	44,571,043,0(	44,537,209,200 / 5yr Average
TOTAL Retail (Treated + Raw)	157,252,564,0	161,167,165	167,317,336,(	170,822,751,(	165,986,251,(	164,509,213,400 / 5yr Average

E. Water Loss

Provide Water Loss data for the previous five years.

Water Loss GPCD = [Total Water Loss in Gallons ÷ Permanent Population Served] ÷ 365
Water Loss Percentage = [Total Water Loss ÷ Total System Input] x 100

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss as a Percentage
2019	23,441,484,560	27	21%
2020	18,804,872,104	22	17%
2021	20,158,476,311	22	19%
2022	26,784,545,186	29	23%
2023	34,246,986,578	37	28%
5-year average	24,687,272,948	27	22%

Texas Water Development Board

F. Peak Water Use

Provide the Average Daily Water Use and Peak Day Water Use for the previous five years.

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2019	457,000,000	567,000,000	1.24
2020	448,000,000	543,000,000	1.21
2021	446,000,000	531,000,000	1.19
2022	480,000,000	587,000,000	1.22
2023	499,000,000	659,000,000	1.32

G. Summary of Historic Water Use

Water Use Category	Historic 5-year Average	Percent of Connections	Percent of Water Use
Residential SF	25,104,629,000	36%	%
Residential MF	28,059,472,000	58%	%
Industrial	1,693,854,200	0%	%
Commercial	24,462,634,200	5%	%
Institutional	5,227,087,600	0%	%
Agricultural	0	0%	%

H. System Data Comment Section

Provide additional comments about system data below.

N/A

Texas Water Development Board

Section III: Wastewater System Data

If you do not provide wastewater system services then you have completed the Utility Profile. Save and Print this form to submit with your Plan. Continue with the Water Conservation Plan Checklist to complete your Water Conservation Plan.

A. Wastewater System Data (Attach a description of your wastewater system.)

1. Design capacity of wastewater treatment plant(s): 563,713,000 **gallons** per day.

2. List the active wastewater connections by major water use category.

Water Use Category*	Active Wastewater Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal			0	0%
Industrial			0	0%
Commercial			0	0%
Institutional			0	0%
Agricultural			0	0%
TOTAL	0	0	0	

2. What percent of water is serviced by the wastewater system? ____%

3. For the previous five years, enter the number of gallons of wastewater that was treated by the utility.

Month	Total Gallons of Treated Wastewater				
	2019	2020	2021	2022	2023
January	7,982,299,000	7,746,894,000	8,343,684,000	8,180,984,000	9,400,874,000
February	6,299,465,000	6,728,960,000	6,671,031,000	6,935,802,000	7,693,308,000
March	6,521,389,000	7,361,880,000	7,237,052,000	6,957,346,000	7,217,141,000
April	7,428,474,000	7,017,600,000	6,729,930,000	6,695,145,000	7,104,330,000
May	9,156,172,000	7,488,360,000	10,561,390,000	7,633,902,000	9,420,001,000
June	7,177,623,000	6,708,000,000	9,473,055,000	7,829,043,000	8,459,010,000
July	6,855,030,000	7,125,260,000	9,807,309,000	7,937,845,000	7,070,201,000
August	6,357,480,000	8,092,953,000	7,502,580,000	7,340,577,000	7,240,298,000
September	6,429,000,000	6,852,960,000	7,822,398,000	9,075,711,000	8,949,570,000
October	7,268,260,000	6,349,197,000	8,294,940,000	6,854,227,000	7,569,704,000
November	7,503,039,000	8,036,481,000	7,308,600,000	7,168,380,000	7,503,039,000
December	6,904,540,000	7,261,449,000	7,528,660,000	8,824,215,000	6,904,540,000
TOTAL	85,882,771,000	86,769,994,000	97,280,629,000	91,433,177,000	94,532,016,000

4. Can treated wastewater be substituted for potable water?

○ Yes ◉ No

B. Reuse Data

1. Provide data on the types of recycling and reuse activities implemented during the current reporting period.

Type of Reuse	Total Annual Volume (in gallons)
On-site irrigation	66,011,000
Plant wash down	13,576,690,000
Chlorination/de-chlorination	0
Industrial	0
Landscape irrigation (parks, golf courses)	3,302,406
Agricultural	0
Discharge to surface water	0
Evaporation pond	0
Other	0
TOTAL	13,646,003,406

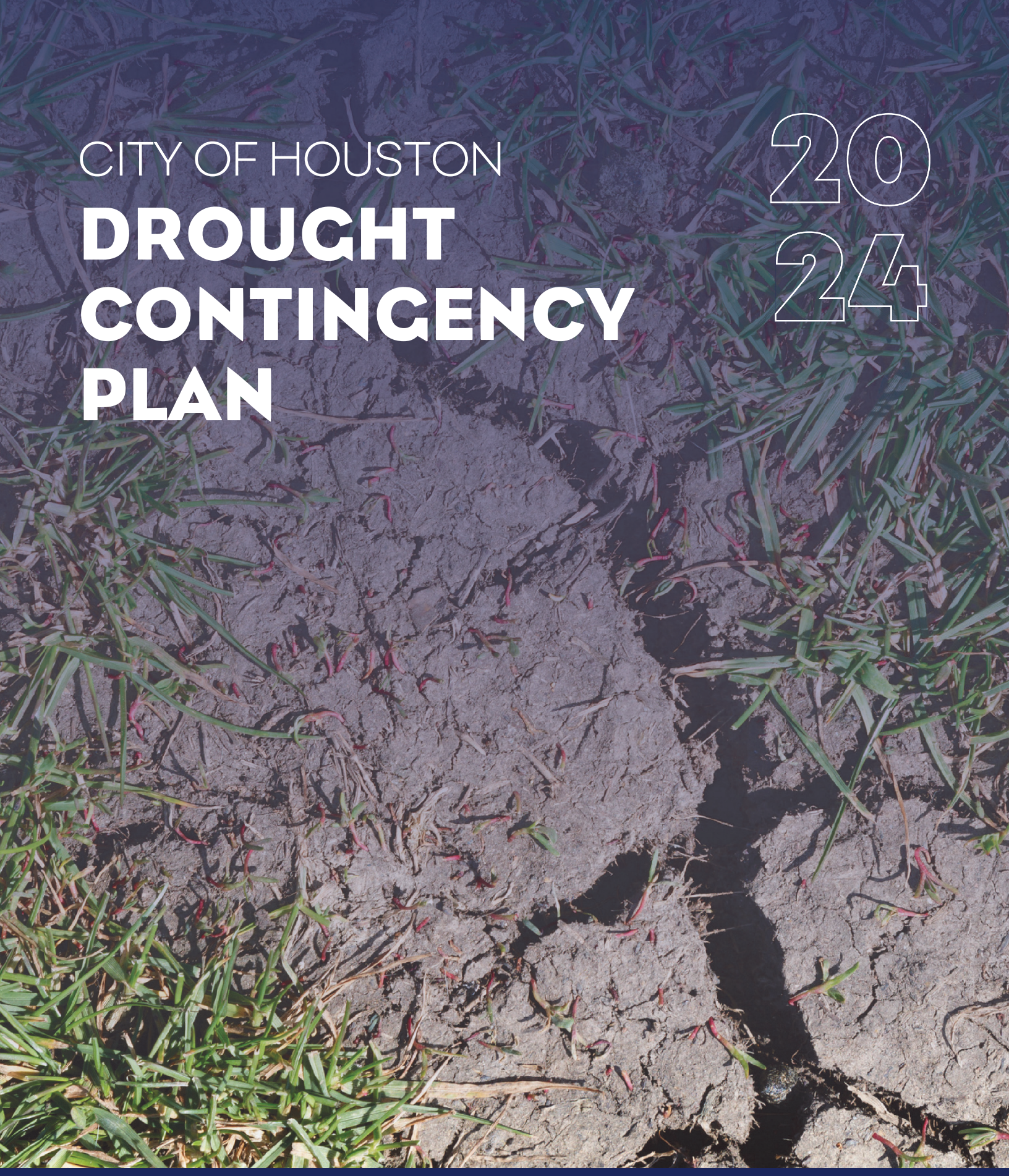
C. Wastewater System Data Comment

Provide additional comments about wastewater system data below.

You have completed the Utility Profile. Save and Print this form to submit with your Plan. Continue with the Water Conservation Plan Checklist to complete your Water Conservation Plan.

APPENDIX E

CITY OF HOUSTON DROUGHT CONTINGENCY AND EMERGENCY WATER MANAGEMENT PLAN



CITY OF HOUSTON

DROUGHT CONTINGENCY PLAN

2024

Prepared by:
PLUMMER | 1320 S. University Drive Suite 300 | Fort Worth, TX 76107

HOUSTON PUBLIC WORKS

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CITY OF HOUSTON
DROUGHT CONTINGENCY PLAN
FOR PUBLIC WATER SUPPLIES

Texas Commission on Environmental Quality
Water Availability Division
MC-160, P.O. Box 13087 Austin, Texas 78711-3087
Telephone (512) 239-4600, FAX (512) 239-2214

Drought Contingency Plan
for a Retail/Wholesale Public Water Supplier

This form is provided as a model of a drought contingency plan for a wholesale public water supplier. If you need assistance in completing this form or in developing your plan, please contact the Conservation Staff of the Resource Protection Team in the Water Availability Division at (512) 239-4600.

Drought Contingency Plans must be formally adopted by the governing body of the water provider and documentation of adoption must be submitted with the plan. For example, adoption by a City Council as an ordinance or by resolution of the entity's Board of Directors adopting the plan as administrative rules.

Name:	City of Houston Public Works
Address:	7000 Ardmore Street, Houston, TX 77054
Telephone Number:	(713) 641-9507 Fax: (713)
Water Supplies Covered By This Plan:	City of Houston Main System (PWS #1010013), Willowchase (PWS #1011902), Kingwood (PWS #1010348), District 82 (PWS #1011593), Lake Houston Parks (PWS #1011587), Belleau Woods (PWS #1011594), District 73 (PWS #1011585)
Water Rights Numbers:	2925-B, 4261-B, 4277-A, 4963-A, 4965-A, 5807, 5808, 5826, 5827
Regional Planning Group:	Region H
Form Completed By:	Amanda Siebels
Title:	Senior Division Manager
Person Responsible for Implementation:	Amanda Siebels Phone: 832-395-2721
Signature:	_____ Date: _____

SECTION I: DECLARATION OF POLICY, PURPOSE, AND INTENT

In order to conserve the available water supply and/or to protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the City of Houston ("City") adopts the following Drought Contingency Plan ("Plan").

SECTION II: PUBLIC & WHOLESALE INVOLVEMENT

According to 30 TAC 288.20(a)(1)(A): *"Preparation of the plan shall include provisions to actively inform the public and to affirmatively provide opportunity for user input in the preparation of the plan and for informing wholesale customers about the plan. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the public and providing written notice to the public concerning the proposed plan and meeting."*

The City provided opportunity for public input in the development of this Plan by the following means:

1. Making the draft plan available on City of Houston's website, **www.houstonpublicworks.org/waterconservation**
2. Providing the draft plan to anyone requesting a copy
3. Sending a notification to customers requesting feedback
4. Held a public meeting at the Houston City Hall at ____ p.m. on_____, 2024.

SECTION III: PUBLIC & WHOLESALE CONTRACT EDUCATION

Houston Public Works will periodically provide the public and wholesale water contract customers with information about the Plan, including information about the conditions under which each Stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each Stage. This information will be provided by the means identified below:

1. Making the plan available to the public through the City of Houston's web site, **www.houstonpublicworks.org/waterconservation**
2. Notifying wholesale contract water customers through the Everbridge system and the wholesale Customer Contact application _____.

SECTION IV: COORDINATION WITH REGIONAL WATER PLANNING GROUPS

The City of Houston is located within the Region H Water Planning Area. The City shall notify and coordinate with the chair of the Region H Water Planning Group (RHWPG) of this plan for their information and comment. The Plan will be reviewed by RHWPG to assure conformity and consistency with the regional water plan.

SECTION V: AUTHORIZATION

At the request of the Director of Public Works or his/her designee, the Mayor may authorize and direct the implementation of the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. At the request of the Director of Public Works or his/her designee and based on his or her assessment of the situation, the Mayor shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

SECTION VI: APPLICATION

The provisions of this Plan shall apply to all customers of the following City public water supplies:

1. Main System (PWS #1010013) – Surface Water & Groundwater
2. Isolated System - Willowchase (PWS #1011902) - Groundwater
3. Isolated System – Kingwood (PWS #1010348) - Groundwater
4. Isolated System - District 82 (PWS #1011593) – Groundwater
5. Isolated System - Lake Houston Parks (PWS #1011587) – Ground Water
6. Isolated System - Belleau Woods (PWS #1011594) – Purchased Surface & Groundwater
7. Isolated System – District 73 (PWS #1011585) – Groundwater

The terms “person” and “customer” as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities. The City of Houston Belleau Woods public water supply (TX ID# 1011594) is covered by this Plan, but as a purchased water system will follow the requirements of the Plan set forth by its water supplier, the City of Humble (TX ID# 1010014).

SECTION VII: DEFINITIONS

The words and terms used in this plan shall have the following meaning unless the context clearly indicates otherwise.

1. **Aesthetic water use:** water used for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.
2. **Commercial water use**: Water use which is integral to the operations of commercial, non-profit, and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

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

4. **Contamination:** The presence of any foreign substance (organic, inorganic, radiological or biological) in water which tends to degrade its quality to constitute a health hazard or impair the usefulness of the water such that the water system cannot be used.

5. **Customer:** Any person, company, organization, or municipality using water supplied by the City of Houston.

6. **Director:** The City of Houston Public Works Director or designee.

7. **Drought:** An extended period of abnormally low precipitation that adversely affects growing or living conditions.

8. **Even number address:** Street addresses, box numbers, or rural postal route numbers ending in 0, 2, 4, 6, or 8 and locations without addresses.

9. **Impervious Surface:** Any structure, street, driveway, sidewalk, patio, or other surface area covered with brick, asphalt paving, tile or other impervious or nonporous material.

10. **Industrial water use:** The use of water in processes designed to convert materials of lower value into forms having greater usability and value.

11. **Landscape Watering:** The application of water to landscape trees, shrubs, plants, or grass to promote the health and/or growth of existing landscape plants.

12. **Non-essential water use**: Water use that is neither essential nor required for the protection of public health, safety, and welfare, including:

    a. Irrigation of landscaped areas, including parks, athletic fields, and golf courses, except as otherwise provided under this plan;
    b. Use of water to wash any motor vehicle, motor bike, boat, trailer, airplane, or other vehicle at any non-commercial establishment not designed for such purposes;
    c. Use of water to wash any sidewalks, walkways, driveways, parking lots, tennis courts, or other impervious surfaces;
    d. Use of water to wash buildings or structures for purposes other than immediate fire protection;
    e. Flushing gutters or permitting water to run or accumulate in any gutter or street;
    f. Use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi-type pools;
    g. Use of water in fountain or pond for aesthetic or scenic purposes; except where necessary to support non-plant aquatic life; or
    h. Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

13. **Odd numbered address**: Street addresses, box numbers, or rural postal route numbers ending in 1, 3, 5, 7, or 9.

14. **Person or User:** The provisions of the plan shall apply to all persons, users, and property utilizing water provided by the City of Houston. The terms "person" and "user" as used in the plan includes individuals, corporations, partnerships, associations, and all other legal entities.

15. **Production capability:** The volume/amount a public water supplier can produce utilizing the current water resources and infrastructure.

16. **Raw Water:** Raw water is defined as water found in the environment that has not been treated and does not have any of its minerals, ions, particles, bacteria, or parasites removed. Raw water includes rainwater, groundwater, water from infiltration wells, and water from bodies like lakes and rivers.

17. **Reservoir:** The City of Houston raw water holding facilities, including Lake Livingston, Lake Conroe, and Lake Houston.

18. **Swimming Pool:** Any structure, basin, chamber, tank, or large tub, including hot tubs, containing water for swimming purposes, diving, or recreational bathing, and having a depth of two feet or more at any point.

19. **Water Emergency:** A water system failure due to weather, electrical or mechanical failure, contamination of source, extremely low river water allotment, or act of God or force majeure.

20. **Water supply:** the amount of water that is available to meet the immediate unrestricted customer demands based on the available water resources and infrastructure.

21. **Wholesale Contract Water user:** Potable water provided to a regional water authority, political subdivision, industrial user, or municipality who is not the ultimate user of the water.

SECTION VIII: AUTHORIZATION, INITIATION, AND TERMINATION OF DROUGHT AND WATER EMERGENCY ACTION OR STAGES

The Public Works Director or his/her designee shall monitor water supply and/or demand conditions daily and shall determine when conditions suggest that initiation or termination of any Stage of the Plan is warranted, that is, when the specified “triggers” are reached. At the request of the Houston Public Works Director (“Director”) and based on his/her assessment of water utility conditions, the Mayor of the City of Houston (“Mayor”) may declare a drought or water emergency, to include any part of the drought and water emergency Stages listed herein.

During the period covered by the drought or water emergency, the Director will implement and direct such measures, as he or she may deem necessary, to be taken as set forth herein to include, but not by way of limitation, the implementation of the set-out Stages. Such other measures may be implemented as the Director may deem necessary or appropriate to respond to the drought or water emergency to bring the emergency to a close with the minimum loss of property and due consideration for the public health and safety. The City shall be responsible to see that all public notification, outreach education measures, and activities related to the drought or water emergency, and such restrictions and Stages, as have been implemented shall be taken.

In a declared drought or water emergency, any combination of management response options may be used system-wide or in any section of the region as circumstances may require in the judgment of the Director. Any of the measures provided for in this Plan shall be implemented so as not to adversely affect public safety, hospitals, or sanitary uses.

1. AUTHORIZATION

At the request of the Houston Public Works Director ("Director") and based on his or her assessment of the situation, the Mayor of the City of Houston ("Mayor") may declare a drought or water emergency in the event of any condition that significantly interrupts the ability of the City to supply water to its customers. Initially, actions based on this declaration will include any measure the Director deems as necessary to respond to the drought or water emergency, to include any part of the drought and water emergency Stages listed herein.

If the drought or water emergency is expected to continue for more than five (5) days:

a. The Director shall notify TCEQ within five (5) business days upon implementing any mandatory provisions of this plan, as prescribed in Title 30, Texas Administrative Code, Chapter 288, Subchapter B (288.20(b)), as amended; and

b. The Director shall make a report to the Mayor setting out the nature and expected severity of the drought or water emergency. At such a time, the Mayor will declare continuing use of the Plan.

2. INITIATION

In the event of a drought or water emergency, the Director will implement and direct such measures to be taken as set forth herein. Such measures may be implemented as the Director deems necessary or appropriate to respond to the drought or water emergency to bring the emergency to a close with the minimum loss of property and due consideration for public health and safety. The City shall be responsible to see that all public notification, outreach education measures, and activities related to the drought or water emergency, and such restrictions and Stages, as have been implemented shall be taken.

In a declared drought or water emergency, any combination of management response options may be used system-wide or in any section of the region as circumstances may require in the judgment of the Director. Any of the measures provided for in this Plan shall be implemented, conditioned that they will not adversely affect public safety, hospitals, or sanitary uses.

3. TERMINATION

The City, through the City staff, will monitor the drought or water emergency and promptly recommend that the Director request the Mayor to declare the drought or water emergency to be concluded. The termination of the declaration of a drought or water emergency shall be declared by the Mayor after receiving and reviewing a report from the Director.

Any Stage may end when the Mayor declares, based on the recommendation from the Director that the conditions leading to the declaration either no longer exist, have been mitigated, or have been escalated, and the Director files a written declaration to that effect with the City Secretary.

Upon termination of a declared drought Stage, and based on the prevailing conditions, the Mayor may declare adoption of a lesser drought Stage or an end to all drought Stages.

SECTION IX: NOTIFICATION OF DROUGHT RESPONSE STAGES

Upon initiation of a drought Stage, the following public notification actions will be taken:

1. Public notification of the initiation of drought response Stages shall be by means of media alerts, press releases, social media outreach, and on the City's website at **www.houstonpublicworks.org**.
2. Customer email notifications, billing inserts, or on-bill messaging.
3. The Director, and/or designee, shall make notification to water contract customers upon initiation of the drought response Stages. They will be notified using the Everbridge notification system with a follow-up email. Contact between the Director, and/or designee, and water contract customers shall be maintained throughout drought conditions. Notification shall include a reminder that water will be distributed to all water contract customers pro rata, in accordance with Texas Water Code § 11.039.

SECTION X: CRITERIA FOR INITIATION AND TERMINATION OF DROUGHT RESPONSE STAGES

The triggering criteria described below are based on:

1. Weather conditions, including rainfall and ambient temperatures, impact irrigation;
2. Combined total storage of surface water supply based on a calculated projection of monthly production of City water that includes historic production and information provided by customers;
3. Combined total storage of surface water supply based on a calculated projection of monthly production of City water based on a calculated projection of current water production (10-day rolling average);
4. Current water production (10-day rolling average) as a percent of the available treatment capacity;

5. Loss of a determined percent of available treatment capacity; and
6. Water pressure readings of a determined pounds per square inch or less throughout all or material portions of the City's treated water distribution system.

For any Stage, the Director's declaration, which may cover all or a portion of the City's water supply system, shall be in writing and filed with the City secretary.

1. STAGE I: ABNORMAL CONDITIONS (VOLUNTARY)

a. Target: Achieve a FIVE percent reduction in OVERALL water use.

b. Triggers:
When the Director finds that the City's water supply system is under stress because of lower-than-average annual rainfall, temperatures that are higher or lower than normal, or other circumstances Stage I will be implemented as follows:

c. Measures:
Under Stage I, the City of Houston will focus on, and ask customers for, voluntary reductions in water usage, unless otherwise stated in the declaration. All customers are encouraged to follow the water use restriction measures listed below:

1. Customer Measures

a. Voluntary Watering Restrictions

i. Voluntary two-day per week watering, with no watering between 8:00 AM and 7:00 PM, in conformity with the following schedule;
ii. Sundays and Thursdays for single-family residential customers with even-numbered street addresses;
iii. Saturdays and Wednesdays for single-family residential customers with odd-numbered street addresses; and
iv. Tuesdays and Fridays for all other customers.

b. Check for and repair all leaks, dripping faucets, and running toilets.

c. Check for and correct excessive irrigation or uncorrected leaks that result in City water leaving the customer's property by drainage onto adjacent properties, or public or private roadways, or streets or gutters.

d. Power washing for health and safety reasons only is encouraged.

e. Washing of cars only at carwash facilities is encouraged.

2. Utility Measures

a. Notify water contract customers of actions being taken in the City of Houston and require implementation of similar procedures.

b. Increase public education efforts on ways to reduce water use;

c. Review the problems that caused the initiation of Stage I;

d. Notify major water users and work with them to achieve voluntary water use reductions;

e. Intensify efforts on leak detection and repair;

f. Reduce non-essential City government water use, including street cleaning, vehicle washing, and operation of ornamental fountains; and

g. Reduce City government water use for landscape irrigation.

d. Termination:

A Stage I water shortage ends when the Mayor declares, based on the recommendation from the Director that the severe conditions leading to the declaration either no longer exist, have been mitigated, or have been escalated, and the Director files a written declaration to that effect with the City secretary.

2. STAGE II: SEVERE CONDITIONS (MANDATORY)

a. Target: Achieve a TEN percent reduction in OVERALL water use.

b. Triggers:

Triggers (1) through (5) apply to the main system, and triggers (3) to (5) apply to the isolated systems, as defined under Section VII.

1. Combined total storage of surface water supply is less than 24 months, based on a calculated projection of monthly production of City water that includes historic production and information provided by customers;
2. Combined total storage of surface water supply is less than 16 months, based on a calculated projection of current water production for the most recent 24-hour period;
3. Current water production is 80 percent of the available treatment capacity;
4. Loss of approximately 20 percent of available treatment capacity; or
5. Water pressure readings of 45 pounds per square inch or less throughout all or material portions of the City's treated water distribution system.

c. Measures:

All Stage I measures remain in effect. Additionally:

1. Customer Measures

a. During a Stage II water shortage, unless otherwise stated in the declaration, all classes of customers are subject to mandatory restrictions of outdoor use.

During a Stage II water shortage, outdoor use shall be unlawful except for the following time periods as specified in the declaration:

i. Between 7:00 p.m. and 8:00 a.m. of the following day on no more than two days per week in conformity with the following schedule: a. Sundays and Thursdays for single-family residential customers with even-numbered street addresses; and b. Saturdays and Wednesdays for single-family residential customers with odd-numbered street addresses; and c. Tuesdays and Fridays for all other customers; or

ii. Between 7:00 p.m. and 8:00 a.m. of the following day on no more than one day per week in conformity with the following schedule: a. Saturdays for single-family residential customers with odd-numbered addresses; b. Sundays for single-family residential customers with even-numbered addresses; and c. Tuesdays for all other customers.

b. Any outdoor water use resulting in water leaving the customer's property by drainage onto adjacent properties, public or private roadways and/or streets, or gutters shall be deemed unlawful.

c. Unrepaired indoor owner leaks shall be deemed unlawful.

d. Excessive irrigation or uncorrected leaks that result in City water leaving the customer's property by drainage onto adjacent properties, or public or private roadways, or streets or gutters shall be deemed unlawful.

e. Power washing is permitted for health and safety reasons only.

f. Washing of cars is permitted only at carwash facilities.

2. Utility Measures

a. Review the problems that caused the initiation of Stage II.

b. Notify major water users and work with them to achieve mandatory water use reductions; and

c. Eliminate non-essential City government water use, including street cleaning, vehicle washing, and operation of ornamental fountains; and

d. Reduce City government water use for landscape irrigation; and

e. Notify water contract customers of actions being taken in the City of Houston and require implementation of similar procedures.

d. Termination:

A Stage II water shortage ends when the Mayor declares, based on the recommendation from the Director that the severe conditions leading to the declaration either no longer exist, have been mitigated, or have been escalated, and the Director files a written declaration to that effect with the City secretary.

3. STAGE III: EXTREME CONDITIONS (MANDATORY)

a. Target: Achieve a TWENTY percent reduction in OVERALL water use.

b. Triggers:
Triggers (1) through (5) apply to the main system, and triggers (3) to (5) apply to the isolated systems, as defined under Section VII.

1. Combined total storage of surface water supply is less than 18 months, based on a calculated projection of monthly production of City water that includes historic production and information provided by customers;

2. Combined total storage of surface water supply is less than 12 months, based on a calculated projection of current water production for the most recent 24-hour period;

3. Current water production is 85 percent of the available treatment capacity;

4. Loss of approximately 25 percent of available treatment capacity; or

5. Water pressure readings of 40 pounds per square inch or less throughout all or material portions of the City's treated water distribution system.

c. Measures:
All Stage I and Stage II drought management response options shall remain in effect. Additionally:

1. Customer Measures

a. Residential users will be limited to no more than 5,000 gallons per month;

b. Non-residential users will reduce usage by 10%; and

c. Establishment of new landscape is prohibited.

2. Utility Measures

a. Suspend non-essential City government water use, including street cleaning, vehicle washing, and operation of ornamental fountains;

b. Suspend City government water use for landscape irrigation; and

c. Notify water contract customers of actions being taken in the City of Houston and require implementation of similar procedures.

d. Termination:
A Stage III water shortage ends when the Mayor declares, based on the recommendation from the Director that the severe conditions leading to the declaration either no longer exist, have been mitigated, or have been escalated,

and the Director files a written declaration to that effect with the City secretary.

4. STAGE IV: EXCEPTIONAL CONDITIONS (MANDATORY)

a. Target: Achieve a THIRTY-FIVE percent reduction in OVERALL water use.

b. Triggers:
Triggers (1) through (5) apply to the main system, and triggers (3) to (5) apply to the isolated systems, as defined under Section VII.

1. Combined total storage of surface water supply is less than 12 months, based on a calculated projection of monthly production of City water that includes historic production and information provided by customers;

2. Combined total storage of surface water supply is less than 6 months, based on a calculated projection of current water production for the most recent 24-hour period;

3. Current water production is 90 percent of the available treatment capacity;

4. Loss of approximately 20 percent of available treatment capacity and or production capacity; or

5. Water pressure readings of 35 pounds per square inch or less throughout all or material portions of the City's treated water distribution system.

c. Measures:
All Stage I, II and III drought management response options shall remain in effect. Additionally:

1. Customer Measures

a. During a Stage IV water shortage, the following acts or omissions shall be unlawful:

i. All outdoor use;

ii. Use of more than 4,000 gallons of City water per month by single-family residential customers;

iii. Use of more than 4,000 gallons of City water per month (used per unit, as provided in section 47-71 of City of Houston Code of Ordinance) by multi-family residential customers; and

iv. For all customers other than residential customers, failure to reduce use of City water by 15 percent of baseline usage, or any other percentage if recommended by the Director and adopted by city council in the Stage IV water shortage declaration.

2. **Utility Measures**

    a. During a Stage IV water shortage, the Director may authorize a ten percent rate reduction for water usage to customers for reductions of City water use by 20 percent or more than those restrictions set forth in subsection (d), except that the ten percent rate reduction shall not be available to customers whose average monthly usage during the preceding 12-month period was less than 4,000 gallons. The rate reduction for water usage shall be effective for the duration of the existing water shortage period.

    b. Immediately upon the declaration of a Stage IV water shortage, the City may claim force majeure to all its existing water service contracts consistent with the terms of such water service contracts and in accordance with applicable state law.

    c. Notify water contract customers of actions being taken in the City of Houston and require implementation of similar procedures.

d. **Termination:**
A Stage IV water shortage ends when the Mayor declares, based on the recommendation from the Director that the severe conditions leading to the declaration either no longer exist, have been mitigated, or have been escalated, and the Director files a written declaration to that effect with the City secretary.

SECTION XI: PRO RATA CURTAILMENT

If the triggering criteria specified in Section X of the Plan for Stage IV – Exceptional Conditions have been met, the Director of Public Works is hereby authorized to initiate allocation of water supplies on a pro rata basis in accordance with Texas Water Code, §11.039.

SECTION XII: CONTRACT PROVISIONS

The City of Houston Public Works Department will include a provision in every wholesale water contract entered into or renewed after adoption of the plan, including contract extensions, that in case of a shortage of water resulting from drought, the water to be distributed shall be divided in accordance with Texas Water Code, §11.039.

SECTION XIII: ENFORCEMENT

Mandatory water use restrictions may be imposed in Stages II, III, and IV. These mandatory water use restrictions will be enforced by warnings and penalties as follows:

1. On the first violation, customers will be given a written warning that they have violated the mandatory water use restriction.
2. On the second and subsequent violations, citations may be issued to customers, with minimum and maximum fines of $100.00 to $2,000.00.
3. After three violations have occurred, the utility may cut off water service to the customer.

SECTION XIV: VARIANCES

Variances shall be applied for online. Houston Public Works will make a variance process available on their website, with detailed instructions on how to file.

The utility official may grant in writing a temporary variance for an otherwise prohibited water use if the utility official determines that:

1. Failure to grant the variance would cause an emergency condition immediately threatening the life, safety, welfare, or fire protection of the public, the person requesting the variance, or the environment;
2. The applicant cannot comply with the prohibition for technical reasons; or
3. The applicant agrees to implement alternative methods that will achieve the same or a greater level of reduction in water use.

SECTION XV: COORDINATION WITH WATER CONTRACT CUSTOMERS

In accordance with Texas Water Code Section 11.039, when necessary, as determined by the Director, water deliveries to water contract customers shall be curtailed on a pro-rata basis. Every water contract entered or renewed after adoption of this Plan, including contract extensions, shall include a provision that in the case of a drought or water emergency declaration, water to be distributed shall be done so in accordance with Texas Water Code Section 11.039.

1. The City of Houston will work with our contract customers to ensure their drought Stages meet or exceed our reduction goals.
2. During drought Stages, the City of Houston will work with local subsidence districts and contract customers to increase groundwater production where possible and reduce stress on the main system.
3. During any drought Stage, the City of Houston may exercise the option to suspend the minimum amount of water specified under the “Take or Pay” provision of a customer’s water supply contract.

SECTION XVI: SYSTEM OUTAGE OR SUPPLY CONTAMINATION

The City of Houston will notify the TCEQ Regional Office as soon as communication can be established.

SECTION XVII: APPEALS

The Property Owner or applicant for a new development has the right of appeal pursuant to the Director of any adverse determination.

SECTION XVIII: SEVERABILITY

If any provision, paragraph, word, or section of this Plan is invalidated by a court of competent jurisdiction, the remaining provisions, paragraphs, words, or sections shall remain in full force and effect and shall be read or interpreted so as to give effect to the purpose of this Plan.

SECTION XIX: SAVINGS

This Plan is part of the Rules and Regulations adopted by the City of Houston, and save and except as amended hereby, the remaining provisions of the City of Houston shall remain in full force and effect.

SECTION XX: REVIEW AND UPDATE OF DROUGHT AND WATER EMERGENCY RESPONSE PLAN

As required by TCEQ rules, the City of Houston will review this Drought and Emergency Response Plan no later than May 1, 2024, and every five years after that date to coincide with RHWPG. The Plan will be updated as appropriate based on new or updated information. As the plan is reviewed and subsequently updated, a copy of the revised Plan will be kept on file at the City of Houston Main Public Library and submitted to the RCHWPG for their records.

SECTION XXI: EFFECTIVE DATE

This Plan shall be and become effective from and after its adoption hereby and shall remain in effect until otherwise amended by the City of Houston or operation of law.

PASSED, APPROVED and ADOPTED RULES AND REGULATIONS CONCERNING DROUGHT AND WATER EMERGENCY RESPONSE PLAN at a regularly scheduled meeting of the City of Houston City Council, this *fill in Council adoption date*, at which meeting a quorum was present, said meeting being held in accordance with the provisions of V.T.C.A., Government Code, Sections 551.001 et. seq.

This is the final version of the City of Houston's 2024 Drought Contingency Plan, as approved and adopted by the Houston Council on _____, 2024, after incorporation of comments received from _____ of the Texas Commission on Environmental Quality on _____, 2024.

APPENDIX F

LETTER TO REGION H WATER PLANNING GROUP

HOUSTON PUBLIC WORKS

John Whitmire
Mayor

Carol Ellinger Haddock
Director
P.O. Box 1562
Houston, TX 77251-1562

832 395 2500
www.publicworks.houstontx.gov

March 26, 2024

Mr. Mark Evans
Chair, Region H Water Planning Group
3648 Cypress Creek Parkway #110
Houston, TX 77068

Re: 2024 City of Houston Water Conservation Plan

Dear Mr. Evans,

Enclosed please find a copy of the 2024 City of Houston Water Conservation Plan, which is submitted to the Regional H Water Planning Group in accordance with 30 T.A.C. Chapter 288. This plan, which includes the 2024 City of Houston Drought Contingency Plan, is the required 5-year update to the 2019 City of Houston Water Conservation Plan. Additional copies have been provided to the Texas Commission on Environmental Quality and the Texas Water Development Board.

Best Regards,

Ekaterina Fitos
Planning Director
Houston Water

Cc. Greg Eyerly, Deputy Director
Mandi Siebels, P.E., Senior Division Manager

APPENDIX G

CITY COUNCIL RESOLUTION OF ADOPTION

[City Council Resolution Placeholder Page]

APPENDIX H

PUBLIC COMMENT

ID	Organization	Comment	City of Houston Response
1		How about getting leaks/line breaks fixed IN A TIMELY MANNER!?! I've made numerous complaints about water leaks and it has taken the City OVER A MONTH to get them fixed! Outrageously incompetent!!! And I'm sure the City will pass those charges on the their customers! Get it together!	Houston Public Works (HPW) prioritizes leaks repairs based on severity and impact, which can sometimes result in longer wait times for other leak repairs. We recognize the importance of timely repairs to prevent water waste and inconvenience.
2	Residential Customer	Why is the water always so high. It's almost unaffordable. The sewer usage be way higher than the actual water usage. Y'all have us residents paying for all this extra stuff, in the automatize section. 2 person household and the bill then went up almost twice. I hope my bill stays steady of where it's at, cause honestly I don't think y'all read the meters accurately. We're gone most of the day, and pretty much use the same amount of water daily-weekly-monthly	We understand your concerns about your water and sewer charges. Houston Public Works strives to ensure that billing is accurate and reflective of each household's actual water usage. Water rates help the city pay to clean, treat, and ensure our water meets all regulatory compliance meausres.
3		No comment	Noted-no response needed
4		Just wondering why you send bills on colored paper, e.g.blue. Wouldn't it be less expensive to print these on white paper?	The Mayor's "Water Bill Improvement Plan" went into effect in April 2024. Under this plan, residential customers were charged a fixed monthly amount, a customer's set usage. Set usage water bills were printed on blue paper until an upgraded remote reading device is installed, or until your current device is confirmed to be functioning properly and providing accurate readings to the billing system. Once confirmed, your bill will be printed on white paper and customers will be transtionsed to their actual water usage.
5		Excellent plan. An easy-to-read and engaging program to get out to the public.	Thank you for your response. We're glad you find the plan clear and engaging. Our goal is to ensure that the public can easily understand the improvements and how they will benefit the community.
6	Self	Most HOA want home owners to water their grass excessively or they will receive a LETTER!	Thank you for your response. We understand that some Homeowners Associations (HOAs) may encourage watering to maintain aesthetic standards. Houston Public Works promotes responsible water use, especially during times of drought or water shortages. We encourage HOAs to advocate for more sustainable landscaping practices, such as drought-tolerant plants, xeriscaping, and efficient irrigation methods.
7	INDIVIDUAL	REGARDING THE DRAINING OF WATER FROM FIRE HYDRANTS IN NEIGHBORHOODS THAT FLOW IN THE STREET OR INTO DRAINS: PERHAPS, HOSES COULD BE CONNECTED BY WHICH NEIGHBORS COULD BENEFIT IN COLLECTING THIS WATER TO WATER THEIR PLANTS/GRASS.	Thank you for your response. The idea of collecting hydrant water for reuse is creative. Houston Public Works will continue to explore ways to reduce water waste and maximize efficiency.
8	Private citizen	Just had remote meter installed and had been charged 6000 gal/month. I am a widower with a low maintenance yard and not a lot of extraneous water use. I called to confirm that my consumption would be adjusted and the difference in total usage recouped soon. I was told that 6000 gal/month would be my billed rate until the city put remote metering in service - unless I changed buy stated consumption. The service representative agreed that 3000 gal/month was a more reasonable number so it was changed. BUT - I have been paying for unused water and would have continued to do so unless I had made that call! Bad PR for an organization trying to get out of a hole.	Thank you for your response. We're happy to help address any concerns with your account. Please reach out to our customer service team at 713-371-1400 or email impovewaterbills@houstontx.gov. We are committed to resolving your concerns.
9		People can buy gallons and collect water from the rain and use for their yard during hot/no rain season ; instead of using sprinklers and city water. I do this	Thank you for your response and for practicing water conservation! Collecting rainwater for use during dry seasons is a great way to reduce dependence on city water and keep your yard healthy.

ID	Organization	Comment	City of Houston Response
10		The only comment I have is to stop charging so much. And or if you see a customer has an abnormally high bill, reach at to them. I've behind on my bill for months due to abnormally high bills. We are in a recession. I can't afford it.	Thank you for your response. We're happy to help address any concerns with your account. Please reach out to our customer service team at 713-371-1400 or email impovewaterbills@houstontx.gov. We are committed to resolving your concerns.
11		Rain collection barrels should be provided for free to all single family households. Either 1 barrel per year for several years or an opt in program to get 2-4 barrels per household. These are such important tools to help conserve water and ease landscaping water needs during Spring, Summer, and Fall.	Thank you for your response. Houston Public Works is committed to promoting water conservation efforts, and we are always exploring ways to support the community.
12	Disabled	I read your information and have had only one incident with the water company....a leak which I paid dearly for. Other than that I live alone and my water bill has been reasonable. I am old sick and really don't use a lot of water. I agree with your proposals as long as the price is reasonable due to me being on a fixed income. Thank you.	Thank you for your feedback.
13		During droughts in California, it is frequently found that wealthy residents continue to use an excessive amount of water even when middle and lower income residents conserve. This is likely the case in Houston. Businesses also use a significant amount of water and often do so inefficiently. We need a plan to limit excessive water use by wealthy individuals and businesses and actually hold them accountable. Residents shouldn't be forced to limit when they can water their plants when the corporate office down the street has automatic sprinklers going off at regular intervals. Cryptocurrency mining in Texas can also use millions of gallons of water while providing little to no discernible benefit to normal, working Texans. This practice should be more heavily regulated to limit both its water and energy usage.	Thank you for your feedback.
14	Homeowner	Water has become to expensive to this homeowner. I had a timer controlled sprinkler system installed shortly after we moved into our home. For many years I ran the system every night during the season with great results on the lawn and shrubs. Since I have retired water, and a very expensive drainage charge based on the square feet have made it more and more expensive. The lawn and the shrubs have suffered as I no longer water every day, but only manually. Yet the COH has many leaks wasting so much water that runs down the drainage system. The burden needs to be placed on large land owners and industrial companies that consume large quantities of water and not on homeowners.	Thank you for your feedback.
15		Cutting irrigation on city owned golf courses will save water.	Thank you for your feedback.
16	Homeowner	The City of Houston DRAINAGE CHARGES and SEWER DRAINAGE CHARGES ARE EXORBITANT, OUTRAGEOUS, IMMEASURABLE, FABRICATED, COST PROHIBITIVE AND NEEDED TO BE ELIMINATED ENTIRELY OR LOWERED DRASTICALLY!! THESE MONTHLY CHARGES HAVE NO MEASURABLE OR CREDIBLE BASIS!! THEY WERE MEANT TO BE TEMPORARY TO FUND DRAINAGE IMPROVEMENTS SUPPOSEDLY MADE AFTER TROPICAL STORM ALLISON. ANY FEDERAL COURT WILL RULE AGAINST HARRIS COUNTY AND THE CITY OF HOUSTON AND RULE THESE CHARGES AS PHONY, UNSUBSTANTIATED, IMMEASURABLE, FRAUDULENT, OUTRAGEOUS AND ULTIMATELY THESE FABRICATED / MANUFACTURED CHARGES WILL COST THE CITY AND COUNTY MILLIONS, IF NOT BILLIONS IN PENALTIES AND FINES!!	Thank you for your feedback.
17	Residential Customer	I believe that in the proposed City Drought Contingency Plan, Section X, Sub-section 3: Stage III Severe Drought Conditions (Mandatory) Sub-section C.1.a. Customer Measures: The mandatory amount should not be a fixed 5,000 gallon usage number for every customer (treating all customers the same), it should instead be a common percentage reduction of the individual customers usage over some average monthly time period for each customer. This approach will achieve the same resulting overall water usage reduction as was planned with the 5,000 gallon value. Treating all customers the same puts undue burden on those that have more legitimate usage needs of higher than average customers. Asking everyone to cut usage similarly (percentage wise) is the more fair approach.	Thank you for your feedback. We appreciate your commitment to improving water management and conservation practices.

ID	Organization	Comment	City of Houston Response
18	Homeowner	1. The City of Houston MUST be required BY LAW to do a much better job of repairing broken water lines/mains before residents are going to support measures against their own properties. Thousands of gallons of water are wasted weekly because the city won't/can't get to the broken lines. 2. The city HAS to pass ordinances over riding the HOA/Civic Assn., and other Property Owners Assn. archaic landscape restrictions. Priority should be given to allowing alternative lawn species, use of non-vegetative ground covers, and replacement of lawn with native and water-wise adapted species. 3. They also need to pass ordinances, again over riding all POA restrictions against using permeable surfaces for all sidewalks, driveways, front porch and patio surfaces. We need as much water to soak into the soil as possible to help maintain ground water levels.	Thank you for your feedback. We appreciate your commitment to improving water management and conservation practices.
19		I am for what saves us water and leaks taking care of in timely matter	Thank you for your feedback. We appreciate your commitment to improving water management and conservation practices.
20		It is not the consumers/homeowners fault that the city can not hire enough employees to repair and maintain the leaks and infrastructure to not waste water in our streets.	Thank you for your feedback. Houston Public Works is actively working to address these challenges. We are committed to reducing water waste and ensuring that our infrastructure is managed effectively.
21	Retired	All of this is just another government scam to increase management costs (added staff) with little or no benefit...more tax dollars for no benefits...by the way, CLIMATE SCAM is included. This comes from city now that builds sidewalks and parks as our roads are nothing but continuous potholes. I more "bonds" to be voted on like the "Harvey" ones - just scams	Thank you for your feedback.
22	Self	during the last drought and during water restrictions, many city water lines broke when the ground shifted and the city let water pour out of many of these and flood streets for many weeks before fixing the problems. Please do repairs more quickly next time	Thank you for your feedback. Houston Public Works is actively working to address these challenges. We are committed to reducing water waste and ensuring that our infrastructure is managed effectively.
23	Residencia	Necesitan bajar el precio del agua esta muy elevada	Gracias por tu comentario.
24	Customer	I am not in favor of any water rate increases.	Thank you for your feedback. We understand concerns about water rate increases. Houston Public Works is committed to providing reliable water services while striving to keep rates as affordable as possible.
25		For shower I one with on/off button. No leaving water run down drain as I wash.cut usage in about 70%	Thank you for your feedback and efforts to conserve water.
26		Rain barrel great idea.problem is HOA DOESN'T LIKE THEM.	Thank you for your feedback. We understand that using rain barrels can be a great way to conserve water, but HOA restrictions can sometimes pose challenges. We appreciate your water conservation efforts.
27		"Unavoidable Annual Real Losses (UARL) in 2023 were approximately 4.68 billion gallons." (Page 25, Paragraph 5) How are you going to push conservation onto the public when you're knowingly wasting billions of gallons of water per year and calling it "unavoidable"? Classic (worthless) government.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
28		There are few of things that stick out to me about the plans. First, most of the best management practice 2034 timelines could be shortened by having a conservation coordination office, to put a bit more manpower on this project. Secondly, contamination mitigation is kind of thin in the plan. With all of the weather events we have, we must also be thinking about water contamination caused weather events, and possible leaks of contaminants from our industrial plants into the water supply. I think it needs to be thought out more specifically, and a timeline to address contamination should be a quick one. If we have a storm like Harvey, and all that flooding occurs on the east side of town where the purification plants are, all of our efforts to conserve could be wasted if we haven't taken care of our plans to handle a contamination event.	Thank you for your feedback. We will examine ideas before moving forward.

ID	Organization	Comment	City of Houston Response
29		Spend the money and hire the personnel to fix leaks. We waste 10% of Houston water on leaks and the consumers are penalized by higher prices or rationing. I watched a multi-1000gallin a day leak go on unaddressed for a month or more near my house. My precinct rep told me that was nothing compared to other leaks in the precinct. Fix it or resign and find someone who will. BTW, whatever happened about the fraudulent water billing that is supposedly fixed?	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
30		I've seen water pipes and main lines bust around public roads. For 2 lines in particular - one in spring branch and the other on lumpkin road. Both these had significant leaks and they were not fixed for weeks, and one was months and may be still leaking. I understand the need for conservation, but make sure the city lines are fixed and not wasting valuable water before you tell other to conserve their water that we get overcharge for.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
31	Retired	You need to stop relying on the customer to reduce water consumption. You need to evaluate the use of a Gulf of Mexico seawater Reverse Osmosis plant for not only supplying drinking water but also an irrigation source. The Gulf of Mexico has an unlimited supply of water. Also Waste Water treatment plant technical upgrades can provide very safe irrigation water for golf courses, road medians, and farms. These are very old and very successful technologies that exist here in the USA. Where does the money come from for these technologies? From the Federal Infrastructure Bill.	Thank you for your feedback. We will examine ideas before moving forward.
32	Bear Branch Trail Association of Kingwood	When planting vegetation, please select drought resistant native shrubs and prairie plants. Consider incorporating dry landscaping that doesn't rely on water dependent vegetation. Work to prepare open areas for water retention vs water shedding. Thank you.	Thank you for your feedback. We appreciate your commitment to improving water management and conservation practices. Houston Public Works is working on developing a native plant/xeriscaping program.
33	Customer	Conservation of water should start with City of Houston water department making it urgent to get to City streets water leaking . I have witnessed numerous water leaves in city streets and customers have brought it to City of Houstons attention yet it takes them days, and some weeks to address those matters and these are not small leaks . I am pretty sure I am not the only customer that has seen this .	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
34	Empower CDC	As part of the ongoing efforts to promote water conservation and sustainability, Empower CDC would like to propose a plan that requires all landlords and property owners to take proactive measures in reducing water consumption across their properties. Specifically, we recommend that: Shower Head Replacement: All landlords should be required to replace existing shower heads with the water-efficient shower heads provided by Houston Water Works. This should be done as part of regular property maintenance, ensuring that all units are equipped with devices that contribute to water conservation. Water Consumption Clause in Leasing Agreements: Landlords should also be required to include a clause in their leasing agreements that informs tenants about the water-efficient fixtures and encourages mindful water usage. This clause would not only educate tenants but also help in achieving long-term water conservation goals. Inclusion in HAA Housing Developments: We further recommend that all new developments under the Houston Apartment Association (HAA) incorporate these water-efficient shower heads in their design and construction. By standardizing this practice, we can significantly reduce the overall water usage in these communities. Implementing these measures will not only support our shared environmental goals but also help in reducing water bills for both property owners and tenants. Please let me know if there are any additional steps we should take to move forward with this plan, and I am more than happy to discuss this proposal in further detail at your convenience. Thank you for your attention to this matter.	Thank you for your feedback. We appreciate Empower CDC's proactive approach to enhancing water efficiency across rental properties and new developments. Houston Public Works will review these items to determine if they can be implemented into our future water conservation programs/strategies.

ID	Organization	Comment	City of Houston Response
35		Need to know where the money is this coming from to pay for this ? How much ? Who are the direct parties organizing this ? We the public need to know details , a site where we can go to , to know what , who , when and where this is taking place . Houston is tired of paying for things , there is already Money in place . This cannot impact our water bills or fees !	Thank you for your feedback. Transparency is crucial, and we understand the need for the public to be informed about financial aspects and the parties involved. Please review the 2021 rate study for more information: https://houstontx.gov/citysec/HPW/serviceratestudy.pdf
36	CBB Civic Association	I think it's uncommunicative for the COH to just put out the entire draft of this plan to residents and expect us to read it all before commenting. Some people may do so but most of us aren't bureaucrats and just want a high level summary. COH obviously doesn't want genuine feedback from their residents (customers) or they would have done so.	Thank you your feedback. We will examine ideas before moving forward.
37		Why can't we use whatever water we want? I'm charged 10x what I paid for water at my last house. HOW? Houston water is criminal. It should be investigated by the state as a RICO, and you should all be in jail. HOW ABOUT YOU LOWER OUR WATER COSTS!!!!!!!!!!!!! LOWER THEM NOW!!!!!!!!!!!!!!!! We've had enough abuse!	Thank you for your feedback.
38	Resident	I would like to see the city of Houston invest in a centralized leak detection system to monitor water pressure drops on specific pipeline segments to address undetectable below ground leaks. I would suggest partnering with our energy company neighbors that operate hydrocarbon pipeline systems within our city to create the software necessary to monitor and detect a robust leak detection system. I also would like the city to look into utilizing those hundreds of miles of abandoned hydrocarbon pipelines to divert and pump storm floodwater from low lying area bayous into existing reservoirs and surface water plants to recharge our freshwater aquifer systems. Again this can be achieved by partnering with the vast resource of energy partners willing to message a POSITIVE contribution to the health and safety of our community.	Thank you for your feedback. We appreciate your ideas on alternative water management strategies and the potential for technological upgrades within our system.
39	N/A	There also needs to be more attention to the leaks occurring on sidewalks throughout city; some I've seen for years.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
40	Citizen and landowner	Creating plans such as this that are not respected by other parts of the City of Houston makes little sense. Our neighborhood is patrolled by an overzealous Department of Neighborhoods employee POchoa that was enforcing rules counter to the recent drought we had. I was using drought resistent native vegetation on property I own that is both a homestead and working farm (we are on a dead end street), and the city Department of Neighborhoods required us to strip it and replace it with grass even though it is a dead end street-no one should ever bee here unless they live here or are jogging. The end result is I use 4x- 8x more water now to keep my pretty grass green no matter what you say about a drought-lest I get a ticket for imperfect grass or something like that again from POchoa in the Department of Neighborhoods DURING A DROUGHT. Unless this plan is agreed to and communicated to the local HOAs and DON, we will have to continue draining lakes to keep our grass green to avoid yellow placards being placed in our yard for brown grass.	Thank you for your feedback.
41	Myself	How is my water bill REALLY calculated? I do have an oversize yard so does the City of Houston charge me more for my over size yard? I would love to plant my own garden, but I can't afford it with a monthly bill of over $100 every month with 3 adults. I have NEVER watered my yard in 25 years.	Thank you for your feedback. Understanding your water bill is important, especially when it comes to managing costs. Please visit the following website for a water and wastewater charge calculator: https://www.houstonwaterbills.houstontx.gov/ProdDP/CalculateConsumptionrate/CalculateConsumptionrate

ID	Organization	Comment	City of Houston Response
42		continued emphasis needs to be placed on repairing and replacing leaky water mains throughout the system. There are constant leaks that I see and drive through in a regular basis (what immediately comes to mind is West Bellfort between Dairy Ashford and Kirkwood). Water wasted and pouring into the street. There needs to be much more rapid repair when as leaks continue for weeks on end despite multiple reports to 311. This wastefulness puts unnecessary strain on the water system and ultimately costs ratepayers more for treated water. I can't help but wonder how many thousands of gallons are wasted on a daily basis? I fully support the conservation plan and efforts but this is the worst maintained water system on many fronts.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
43	None	The first item to conserve water hopefully includes repairing these old broken meters. Thanks again for the current practice of fixed pricing, but that does not replace the 1300 dollar bill paid and the response from customer service when it was questioned.	Thank you for your feedback.
44		Fix leaks. On my street a pipe leaked hundreds of gallons a day, for months. And I need to conserve?	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
45		As waste management has removed millions of tons of vegetation from recent storms. COH needs to convert this trash to usable and cheap mulch to help maintain moisture on landscaping.	Thank you for your feedback.
46		So to me, if you want to conserve water, faster repairs for all the leaks would help a lot. We had a water leak in front of our property last year that started before Halloween, and was not repaired until early December. Thousands of gallons of water went down the drain each day for all that time, and that was just this one leak. There were half a dozed leaks at the same time with in a half a mile from the one in front of my property.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
47	Resident	I read the subsection about educating on native drought tolerant plants and thought it could go a step further. Offering opportunities to purchase native plants is good but the root of much of the outdoor water waste in residential and comercial areas comes from watering lawns. Would love to see a recommendation to switching to a native lawn option —https://tpwd.texas.gov/wildlife/wildlife-diversity/wildscapes/buffalograss/#:~:text=Buffalograss%20produces%20a%20uniform%20and,looking%20turf%20even%20without%20mowing — encouraged along with education programs targeted at youth. (I grew up in houston and still remember the water conservation lessons we learned in elementary school. Many of us were given kits to take home. I came home and told my family and got my mom to switch our shower heads and check for water leaks with the blue tabs. Much of the movement starts with kids.) Additionally I would like to see efforts to work alongside new residential builders. There is a failure in our system to only use water once in the home and then whisk it away to the treatment plant. If homes were designed for efficient practices then we would utilize gray water and reduce water consumption. Last note: conservation has always been at the forefront to communities of lower social economic status. Those most at risk bare the burden of enacting the necessary changes due to financial hardship and also the consequences when enough is not done. Your outreach programs must reach those with the most power also. Gated communities with HOAs and pools and golf courses contribute to some of the highest resource usage yet they have little stake when things worsen. Go to their kids private schools and make sure they're getting informed as well.	Thank you for your feedback. We will examine ideas before moving forward.
48	Help Lower My Bill	We were affected by the Tornado in May and Hurricane in July. I have a underground pool that is about 13ft deep I had to drain pool out and refill water up took about 3days to fill up. now I know my bill is going to be very high I need help with payment plan or something.	Please reach out to our Customer Service team at 713-371-1400 for assistance.

ID	Organization	Comment	City of Houston Response
49	Homeowner	I believe that the city needs to get better at fixing public water leaks faster. There was a gushing leak on the road that I live off of and it was reported over and over but never was fixed for over 6-9 months. I know that had to be thousands and thousands of gallons wasted. We can start there. You ask us, the consumer to do better, but you do not set a good example. The city can do so much better.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
50		Repairing water leaks should be a PRIORITY. My neighbor has had a strong water leak for 3 days now. There is a blue flag there. Fix the leak! Do research to find the best type of material for water pipes for our soil that can withstand the contraction and expansion of the gumbo. Educate folks on water conservation. Encourage more rain barrels, and educate how that water can be used to water plants. Mandate that all new developments use drought tolerant grass and plants. No more St. Augustine. Mandate planting of native trees and grasses. Mandate that all new developments install grey water recycling for watering plants. Tax credits for homeowners to retrofit their systems with grey water recycling, rain water harvesting systems etc. Anti-littering campaign, explain the trash affects our water quality.	Thank you for your feedback. We will examine all ideas before moving forward. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
51		My concerns/comments: regulating businesses that use water as decoration (think fountains downtown), regulating businesses that water outside the designated times, regulating businesses that water even after rain (complete waste), explain to public where our annual increase in price is being utilized because it certainly isn't on infrastructure given all the water main breaks, explain why we have to pay a drainage fee when we don't have drains (in my neighborhood), consider regulation on lake usage due to boating, implement water capturing from rains - perhaps give incentives for people who do this with those rain buckets (not sure how to track though) - in fact, give them away instead of sell them - base it on income or something similar, implement programs to help citizens with foliage that is drought resistance, if continuing to provide water conservation equipment - make it lead free (I ordered those shower things but stopped using it when I saw it contained lead), subsidize replacement of toilets and showerheads or give credits if customers show they've upgraded. I probably have more ideas and concerns, so feel free to email me.	Thank you for your feedback. We will examine all ideas before moving forward. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
52		There is a water leak in the parking lot at 8383 SW Freeway - it has been flooding the parking lot for a year. I have submitted a 311 ticket and alerted the SW Management district but it hasn't been resolved. A construction crew was working there then left without repairing the leak. Thank you.	Thank you for your feedback. We will pass along to our repair crews.
53	Single Family Water User	In reading the Houston Water Conservation draft, the device seems to take into account MOST of the options for conservation. I do have the following suggestions: 1) In 2027 or there about, begin requiring multiple use buildings of any kind to reuse water from sinks and showers (known as gray water) for the purposes of toilet flushing. This especially includes multi-family residences and hotels. 2) Work with providers of automated water main shut off devices that stop the water flow in the event of a prolonged water flow. Example: MOEN Flow device. These devices can also be tied to wi-fi for user notification and configured for the amount of water flow before shut off ensues. Normally it only takes about 5 minutes for the device to reset and the water to be restored. The City could work with the manufacturers to get low cost purchase and implementation. Note, this may impact use of irrigation systems tied to potable water sources, so educating the user is paramount. 3) While visiting a West city during a drought, the city implemented an education plan to help reduce potable water use. In effect there was a saying accompanying this education. The saying is "If its yellow, let it mellow. If its brown, flush it down.' You educate folks that flushing the toilet when urine is excreted into the toilet is not required EVERY time. Assuming a toilet uses 1.5 gallons of water and there are approximately 1.5 million residential customers by saving just ONE flush per day per toilet conserves about 2.25 million gallons per day or about 67.5 million gallons per month. Best Regards, Houston, Texas	Thank you for your feedback. We will examine all ideas before moving forward. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.

ID	Organization	Comment	City of Houston Response
54	Individual resident	I'm happy a plan is in place. This 107 page 2024 Water Conservation, Agricultural Water Conservation and Drought Contingency Plans is legal document wrapped up in a giant ball of red tape. I can understand that for the sake of transparency, you need to present it to the public. However, a 2 or 3 page bullet point summary plan in layman's term would be more beneficial and easier to decipher for the average, residential consumer - like myself. I'm searching your website, but not finding a briefer summary. A brief summary would be welcome. Thank you and best wishes for implementing and carrying out the proposed plan. As a native Houstonian, I'm all for anything that benefits this great city and its residents and businesses.	Thank you for your feedback. We understand that the full 107-page document can be overwhelming. Your suggestion for a concise, 2 to 3-page summary is a great idea. We will work on creating a simplified version of the plan that outlines the key points in a clear and accessible format for our residents.
55	Healthcare	My water cconsumption, need more resources for assistance	Thank you for reaching out. We understand that managing water consumption can be challenging. We recommend contacting our customer service team for tips to save money on your water bill by calling 713-371-1400.
56		Could not agree more with this Future Consideration: HPW will investigate the feasibility of implementing seasonal or year round time-of-day and day-of-week watering restrictions, potentially for drought contingency. Ordinances would be required for implementation of this BMP. (Section 6.3.3, page 42). Water should not be run at 1 pm, every day! A considerable effort to inform the public of the drought contingency plan is needed as many did not know were ever at a Level 1 much less a Level 2 last year. Consider including mailers in paper water bills and adjusting the header for e-bills.	Thank you for your feedback. We will examine all ideas before moving forward.
57	Individual	I have scanned but not read the full report and wanted to make sure that when leaks are detected that there are enough resources allocated to make the necessary repairs. We have had two recent significant leaks in the neighborhood which went unattended for many months. Noticed that the percentage of water loss in the city is equal to single family use.	Thank you for your feedback. We will examine all ideas before moving forward. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
58		When I drive around in the city of Houston, I see water leaking out of the ground and no repairs done. I know of two spots on W. Alabama at which water is leaking out of the ground for a couple of weeks by now. This indicates to me that the water system infrastructure is not up to the needed quality and the monitoring system needs improvement if there is one. I realize the value of citizens informing the city and I have done so but it took the city more than two weeks to fix the problem. During which water was running out of the ground at an increasing rate. This happened on multiple incidents. I also realize that the streets are not well maintained and rain water can run into the ground under the pavement and erodes the soil. This eventually will contribute to the deterioration in the water system infrastructure. Basically, the city has to improve many of its functions to effectively have an achievable water conservation plan. Although the customers have a major role in water conservation, you have to protect and properly maintain the infrastructure, therefore the city is teaching by example.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
	Houston Climate Movement	You did not reference the 2021 International Building codes that the City of Houston adopted Sept 2023 and implemented in January 2024. Can you please address why on page 12 you do not recommend implementing water wise landscaping design and conversation program?	Thank you for your feedback. Houston Public Works' water conservation team will collaborate with the Houston Permitting Center to further our commitment to green development. We are currently evaluating a native planting guide and working with HOAs and businesses to establish guidelines for turf alternatives as sustainable landscaping options.

ID	Organization	Comment	City of Houston Response
60		In our subdivision late last year or early this year there was a main water leak. It took almost a month to have it repaired. Thousands, if not hundreds of thousands of gallons of water gushed to our storm drains. Probably wasted more water in a week than our subdivision uses in a month or two! Waters Edge on Lake Houston. Fix leaks/breaks faster! This break was at the corner of Lake Medina Way and Bend Rock Way 77044	We understand the impact of such delays on water leak repairs. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
61	Individual homeowner	It would be very helpful if you created an executive summary for identified target audiences, and put highlights in plain English or Spanish. This report is overwhelming for the average reader and thus, will not elicit many comments, if your goal is community input. As a homeowner, here are issues you might address in a summary: 1. Are my bills projected to increase as a result of any of the contents of the plan? 2. Is water quality projected to improve as a result of the plan? 3. Is there any intention to throttle down usage, for example using water for irrigation? 4. Are there intentions to raise revenues by adding fees, as happened with trash cans being added in prior years? 5. What public or private entities are backing this effort, and how does their support or involvement benefit them over the general public? 6. Are there any elevations of chemicals or other pollutants that are now being allowed in drinking water as part of this plan? 7. Why are we making changes to the plan now? What is precipitating these changes? 8. In summary, how does the new plan specifically impact the average homeowner or apartment dweller? Thank you,	Thank you for your feedback. Your suggestion for a concise, executive summary is a great idea. We will work on creating a simplified version of the plan that outlines the key points in a clear and accessible format for our residents.
62	Houston Resident	If you want consumers to actively conserve water, which I personally would be willing to do, how about billing me only for what I actually use? The fact that my usage and billing is rounded up to the nearest 1000 is a total disincentive to any sort of conservation on my part. I'm sure I am not alone in my sentiments.	Thank you for your commitment to water conservation. We recommend contacting our customer account service team directly for assistance with your specific water consumption concerns. https://www.houstonpublicworks.org/customer-account
63	Self	_ Include a system for prompt repairs on the City infrastructure. The last leak at our neighborhood took a full 30 days to be repaired. a significant amount of water is lost due to the City very long time to repair infrastructure. - Incorporation of a system to educate and assist home owners / private businesses and public spaces to incorporate sponge and rain gardens into the re-design and design of landscaping.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.

ID	Organization	Comment	City of Houston Response
64		Pg 4/64 - spacing issue at bottom of page Pg 11/64 - punctuation errors in multiple places in the notes column Pg 17/64 - "Water Loss in Gallons 22%" does this mean water loss such as leaks which remain unfixed for months at a time? Pg 23-24/64 - spacing issue at bottom of both pages Pg 24/64 - It's difficult to understand the urgency of water conservation by the public when it takes months at a time for the city to fix leaks which, by your data, equal the water usage of single-family homes in Houston. Wouldn't the priority be to address water loss that are under city control more efficiently, effectively, and timely considering that's a component of usage more easily controlled by the city? Pg 26/64 - Encouraging citizens to utilize 311 to report issues would be better received if the experience was more user friendly. Additionally, from personal experience, when making reports of water loss, the reports were erroneously closed or rerouted to another department without commentary that would indicate how to track the rerouted report. Pg 13/16 - Section XIII: Enforcement - what enforcement is there to ensure the timely resolution of water loss leaks by the city?	Thank you for your feedback. We greatly appreciate your attention to both formatting and content. Below are responses to your comments: Pg 4/64 and Pg 23-24/64: We will review and correct the spacing issues at the bottom of these pages to ensure consistency and readability throughout the document. Pg 17/64: Yes, the "Water Loss in Gallons 22%" figure includes leaks that may take time to repair. Leak repairs are prioritized based on severity. We are continuously working to enhance our repair timelines. Pg 26/64: Thank you for your feedback regarding 311. We recognize the importance of a user-friendly system and are working on improving the reporting process. Your experience highlights areas where we can enhance transparency and follow-up procedures. Pg 13/16 - Section XIII: Enforcement: Enforcement related to the City's own water loss and leak repair is handled internally, but we understand the need for transparency. We will consider additional educational materials on the Houston Public Works website to explain how leaks are prioritized and addressed.
65	Private Citizen	I have a hard time with this issue as I live in the Spring Branch area and after just about any amount of rain Longpoint Road is flooded with just about every hydrant open to the max allowing for a massive release of water. So, if we can routinely release significant amounts of water why are we not able to develop better storage solutions for when we experience drought? Given the calamity around Centerpoint, I am growing more cynical regarding public services and the overall lack of communication with respect to what is happening. About the only thing we can count on is increasing rates for less service.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
66	N/A	I was not able the find information on vegetable gardens or gardening in the proposal except for "demonstration" gardens and rain barrels. Vegetable gardens, specifically growing food for human consumption, should be exempted in Stages 3 and 4, with the proviso of only watering between the hours of 7 pm to 5 am the following morning.	Thank you for your feedback and suggestion. During Stages 3 and 4, you can request a variance through a process that will be available on the water conservation page at **waterconservation@houstontx.gov**.

ID	Organization	Comment	City of Houston Response
67	Houston resident	I appreciated the opportunity to read through the draft document. I applaud the education efforts and giveaways designed to help reduce the residential water use shown in Fig. 4-4. However, it is difficult to imagine how successful some of these programs will be without enforcement (largely impossible, except perhaps on restricted lawn watering days, which residents seem to enforce for each other). I would like to see effort put towards innovate water conservation design programs for new commercial and industrial developments., such as green parking lots and roofs, permeable paving, and using non-potable water to irrigate athletic fields and green areas. I recently attended a One Water webinar hosted by the US Water Alliance. It focused on water issues in the Hill Country, and while (unlike Houston) the Hill Country struggles with water supply (or expects to in the future), many of their ideas are simply good for communities and the environment. This is a great document with good examples and strategies: https://hillcountryalliance.org/wp-content/uploads/LBE_Guidebook_05.08.24.pdf I would love to see Houston include some of this focus in our projects for new development. I especially like the ideas for green parking lots and roofs, and permeable paving. Houston could greatly benefit from a reduction in reflected heat and the improved percolation of rainwater. A school in Wimberley uses half as much water as its neighbor school as a result of strategies such as using non-potable water to irrigate athletic fields and green areas. Other successful examples include the Hill Country Youth Center and Peterson Hospital in Kerrville, Sycamore ES in Dripping Springs, and Silver Sage Community Center and Housing Project (in progress) in Bandera. The City of New Braunfels has developed ordinances around strategic building codes: https://newbraunfels.gov/3449/Land-Development-Ordinance . One of the concepts that is front and center is that new construction should be built as drought-compliant and incorporate concepts that	Thank you for your feedback and suggestions. We will review all ideas before moving forward.
68	House	Since tied for 1st place in the charts provided is the 22% of water lost in gallons and one is to assume that is primarily from old water lines and leaks (which we have experienced over the years). I would suggest the 22% of water loss should be in a work program to cut the loss to 2-5% instead of 22%. One solution based on my experience is to get rid on speed bumps on roads where the speed bumps are by the water meters. Based on the experiences with our meter and the neighbors meters it is obvious that the 2 meters which are always in constant repairs are the two meters that sit directly in line with the speed bumps while the other 2 meters are 20 to 50 feet away from speed bumps. The 2 meters away from the speed bumps have never had a problem with leaks in 30+ years while my and my one neighbor with meters next to the speed bumps have problems on both sides of the meters (the most recent being August of 2024 to the tune of a $3,168 repair bill - that does not include similiar repair bills for my neighbor as well just over a years span). This may sound quirky at first but there is truly no other reasonable explanation for the numerous repair bills or the city having to repair leaks on their side of the meter.	Thank you for your feedback and suggestions. We will review all ideas before moving forward.
69	N/A	report is too technical and for a layperson as good as a foreign language, cannot be understood I a missing the efforts to harvest rain/storm run-off, meaning collecting the water and piping/pumping it into Texas reservoirs to store for future use (Falcon Lake and outlying lakes around the state)	Thank you for your feedback. Your suggestion for a concise, executive summary is a great idea. We will work on creating a simplified version of the plan that outlines the key points in a clear and accessible format for our residents.
70	My Family	You need to provide a concise summary of what this might mean in terms of expected customer behaviors and anticipated costs associated.	Thank you for your feedback. Your suggestion for a concise, executive summary is a great idea. We will work on creating a simplified version of the plan that outlines the key points in a clear and accessible format for our residents.
71	Resident of City	You don't have any special provision/process for reporting water main/water pipe breaks. Especially during a drought, they will be happening. And the irony of being asked to conserve when we can see massive leaks happening in our area of the city, is not lost on any citizen. It's painful to see the waste. Please provide something simple and easy to use and some feedback mechanism.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.

ID	Organization	Comment	City of Houston Response
72	Resident	Let’s fix all of the leaks first. We have a lot of leaks in Westbury.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
73	Denver Harbor Civic Club	Better development in the neighborhood would be efficient for using the water instead of wasting and clogging old pipes, and increase water pressure!!!! 77020 has suffered with low pressure for the past year if not longer.	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community. Please remember to report water pressure issues to 311 so our team can investigate.
74	None	Fix broken water leaks faster will save a lot of water	Thank you for your feedback. Houston Public Works is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
75		How will this impact my water bill? Which has already gone to.	Thank you for your question. We understand your concerns about raising prices and a rate study will be completed next year. Please review our previous rate study that was completed in 2021 and can be located here: https://houstontx.gov/citysec/HPW/serviceratestudy.pdf
76	N/A	Houston Water should offer incentives for homeowners to install a second water meter for landscape watering.	Thank you for your suggestion. Houston Public Works will explore future funding options from environmental grants or government programs.
77	Homeowner	The City of Houston Water policies and charges are outrageous for most homeowners. We are paying often $600+ per month to keep lawns and foliage alive, which if burn up, the HOA then comes after us for $2-$4K resodding / replanting costs. Why is this? Simple answer is water rates for "unsubsidized" taxpayers are way too high, largely due to the 'drainage fees'. Too much of this fee is directed to unrelated 'City' projects. Money we pay to the City for water is redirected to other projects unrelated to water delivery and sewage. It is unacceptable that water bills can approach mortgage payments. Stop fleecing us, penalizing us for trying to keep our yards alive so our HOA won't fine us.	Thank you for your feedback.
78		The conservation plan as written has a lot of details around conservation by end-users. There is very little information or details about how COH plans to maintain the infrastructure. Just like Centerpoint's recent failures in maintaining the electrical grid, the COH water system has suffered from years of neglect and mismanagement. COH needs to put a much higher emphasis, visibility and transparency on how it intends to improve the infrastructure and maintain it. There's nothing worse than being asked to curtail water use when there is a broken line gushing water into the street for days. We need to do better in all of our public utilities because COH is trending towards third world status when it comes to basic water and electric infrastructure. THANK YOU for developing these plans and for seeking input from the public.	Thank you for your feedback on the water conservation plan and your concerns about infrastructure maintenance. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.

ID	Organization	Comment	City of Houston Response
79	Home Owner	The lack of a preventive maintenance (PM) to the water system has resulted in major loss of water due to leaks and disruption of water distribution system wide. It is not acceptable for the Citry if Houston (COH) to have electrical failures at a poorly maintained pumping station, major ruptures of main and subsidiary water mains and failure to properly manage water meter billing, while not having demonstrated appropriate PM to keep the system working. I would like to know where the monies collected in raised water rates is going. With regard to drought water management, to me, it's an accepted fact that 50% of the time there will be water rationing over the summer months. You might want to read the article in Smithsonian Magazine about water management in Las Vegas. COH should provide incentives to change the "landscaping culture" in Houston in the direction of drought tolerant (Xeriscaping). In Vegas, home owners are paid to remove their lawns and install drought tolerant plantings. The only installations of water irrigated lawns are for functional installations such as sports fields.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
80		Maybe give consideration to collaborating with HOAs during the drought contingency execution. Residents are asked to limit watering; however, HOA sends threatening letters about dry/dead grass on lawns. Thank you .	Thank you for your comment and for highlighting an important issue regarding drought contingency and HOA enforcement. We agree that better collaboration between the City and HOAs is essential to align expectations and avoid conflicting demands on residents. Our outreach groups work to educate the HOAs on the importance of water conservation.
81	N/A	As I read through the document, I became concerned that the Plan will not achieve one of the key objectives. I came to these questions. Which specific communities lack equitable access to clean, safe, and affordable water? Which of the programs in the Water Conservation Plan will enhance equity for said communities? How will improvements be measured - the only metrics in the Plan are GPCD and ILI? How are changes in equity in a specific community be inferred from GPCD and ILI? In order for the utility to truly pursue the goal of equity, it must find answers to these questions.	Thank you for your feedback. We have more information on water equity at OneWaterHouston.org. The site includes information on how the One Water initiative is working to provide equitable access to water resources for all Houston residents, and how the broader plan incorporates equity into its strategies.
82	None. I'm just a Houston home owner, retired professional engineer, and engaged citizen.	Seems a well-developed and well-written plan intended to either comply with the spirit of the guidelines of TCEQ or to avoid ruffling the feathers of TCEQ. Kudos either way. Thank you for the opportunity to review it and comment. I appreciate that. But as an ordinary citizen, I lack the time and energy to gain sufficient understanding of it to offer meaningful comments. However, I will offer an observation as an engineer, for whatever it is worth, based upon my 20-odd years living in West U, almost 30 years in Tall Timbers / River Oaks, and the past 11 years between The Heights and David Crockett Addition in Houston: many / most of my neighbors have watered their landscaping way too much. Way. Sorry to say, I don't have a solution. Education; neighborhood examples (of beautiful yet low maintenance landscapes); shame (people who ignore water restrictions yet have lush lawns); outrageous water bills; none of those things seem to work to curtail excessive watering. Look in and even listen to any of those streets' drains of a morning. I apologize for describing what seems to me to be a big problem without offering solutions. If my observations are valid, I hope you can come up with some. Thanks,	Thank you for your feedback. Overwatering is a persistent challenge that we continue to tackle through various approaches—education, conservation campaigns, and water restrictions.
83		Shut off residential yard sprinkler systems. These should never be operated on timers but only on soil moisture. I have an old small house on a 70'x100' lot and the only watering my yard gets is rain. My yard looks the same as neighbors who all have sprinkler systems. If my grass dies during very dry conditions it grows back and this seldom occurs. I've seen sprinklers operate during heavy rains and also overflow into the street when not raining. Landscapers sell these wasteful and unnecessary systems to gullible homeowners to make a lot of money.	Thank you for sharing your perspective and experience. We agree that water-efficient practices, especially with irrigation systems, play a critical role in conserving water. We will continue to explore ways to better educate the community on water-efficient alternatives and hope to see more widespread adoption of smarter watering practices.

ID	Organization	Comment	City of Houston Response
84		See many water main connections in driveways broken and flooding Should be rehoused away from traffic	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
85	None - Individual	I object to all these measures as the implementation of draconian California style controls and penalties. The existing drought measures are more than adequate. These plans are designed to penalize residents and crush them with added fees and fines. Will the City be penalized for the countless millions of gallons of water wasted through broken pipes and poor maintenance? Not likely. So, I say HELL NO. The city and county should be spending money (our tax dollars) on improving and increasing water resources. Replace pipe, pumps and other infrastructure. Build more damns and increase the size and strength of the damns we have. We can increase supply. We don't have to crush the individual citizen. Thank you.	Thank you for your feedback.
86	Homeowner	Review of Water Conservation documents indicates a proper amount of work and insight has been done. Good work.	Thank you for your feedback.
87	Resident of Houston	While there are a number of topics covered, should there be a prioritized list of which BMP measures will be addressed first and foremost to have the greatest impact on the residents in the CIty of Houston? The document, while organized, is a laundry list of BMP without regard to importance to managing water usage, and the impact on ratepayers and capital expendituresr. The document might be more clear as to which of those measures are monitored, measured, set, and challenged by those in the CIty of Houston who are setting water usage rates? For example, Figure 4-4 and Table 6.2 indicate water losses at 22% from 2019-2023 of available water. (This was just recently the subject of a Houston Chronicle article on August 30, 204 written by Houston Chronicle reported Abbey Church.) It seems that how infrastructure is maintained or not, and the success or failure of existing practices should have been more completely referenced, prioritized and explained? While some of this is discussed in Sections 5 and 6, and quantified in the “Infrastructure Leakage Index (ILI)” in section 6.1.3, it is unclear how this loss of water can be measured, managed and reduced. It also seems that the top most important BMP is the GPCD (Gallons per capita per day) described on page 18 of 64 in the document.	Thank you for your feedback. The plan includes both current BMPs and BMPs for future consideration. Houston Public Works (HPW) staff reviewed all BMPs with Plummer and selected those they felt best suited the needs of the City of Houston and its customers. Rates are set by the City of Houston based on the cost of service, with a tiered residential rate structure designed to promote water conservation and address price elasticity. Please review the 2021 rate study report for more information here: https://houstontx.gov/citysec/HPW/serviceratestudy.pdf.
87	Resident of Houston CONTINUED	The reader who is unfamiliar with these matters has little basis to understand if these goals are appropriate, how these compare to any federal or state standards, nor the historical record, nor the impact on the ratepayer, other than the result of a law suit that forces the City to increase water rates, and beyond which the CIty has made additional assessments. The report suggest that residential water usage is a major portion on this. In the document there is a focus on outdoor lawn irrigation, shower faucet flow and toilet leakage.It is curious that I did not see a discussion of pools, and the volumes (I presume) of water usage in this regard that one can only imagine would have a significant impact on conservation and drought contingency plans, unless that is included in outdoor irrigation systems? In addition, where this document (on page 21 of 64) acknowledges that “weather is a major factor”, there is no discussion “climate change” and what BMP may be used for that or how climate change may otherwise impact BMPs used or selected? Section 6 “Practices to meet Conservation Goals” in Subsection 6.1.2 addresses Financial Aspects (BMPs).	HPW is committed to reducing leaks by investing in a robust pipeline replacement project. When reviewing GPCD data we look at trends over time and Houston has seen a downward trend over the last 10 years and are below the Texas State Water Plan GPDC goal of 140. The current Houston Residential Programs on the HPW website focus on showerheads and toilet leak detection.

ID	Organization	Comment	City of Houston Response
87	Resident of Houston CONTINUED	There are separate arrangements for the “wholesale water contracts”, and it is unclear if there is parity and equity between the two groups? For example, the purpose of the Wholesale Agency Assistance Program referenced in section 6.1.2 and its ratepayer impact equity is unclear.Furthermore, the report seems to create doubt as to whether wholesale customers have met their conservation commitments (see page 39 of 64, section 6.2), and this leaves the reader unclear as to how this is measured by a BMP, and whether it does or should impact rates paid by either group for water. The document states the the COH inspects (only) 78.36 miles of water pipes per year (see page 26). What is the BMP that should set the standard for how many miles of pipe should be inspected? The number seems low for a city as large as Houston. In Section 6.3.2, Financial BMPs for Water Conservation Pricing, it is unclear if that pricing exists currently, and whether it is fairly and consistently applied across all customer classes? Advanced Metering Systems (AMI). If there are BMPs for this, there should be a further explanation of how the COH has progressed installing the AMIs, the timeline and effect on ratepayers for both installation costs, monitoring costs, maintenance costs and the benefit from a complete electronic monitoring of Houston and the surrounding areas for the usage of water.	The Wholesale Agency Assistance Program BMP, which involves only the Goldwater Program, is simply a tool purchased by the City of Houston for use by wholesale customers. We discuss our commitment to water equity in more detail at OneWaterHouston.org. The site includes information on how the One Water initiative is working to provide equitable access to water resources. Please take our survey and sign up for the newsletter. The results from the survey will be included in our master planning efforts.
88	citizen	Each year more and more woodland areas are bulldozed in order to make room for new development. I do not know the statistics of the number of acres of woodlands destroyed in the past 20 years but I do know that it is substantial. The result of which is more and more concrete and non-pervious surfaces. Houston has become a heat sink that drives up the heat in the area to unbearable levels. There are many theories as to why we are experiencing such high heat but without a doubt the explosion of the population and the increase of business in this area are not helping the situation. When is enough going to be enough. The water supply cannot possibly keep up with the increase in population. The vegetation seems to be the first to suffer in drought situations yet without the vegetation the heat will get worse and the oxygen in the air will be depleted. As a senior citizen I am probably one of the problems for living too long. But what am I to do. We need to limit new development to the plains and place the wooded areas that still exist into protected parks. Some time we need to say no to adding more and more lanes to our highways and let the congestion force the developers into more satellite communities that have no need to fill the highways with commuters. So water supply is just one of the many items on the agenda. The most important item is better planning on how to control the growth of the houston metroplex.	Thank you for your feedback. We encourage you to visit OneWaterHouston.org and take our survey. This information will be used for planning purposes during our master planning efforts.
89	Resident	Who runs Imperial Utilities & Sustainability, Inc for the commercial assessments & how will they inform of the qualifications for each commercial property??	Imperial Utilities & Sustainability, Inc. is the contractor selected to conduct commercial water assessments for the program. They specialize in water and energy efficiency solutions. The qualifications and criteria for each commercial property will be determined through a standardized assessment process, tailored to the unique needs of each site. Please visit the Smart Utility webpage to learn more: https://www.houstonpublicworks.org/commercial-customers
90		I think conseving water is a good ideal when neeeded	Thank you for your feedback.
91	None	NO! JUST NO!. Insane California style draconian plan. Strictly designed to raise revenue at the expense of those least able to afford it. Another TAX we can ill afford. Fines for watering on the wrong days, fines for water that seeps into the street. Fines for usage greater than 4K gallons (which the user cannot monitor or control on a real time basis.) Total draconian garbage that we do not need in light of current conservation tools. Don't be like California and beat on the symptoms and not on the disease. Want to conserve water? Fix the City's pipes (broken and leaky pipes lose countless MILLIONs of gallons of water), Build more reservoirs. Strengthen and enlarge existing reservoirs. Invest in desalinization plants. We have PLENTY of water. You as government need to MANAGE the resource and GROW IT. Don't sit on your backsides and assume that draconian fines (and no action) will get us out of it.	Thank you for your feedback.
92		City government needs to be forward thinking. While conservation is important, the city growth was fueled by visionaries that planned for water consumption decades ago. Infrastructure fixes will save the same amount as planned conservation. Fix the future source needs by providing additions to the existing supply.	Thank you for your feedback.

ID	Organization	Comment	City of Houston Response
93	Houston Citizen	1 - Please consider adding in more data and technology based city and public based dashboards and communication on the real time status. This could be as simple as a public ESRI/BI dashboard showing daily water consumption, demand, and losses. Or as advanced as showing zones with likely leaks and pendings work orders and capital projects. 2 - Please report the water calculations in the AWWA water loss table format including apparent and real losses per connection (not per capita).	Thank you for your feedback. Houston Public Works is committed to being more transparent and currently working on a leak repair dashboard. We also have a dashboard for replacing non-functioning remote reading devices at improvewaterbills.org.
94		This is a well-thought-out and reasonable plan. It's common sense and clearly written. Now if people will only pay attention.	Thank you for your feedback.
95		what does all this mean?	Please reach out to our Water Conservation group if you would like to receive water conservation more information, hpw-waterconservation@houstontx.gov.
96		Key problem is lost water which is at the same level as for each residential, commercial, and multi-use customers. Bulk of the plan is on education and evaluating residential customer usage while all the benefits are derived through the PACE program- which is not equitable as it is not available to residential customers and therefore doesn't support your 2024 draft plan goal.	Thank you for your feedback. You raise a crucial issue regarding water loss and its impact across different customer categories. It's clear that addressing water loss is fundamental to achieving our conservation goals, and equitable solutions are essential for the effectiveness of our plan.
97		Would love to offer feedback and genuinely tried to get through the doc, but it's too long for a layperson with other work to get through. Is there an executive summary available? Perhaps a carousel with major points? Would love to see that, if so.	Thank you for your feedback. We are working on putting together an executive summary. Stay tuned for more details.
98	Retired, graduate engineer, Texas A&M, Dec 1975, Major : Industrial Engineering in the Oilfield Equipment manufacturing sector here in Houston.	Excellent draft. Did I miss any discussion on the possibility of using desalination of seawater in the draft? Should it be considered? Why not? I am available to be a Devil's Advocate on this subject. I was a Co-Op student at Freese and Nichols, Consulting Engrs, Ft Worth, in 1973-74 and had the opportunity to develop an interest in this very subject involving a study for the North Central Texas Council of Governments. I believe Bob Gooch, PE, was one of the partners working on this subejct, I worked for him.	Thank you for your feedback. We encourage you to visit OneWaterHouston.org and take our survey. This information will be used for planning purposes during our alterantive water supply master planning efforts.
99	Mi Familia En Accion	Reducing water loss is essential for Houstonians as warmer weather continues to hit Houston in the future and pose the threat of droughts. Pipes must remain in optimal condition to ensure everyone has equal access to water. Thank you for your water conservation plan, and I hope that future Texans have access to plenty of clean water.	Thank you for your feedback. We appreciate your support and commitment to water conservation.
100	individual/family	Without a doubt the #1, #2, #3, #4, and #5 priorities for 2024 and beyond should be addressing the water pipeline infrastructure of the city. The report shows that the loss of water was well above any notion of an acceptable threshold prior to the added loss in 2023. As 22% of water is lost that way and seeing that 22% is a generously low estimate because it is not weighted for the present situation and that the target should be no more than half of that it should be clear that now, more than ever, the priorities should be targeted at that particular problem. Don't make excuses. Don't blame the citizens. Get busy fixing the problem. It's a problem that the city owns or should own. It's no one elses fault. It's the fault of the city for not making this a real priority over the last decade or more. Jay	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
101	Bayou Native: landscape design and consulting	A) Installation of Native Texas Plants & Trees: 1) help retain ground water with deep root systems 2) help prevent flooding 3) are drought tolerant and conserve water 4) counter-act heat island effect 5) Improve water and air quality 6) promote biodiversity B) Reduction of Paved areas 1) reduces heat island affect 2) creates permeable surface to absorb and retain ground water C) Replace traditional turf grass in residential and public spaces with native grasses. Please promote and make available a Harris county native lawn mix!	Thank you for your feedback. Native plants are specifically covered under BMP 7.5. Section 6.3 also encourages residents and commercial customers to visit the Houston Chapter of the Native Plant Society's webpage for information on selecting native plants for landscaping. This resource highlights the numerous benefits of native landscaping, aligning with the advantages you've mentioned. We are currently exploring options to promote the use of native plants and grasses in both residential and public spaces.

ID	Organization	Comment	City of Houston Response
102	N/A	Recommen using big container save air conditioner drain water No1 protecting house foundation from uneven , No 2 save some water for plants. I personally like that how much water I used then I pay for the amount, I don't like if I use 3 thousand gallons and you just charge me 1 thousand gallon cost, you have been nice for doing that. Thank you, but I still prefer auto reading device come soon.	Thank you for your feedback and recommendations. We'll consider your suggestion for future initiatives.
103		Your DRAFT 2024 Water Conservation Plan was very detailed and well written. A few thoughts: 1. Should there be a written plan for unplanned, unexpected events? War, another COVID like disease, extreme temperatures (e.g., Lake Houston, etc. are perilously low), etc.? I believe we should plan for contingencies and, if so, make it clear if/when extreme measures will be taken, on behalf of all citizens. 2. I appreciate the boil notices that come out during extreme weather times. My sense is that there's areas for improvement here? If so, can/should there be a common understanding as to how/when/if residents should take alternative measures? Along these lines, should the City stockpile water leading to summer months (maybe this is already done?)? 3. From time to time, I see water wasted. Whether it's a neighbor's automatic water system watering their lawn during a rain storm, or the occassional fire hydrant spewing water (e.g., extreme heat sometimes causes this). What if we rewarded citizens for being vigilent for citing these references? Such as $5 or $10 per valid occurance? This would be better than dialing 311. Just a thought.	Thank you for your feedback and suggestions regarding the draft 2024 Water Conservation Plan. We agree that there is always room for improvement in communicating boil water notices and other emergency alerts during extreme weather events. We will continue refining our communication strategies to ensure that the community receives clear, timely guidance on alternative measures during these situations. Houston has plans in place to ensure that supplies are adequate for climate driven peaks in water consumptions. We appreciate your suggestion about incentivizing residents to report instances of water waste, such as malfunctioning irrigation systems. We are currently upgrading our water conservation webpage that will have a form that customers can report water waste.
104	Beth Israel Social Justice Committee	I join all those who want safer, cleaner water. I want to feel confident our water quality is properly monitored for any threats to its safety.	Thank you for your feedback. The City's drinking water meets or exceeds ALL Federal and State standards. We post our annual Water Quality reports on our website, houstonpublicworks.org.
105	N/A	I'm a Houston resident, District C. I'm not an expert on water conservation but it is important to me. Water is life. That may sound trite, but when I hear about boil water notices, or as I stock up on water for every conceivable contingency, and when I see water gushing into the street from busted pipes, I always think about water is life. Texas Monthly recently published a series of reporting about ways San Antonio and other Texas areas are conserving water, and they make sense to me. In my household, I'm very careful with water, but my spouse just lets the faucet run. If he were charged for using excessive water, I think he might conserve. That's a small example, but it worked in San Antonio. Please budget for fixing or replacing the old municipal water pipes, even if it's inconvenient. Please replace all infrastructure that delivers lead and other heavy metals in the water. Please fix the sewage pipes in the backyards of folks who can't possibly afford to fix it. Please restrict golf courses, and make them use "used" water, I think it's called "gray" water but it may be some other color. Please figure out a way to capture rain water for reuse on a large scale; this would also mitigate flooding and lighten the burden of our drainage system. Please create infrastructure to reuse sewage water; it sounds gross but the Texas Monthly article reports that it's being done effectively, creating potable water that exceeds health standards and is cheaper than desalination. You know all the best practices because you've read the articles and attended the conferences; the main point of my comment is that it matters to me a great deal that we bear in mind that water is life and we conserve it in every way possible.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.Our drinking water master planning efforts will evaluate the cost-effectiveness of innovative technologies and alternative water supplys for future use.
106		How about designing a program to change lawns into water saving programs. Give customers credit to transition from using water for plants. Not vegetable gardens.	Thank you for your feedback and recommendations. We'll consider this suggestion for future initiatives.
107	The Official Sunnyside Civic Club	Why isn't city storing water from floods, storms , heavy rain events that we constantly get annually ? It's free water and all city has to do is treat it. There can be enormous holding tanks placed strategically around the city , water can even be used for fighting fires .	Thank you for your feedback. We invite you to visit our OneWaterHouston.org website and take our survey. This information will be crucial as we develop an integrated water management approach at Houston Public Works for long-term reliability to meet the needs of the community and the ecosystem.

ID	Organization	Comment	City of Houston Response
108	N/A	I'm a Houston resident, District C. Water conservation is important to me. Water is necessary for life. Clean water is critical for staying healthy and when I hear about boil water notices, and I stock up on water for every conceivable contingency, and when I see water gushing into the street from busted pipes, I always am reminded that we should be doing all we can to conserve water. Texas Monthly recently published a series of reporting about ways San Antonio and other Texas areas are conserving water. How are we doing so in Houston? We're very careful with water and do our best to conserve it. Though our water bill is often too high, I am curious about how the fees for excessive water use worked in San Antonio. As city officials, please budget for fixing or replacing the old municipal water pipes, even if it's inconvenient. Please replace all infrastructure that delivers lead and other heavy metals in the water. Please fix the sewage pipes in the backyards of folks who can't possibly afford to fix it. (Our replacement of old sewer line in back yard was over $4K!) Please restrict golf courses, and make them use "used" water, I think it's called "gray" water. Please figure out a way to capture rain water for reuse on a large scale; this would also mitigate flooding and lighten the burden of our drainage system (I like what is being done with the old golf course at Inwood area). Please create infrastructure to reuse sewage water as the Texas Monthly article reports that it's being done effectively, creating potable water that exceeds health standards and is cheaper than desalination. Here's a link to one of TM articles. https://www.texasmonthly.com/interactive/whos-wasting-our-water/ You know all the best practices because as leaders you've read the articles and attended the conferences. I urge you to not delay in budgeting so that all living in Houston have clean drinking water, and find ways to conserve water in the future. We must conserve and use what works to not waste water. It is critically necessary for health and safety. Thanks,	Thank you for your thoughtful and comprehensive feedback. We share your commitment to water conservation and the need for a robust strategy to ensure the health and safety of all Houston residents. We are also exploring alternative water sources to ensure a more resilient city.
109	none. Voter and individual property owner in Houston.	1. The short time period provided to review this large document is shameful. There should be a longer time period to make comments. 2. There should be open community meetings to discuss the plan and to ask questions about the plan, and to receive answers then from appropriate officials at those meetings. This would foster a better understanding of this plan. 3. I fail to see an equitable cost of service distributed between single family homes, multifamily projects, commercial and industrial projects, and wholesale customers.	Thank you for your feedback and for raising important points regarding the review process and community engagement. We invite you to visit our OneWaterHouston.org website and take our survey. Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.Our drinking water master planning efforts will evaluate the cost-effectiveness of innovative technologies and alternative water supplys for future use.
110		Not related to this but they worked on water pipes sewer lines etc I live 9622 Caraway Ln 77036. Since work completed outside my bathroom has a terrible smell can you please help	Thank you for bringing this issue to our attention. We apologize for the inconvenience you're experiencing. Please report this issue to 311 or email 311@houstontx.gov.
111		Conserving water can be as simple as taking a bath instead of a shower when water is scarce.	Thank you for your feedback.
112	Home owner	Sounds good.	Thank you for your feedback.
113		I feel that this should not affect the residential cost for water, as it is already high and continuously increasing ever year and the amount of water that each house hold is decreased so that the cost will be more. When will the city shoulder the cost for these improvements.	Thank you for your feedback.

ID	Organization	Comment	City of Houston Response
114	none	With all the droughts this region and state has been through, 2011 being the worst we seen since moving here 2001. With all the flooding rains we have received, Allison, Tax Day floods, Harvey dumped more than 65 inches of rain on our geographical area alone & all the other flooding rain events, I'm just stunned how this city, county and region hasn't constructed reservoirs or lakes to capture all that water for future droughts. Instead, the city, county & regions local governments let all that water drain into the gulf. Smart "leaders" would've moved quikly moved to construct reservoirs or lakes...THAT'S the contingency plan this city needs to work on.	Thank you for your feedback as it relates to droughts and heavy rain events. We invite you to visit our OneWaterHouston.org website and take our survey. This information will be crucial as we develop an integrated water management approach for long-term reliability to meet the needs of the community and the ecosystem. We will be hosting public in-person and virtual workshops to give the public more opportunities to provide feedback and insight. Stay tuned!
115		Provide incentives and education for planting native plants which require little water if any or xeriscape beds. Provide incentives for rain barrels to harvest rainwater for watering instead of using tap water.	Thank you for your feedback. We aim to create a multifaceted approach that combines effective regulation with meaningful education to achieve the best outcomes for our community. We are currently evaluating incentives and ways to make rain barrels more accessible and affordable for our community.
116	Corporate	Our water bill is very high we had leak and we submitted proof of leak and our bill is high we can't afford to pay and we don't have water it has been disconnected	Please reach out to our Customer Service team at 713-371-1400 for assistance. Our team will help restore your service.
117		The goals are well thought out, particularly the last goal of "Increase efficient water usage and decrease waste in lawn irrigation by enforcement of reasonable irrigation and landscape water management regulations described in Section 7.3, 7.4, and 7.5". However, the goal of "Raise public awareness of water conservation and encourage responsible public behavior by a public education and information program as discussed in Section 6.1" will likely be less effective than the goal related to enforcement of regulations. Unfortunately, many citizens do not take "education" from the city seriously and, therefore, ignore the information. The regulations would be much more effective and more resources should be put behind this goal compared to the public education goal.	Thank you for your feedback on our water conservation goals. We aim to create a multifaceted approach that combines effective regulation with meaningful education to achieve the best outcomes for our community.
118	Private citizen	Our city suffers from a large amount of rain precipitation that leads to excess water and flooding. Water conservation is an important topic, but it is far more important for cities that do not receive enough rainfall. Our conversations should be more directed to how we can invest sufficiently in water storage and processing strategies from all this flooding that can help us survive a future water drought.	Thank you for your feedback. We invite you to visit our OneWaterHouston.org website and take our survey. This information will be crucial as we develop an integrated water management approach for long-term reliability to meet the needs of the community and the ecosystem.
119		Keep going on with these plans.	Thank you for your feedback. We invite you to visit our OneWaterHouston.org website and take our survey. This information will be crucial as we develop an integrated water management approach for long-term reliability to meet the needs of the community and the ecosystem.
120		Who gave man the authority to put a price on water?	Thank you for your feedback. We invite you to visit our OneWaterHouston.org website and take our survey. This information will be crucial as we develop an integrated water management approach for long-term reliability to meet the needs of the community and the ecosystem.
121		too many people not paying for water in all those apartment complexes do not care of water, they have leaking toilets and run dishwasher and washing machine when not full and taking long showers, we as homeowners paying for precious water have to always watch and converse otherwise our water bill will go up to over hundreds easily It take a village so everyone has to learn, starting at a young age, to converse	Thank you for your feedback. We aim to create a multifaceted approach that combines effective regulation with meaningful education to achieve the best outcomes for our community.

ID	Organization	Comment	City of Houston Response
122		How about before we go any further, the City of Houston take action to fix active leaks in an expeditious manner? I have personally witnessed mains broken all over the city that take WEEKS to be addressed. The City of Houston is either overwhelmed or doesn't care and, like usual, is putting the onus exclusively back on the public and businesses rather than taking responsibility for its own deficiencies.	Thank you for your commitment to water conservation and understand the difficulties in doing so with ongoing leaks. We are actively developing a more comprehensive pipeline repair program to address these issues and enhance our overall conservation efforts.
123	None	There seem to be good programs, ideas, and incentives in the proposal to conserve water, but they are mostly unknown to the public. In order to raise public awareness and compliance, there should be city-wide educational campaigns that teach people how to conserve water. In Melbourne, Australia, the newer houses are required to have water tanks outside to collect rain water which is used for flushing toilets and watering gardens. The rain water tanks have pipes connected to toilet water tanks inside and to irrigation systems in the garden. When the water level is low, then the systems will draw from city water.	Thank you for your feedback and for highlighting the need for increased public awareness about water conservation programs. We aim to create a multifaceted approach that combines effective regulation with meaningful education to achieve the best outcomes for our community.
124		you distributed your draft report after 8 PM on Sept 10th with comments due by the next day, Sept 11th. if you really cared about receiving meaningful comments you would have distributed this email when the draft report was avaliable at the end of August-- not late on the evening before comments are due. You guys are unreal and unrealistic.	Thank you for your feedback. We invite you to visit our OneWaterHouston.org website and take our survey. We plan to develop a more robust educational awareness program and would appreciate your feedback as we make changes in our approach.
125	Home owner	We need some entity to police the water commission because too often we as consumers are being overcharged because of faulty equipment and or incompetent field workers.	Thank you for your feedback.
126		We have been on the fixed rate bill of $144 for months under the reason of out-of-date meters. This is ridiculous based on the past 23 years of experience living in Houston. How can we trust that you spend the money efficiently?	Thank you for your feedback. Our team continues to upgrade remote reading devices across the city. Please visit improvewaterbills.org to see when your device will be replaced.
127	NA	Ban watering of all residential lawns. We will have some backlash but people will get used to it and adapt. On average 30% of all residential water use is for lawn irrigation.	Thank you for your feedback. We invite you to visit our OneWaterHouston.org website and take our survey. This information will be crucial as we develop an integrated water management approach for long-term reliability to meet the needs of the community and the ecosystem. We invite you to visit our OneWaterHouston.org website and take our survey. This information will be crucial as we develop an integrated water management approach for long-term reliability to meet the needs of the community and the ecosystem.
128		Why is our water bill so high in Kingwood. We are paying sewage charges on our bill for city of Houston.	We understand your concerns about the affordability of water bills. We encourage you to contact Customer Account Services to discuss your water bill further at customer.service@houstontx.gov or call us at 713-371-1400.
129	Homeowner	Why can't homeowners ask for 2 rain water barrels for free to conserve water?,they cost $ 77.00 per barrel. I think this would get homeowners a boost to conserve water. Maybe be funded by an environmental government .	Thank you for your suggestion. Houston Public Works will explore future funding options from environmental grants or government programs for future sales.
130		The price is to much stop taxing us	Thank you for your feedback. We understand your concerns about the affordability of water bills. We encourage you to contact Customer Account Services to discuss your water account further at customer.service@houstontx.gov or call 713-371-1400.

ID	Organization	Comment	City of Houston Response
131	Residential Home	Stop being greedy for water that comes from the earth. We all need water to survive. Inflation has hit everyone hard and now we're penny pinching just to pay our bills.	Thank you for your feedback. We understand your concerns about the affordability of water bills. We encourage you to contact Customer Account Services to discuss your account at customer.service@houstontx.gov or call 713-371-1400.
132	Water need to sterling	Cleaned	Thank you for your feedback.
133		I have 26 hours to study the proposal and comment? Sounds to me like you're hiding something here.	Thank you for your feedback. The draft report was uploaded to our website on August 28, 2024, and the first email was sent out that day to our water customers to request comments or provide suggestions on the draft 2024 Water Conservation Plan. A second email was sent out on Sept 10. We'll look at extending the public comment period for the next round.
134		I would highly recommend prioritizing timely repairs to leaks in the city right of way. First, stop the wanton waste due to inefficient repairs, then we can talk about asking citizen to sacrifice by cutting back consumption or paying more for their water.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.Our drinking water master planning efforts will evaluate the cost-effectiveness of innovative technologies and alternative water supplys for future use.
135		I received this email on September 10, 2024 this evening	Thank you for your feedback. The draft report was uploaded to our website on August 28, 2024, and the first email was sent out that day to our water customers to comment or provide suggestions on the draft 2024 Water Conservation Plan. A second email was sent out on Sept 10. We'll look at extending the public comment period for the next round.
136	Homeowner	Thanks for this opportunity. Educating the population is of utmost importance. Water conservation can be achieved by more people planting Xeroscape yards with local/Texas plants and watering them with collected rainwater and the excess water from their A/C units. Also, water collected from inside dehumidifiers provides 5+ gallons per day. These are practices I use daily which conserves palatable water. In addition, too many existing trees have been completely cleared to establish new homes/neighborhoods and property levels raised which has compromised the natural environment and increased the possibility of flooding in the adjacent properties.	Thank you for your feedback on water conservation and the importance of educating the public. We will utilize your suggestions to help guide our efforts toward more sustainable water management practices.
137	None	I am disappointed that there are only three mentions of the aging water infrastructure, and none of them detail how to the infrasture is tracked to insure replacement before leaks become a big problem. Should the plan include some mention of developing an asset managent plan for the water infrastructure?	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.Our drinking water master planning efforts will evaluate the cost-effectiveness of innovative technologies and alternative water supplys for future use.

ID	Organization	Comment	City of Houston Response
138	Citizen	I'm a Houston resident in District C. As a healthcare professional I talk ad nauseam about dehydration. So as I'm personally experiencing droughts and heat waves, I think about the future as our climate changes and reflect on the importance of water conservation. The investment in new and known ways is necessary to support the lives of futures generation of humans, animals, and native Texas trees and plants. When I read Texas Monthly's recently published series about ways San Antonio and other Texas areas are conserving water, I felt hopeful and excited about the focus on life's building block. Excessive water use leading to a charge would change people's habits and reduce waste. Please budget for fixing or replacing the old municipal water pipes, even if it's inconvenient. Please replace all infrastructure that delivers lead and other heavy metals in the water. Please fix the sewage pipes in the backyards of folks who can't possibly afford to fix it, which an analysis of wealth across the city could easily target certain zip codes. Please restrict golf course use of water. Please support rain barrel programs so they become a household staple and figure out better ways to capture rain water for reuse on a large scale. Please invest in infrastructure to reuse sewage water as it sounds like the science is evolving to make this a healthy option. Thank you!	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.Our drinking water master planning efforts will evaluate the cost-effectiveness of innovative technologies and alternative water supplys for future use.
139		City must have vigilantes who will go around to check and respond to reports of broken pipes in order to save millions of gallons of water oozing out	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.Our drinking water master planning efforts will evaluate the cost-effectiveness of innovative technologies and alternative water supplys for future use.
140		Our government is mentally slow and cannot handle basic construction and potholes. Don’t give them amy power power over our water	Thank you for your feedback.
141		There is ZERO need to raise prices, and there is certainly a need to improve infrastructure. Our home STILL does not have a digital meter...our drainage is terrible, etc.	Thank you for your feedback. The Mayor’s “Water Bill Improvement Plan” went into effect back in April 2024. Under this plan, residential customers will temporarily be charged a fixed monthly amount, a customer's set usage. Set usage water bills were printed on blue paper until an upgraded remote reading device is installed, or until it’s confirmed that your current device is functioning properly and providing accurate readings to the billing system. Once confirmed, your bill will be printed on white paper. You can check the status of your remote reading device at improvewaterbills.org.
142		These water bill are ridiculous	Thank you for your feedback. We understand that water bills can be a concern for many residents, and we are committed to finding solutions to manage costs while improving our water infrastructure and services.

ID	Organization	Comment	City of Houston Response
143	Homeowner	Couple items to consider. 1. With the new water meters, HPW should be able to notify users if they have flows that indicate a leak. This could help them realize they need to address it before they get a bill as their first indication. 2. The new accurate meter technology allows HPW to use algorithms to determine a users base water usage of portable water each month and the high water days which are obviously yard/ garden watering. HPW should develop a fair formula for this calculation and not charge sewer charges for watering. I realize we now have an option to put in a second meter, but when the water main is on the other side of the road estimates I have received are it would cost $7000+ for me to have the pipe installed for the new meter. It is obviously not worth it. But when HPD can do this with a simple formula with the new technology, it should be done. Please consider. If you need help developing the algorithm, just get in touch with me. Thank you,	Thank you for your feedback. The city is looking into technology that would help provide leak detection notices. It's part of the Mayor's Water Bill Improvement Plan. You can find more information at improvewaterbills.org.
144		Water conservation would be great if the infrastructure was in better shape. For example, there's a water leak in the median at Antoine and 290 that's been there for over a month. So much for conserving water.	Thank you for your feedback. Do you have a 311 service request number for the reported leak? Please email our team at 311@houstontx.gov and they will provide an update on repairs.
145	N/A	I am extremely happy to see the push for water conservation. I am all for restricting water use when necessary. We practice it here. We have a FLUME system that lets us know if there is a suspected leak. It tells how much water we are using. We have a shower head that we can turn off and on during showers. We run our sprinkling system for short periods. We don't run the dishwasher until it's full. We have a front loading washer. My comment is about Senior Citizens and water conservation. The Seniors are given a break with school taxes, which helps tremendously. We are in our 80's and living on retirements that were funded with money for the early 2000's. Inflation hurts us a lot. All of the increases in everything puts a toll on seniors. I wish the utilities would consider something for seniors.	Thank you for your feedback and commitment to water conservation. We are looking for ways to expand our W.A.T.E.R fund program which provides financial assistance to low-income adults over the age of 60 with City of Houston residential water accounts.
	retirado	Creo que es mu buena idea y debe llevarse a cabo iniciar todos los pobladores de la ciudad de Houston y porque no decir toda la Humanidad del Consevacion de todas las aguas limpias que es esencial para la vida en este Mundo o Planeta en el que vivimos todos los seres humanos, Hay que CONSERVALA TODA LA VIDA PARA SUBEXISTIR EN ESTE PLANETA LO MAS QUE PODAMOS VIVIR	El agua limpia es esencial para la vida en este planeta, y debemos conservarla para asegurar que todos los seres vivos puedan sobrevivir el mayor tiempo posible.
147	Residential	Make water bill more affordable. No one bill should be over $100.	Thank you for your feedback. We continue to explore options to help lower the cost of water services.
148		Please focus your efforts on the infrastructure: https://www.houstonchronicle.com/politics/houston/article/water-loss-houston-leaky-pipes-19718779.php#:~:text=Houston%20lost%2036%20billion%20gallons,to%20supply%20an%20entire%20city Put my utility money and your team's time and efforts where they will be most effective. Don't plug a leak when the dam is broken.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.Our drinking water master planning efforts will evaluate the cost-effectiveness of innovative technologies and alternative water supplys for future use.
149		I AM 81 YEARS OLD AND CANOT AFFORD ANY ADDITIONAL TAXES.	Thank you for your feedback. We encourage you to contact Customer Services and asking them about the W.A.T.E.R. Fund for people over 60. You can email customer.service@houstontx.gov or call us at 713-371-1400 to see if you qualify for financial assistance.

ID	Organization	Comment	City of Houston Response
150		The plan seems to be great, but will there be an increase in my bill ?	Thank you for your feedback. We understand your concerns about the affordability of water bills. We are exploring all options to help improve our infrastructure while not placing financial burdens on customers.
151		I think that is ridiculous that water restriction are enforced on regular homes but the golf cirses keep watering the grass every two days, at least the one i leave close by the Gus Wortham and they do it even at 12:00 pm. And they just get used by a small percentage of the population. Why not restriction the water usage to this big water thirsty places as the do it with the small homeowners, if there's grass die like in many yards around houston what is the problem they had money they are charging the users,they can use that money to replace the turf.	Thank you for your feedback. We invite you to visit our OneWaterHouston.org website and take our survey as we finalize any drought restrictions.
152	Retired	Capturing clean rain water and returning it through the sewer back to the treatment plant? Like having solar adding power to the grid?	Thank you for your feedback. We encourage you to visit onewaterHouston.org to view our long-term strategic planning efforts for sustainable water management.
153	Customer	Water coming into my home has an odor. Have made at least three request for it to be test. They (water company) have been out but problem still exists	Thank you for bringing this issue to our attention. We recommend contacting 311 to ensure your concerns about the water odor are formally logged and addressed promptly.
154		Provide water barrels for residents, either free or highly subsidized.	Thank you for your feedback. Houston Water Conservation partners with Rain Water Solutions to host sale events that provide rain barrels to our citizens at a subsidized price of $77.00 each.
155	private	I appreciate that our opinions are being considered, which is certainly a positive step. However, it seems difficult to engage meaningfully under these circumstances. Formulating a question across 107 pages makes it nearly impossible to form a clear opinion. Due to the lack of clarity on how team actions are involved, I must express my opposition to the plan in its current form. I would suggest that polling could be a more effective way to gather the feedback you're seeking. I assume that most people would struggle to fully understand the document as it stands.	Thank you for your feedback. We will utilize your suggestions in a one-page summary for future documents.
156	Resident	Stay focused for all plans listed in city of houston drafts. Keep politics out of the equation, follow Mayor Whitmire leadership for City of Houston's road to recovery from previous Mayor Turner ineffective leadership.	Thank you for your feedback.
157		I received this in my email on Tuesday (9/10/24) and the response deadline is Wednesday (9/11/24), I find that interesting. I only want to say that one thing that could be done is to shut off all the fountains throughout the city. This would save water & I'm sure electricity to power them.	Thank you for your feedback. The draft report was uploaded to our website on August 28, 2024, and the first email was sent out that day to our water customers to comment or provide suggestions on the draft 2024 Water Conservation Plan. A second email was sent out on Sept 10. We'll look at extending the public comment period for the next round.
158		You guys are taking advantage of your customers! My bill has doubled since this silly program you put in place until all the meters are fixed. It's giving SCAM! Shame on y'all for taking advantage of Hard working people in the city! We wish there were other options for water...smh	Thank you for your feedback. We understand your concerns about the affordability of water bills. We are exploring all options to help improve our infrastructure while not placing financial burdens on customers. Please contact our customer service team for information about your account at customer.service@houstontx.gov or call us at 713-371-1400.

ID	Organization	Comment	City of Houston Response
159	Lifetime Houston resident	I have been a City of Houston water customer for 53 years (1970) and have constantly seen my water bills increase over the years despite using the same amount of water in 1970 that I use now. I do not remember conservation efforts being mentioned for the early years of my usage. I am extremely angry regarding any further attempts to burden current long-time water users with rate increases and conservation efforts. We have shouldered the burden of your mistakes far too long! Recent years have seen a constant influx of migrants into Houston with their hands outstretched, expecting US taxpayers to "grease their palms" and cater to them only to have them steal from us while we sleep and turn our city into a lawless cesspool. Immigrants have shown blatant disregard for both federal and state laws. Most immigrants have no idea what our laws are! Law enforcement quit prosecuting rapists in our city for an 8-year period along with 260,000 other crimes due to lack of personnel in 2016 because there were far too many cases for HPD officers to handle. Can our country withstand another 4 years of open borders? Most people do not realize how nice our city used to be back in the 60s and 70s. I remember being able to leave our doors unlocked. We never had to conserve water before, nor was I ever served free lunch or breakfast during my 12-year tenure as a student in Houston Independent School District despite being from a low income household. While immigrants stand in line to enter our country with their hands outstretched, I do NOT see them standing in line to serve in our military. Time has come to end the era of freeloaders and demand that they pay to come to this country. Instead of us catering to them, they should cater to us if they want to live here. Houstonians are fed up paying for the freeloaders with increased taxes and increased city service rates. To that end, I propose that any increase in infrastructure to accommodate Houston's increasing population be placed squarely on the shoulders of the people responsible for it, i.e., incoming immigrants and new accounts.	Thank you for your feedback. We understand that water bills can be a concern for many residents, and we are committed to finding solutions to manage costs while improving our water infrastructure and services.
159	Lifetime Houston resident CONTINUED	A moratorium on building permits wouldn't hurt either. The cesspool just keeps getting bigger! Houston never had to ration water during droughts before immigration became a problem. Likewise, Houston never had rolling blackouts for our electric grid before the size of this city became a problem. IF WE DON'T HAVE THE RESOURCES FOR EVERYONE, THEN QUIT BUILDING! QUIT LETTING THEM INTO THIS CITY IF YOU CAN'T EVEN SERVE THE PEOPLE WHO HAVE LIVED HERE ALL THEIR LIVES. Houston water customers are NOT responsible for the city's mismanagement of its finances and the sad state of our city. While I have lived here and paid into the system for 50 years, I strongly resent having to pay for city leader's mismanagement who continue to build when resources are already stretched too thin during droughts, heat and cold spells. If it keeps happening, THIS CITY WILL BECOME UNLIVABLE. For fairness sake, Houston needs to charge the new people who come to live in this city for the cost of expanding city services to meet their needs, NOT the people who have lived here and paid into the system all their lives! To that end, I propose a different approach to your financial shortfalls by ending rate increases for senior citizens over 65 years of age who have paid into the system for 50 years, who are on fixed incomes, and who are only using the same amount of water they did 50 years ago. Higher rates are not fair for this group of citizens, nor is it fair to expect them to conserve water due to city mismanagement. Instead, charge the new people who are coming to Houston and new accounts in the past few years for any upgrades and services. This is the fair thing to do. We must punish city leaders who mismanage/misuse city funds. We have already given you more than enough money to provide the city services we need. Get rid of the freeloaders and city mismanagement and there won't be a problem.	
160	Tax payer	How about the COH limit leaks and stop that first. What is that amount? I bet its more its more hen your entire budget	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.Our drinking water master planning efforts will evaluate the cost-effectiveness of innovative technologies and alternative water supplys for future use.

ID	Organization	Comment	City of Houston Response
161		I've been in waters edge for a few yrs. I used to reside near Ce king for 20 yrs. In all the yrs I've stayed there I was never in fear of the water bill being as high as the light bill. I've never had issues with the water having a smell or being a different color. My bill was always no more than 70 dollars. Other than the last couple of months there's been no consistency. I think that we a residents should have a choice as to what company should service our water just as we do with electricity.	Thank you for your feedback.
162		In regards to the Education and Public Awareness portion of the Water Conservation Best Management Practices Implementation Schedule, as delineated in Table 3-1 on pages 10-12 , I note that the plan primarily involves continuing current programs. Based on my personal experience with the most recent Drought Contingency Plan Stage 1 and Stage 2 enactments and subsequent rescindments, I believe that the public awareness aspects would benefit from increasing (repeating) awareness messages and potentially from additional distribution methods, perhaps similar to the channels currently used to distribute silver alerts on cell phones (or an equivalently broad, slightly intrusive/high visibility method). My suggestion for increased frequency of current alert messages is backed up by a search of my inbox, I rarely delete anything (unwieldy - yes; handy, searchable reference - yes again) which shows a single email for each change of state. As much as I loathe the voluminous bombardment of my Inbox by what seems like any organization I've had even the scantest of connection to, the reality is those that flood the zone get noticed while those that do not go unnoticed. Again, while I really do appreciate the measured, civilized communication practices of the Public Works organization, the current landscape requires a volume strategy. Perhaps a recurring weekly reminder email while Emergency Stages are in effect would be a good place to start? During the most recent experience I estimate that fewer than 5% of persons i knew were aware of drought stages at the time. This needs more attention/additional approaches.	Thank you for your feedback. We appreciate your suggestion for an increased frequency of awareness messages, especially during drought stages. We will consider all options as we work towards a more robust ecucation and outreach program.
163	Individual	To think that I can give you an opinion not to mention having read all this information	Thank you for your feedback. We are exploring plans to release a one-page summary in the future.
164		While it's important for individual residents to do their part in conserving water, it's equally or at a greater extent that the city does its part. I'm not sure how it can prevent water main lines from rupturing, but that is large amounts of wasted water pouring into the streets.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.Our drinking water master planning efforts will evaluate the cost-effectiveness of innovative technologies and alternative water supplys for future use.
165	Home owner	In order to preserve water consumption during times of low rain fall, have businesses of all sizes and locations stop watering plants and grass. Encourage them to plant foliage that doesn't require watering and or rock garden.Also have watering systems not turn on during wet weather, simple and effective.	Thank you for your feedback. Encouraging businesses to adopt native plant landscaping and halt unnecessary watering during low rainfall can significantly conserve water.
166	Citizen and Taxpayer	I'm sorry I have not been able to attend these water conservation meetings due to my job requirements; however, it is not that I am not interested. Please forgive me for not having read the plan in detail. If my comment/suggestion is already addressed in the plan, then this email is redundant. I read the Table of Contents and did not see any section addressing conservation. I think the City needs to reinforce conservation messages and inculcate the idea of conservation into Houston's collective culture and awareness. Conservation is a FREE method of savings, not just in water, but also the energy necessary to clean that water, etc. The City does little that I have been able to see/hear wrt conservation of any of its resources. Thank you for reading my comment.	Thank you for your feedback. We agree that reinforcing conservation messages is crucial for fostering a culture of conservation in Houston.

ID	Organization	Comment	City of Houston Response
167	Homeowner	The COH wastes more water by not fixing their leaks than any other private leak if so. City needs to make the repairs needed and quit wasting precious clean water. We see it everywhere in Houston and not being addressed.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.Our drinking water master planning efforts will evaluate the cost-effectiveness of innovative technologies and alternative water supplys for future use.
168	Individual	I had started giving my opinion and it “sent” prior to me completing it, perhaps because I was trying to do it on my phone. This is a lot of information to read. Yes it looks nice and I’m sure it took a lot of effort. Why can’t you do a public announcement or documentary to inform the public. Of “the need to know basics”. Only a landscaper would know what is truly needed. I have a water meter/ box that has been reported broken at least twice, and is still broken. Can it even be read accurately? Sending this out to the public is just a ploy to say, it’s been sent to the people with no responses. The average person probably still hasn’t read it! Why not condense what you want the public to really know? Try that!!	Thank you for your feedback . We will work on creating a simplified version of the plan that outlines the key points in a clear and accessible format for our residents.
169	Citizen	Drought restriction of "all outside watering prohibited" is too broad. It should be permissible to water a home's foundation to prevent damage. This is a homeowner's right. But should be limited to nighttime-only foundation watering	Thank you for your feedback.
170	none	When one reports a water leak, perform the following. 1. Send one person to address and scope the job. 2. Send a crew out once with all appropriate assistance and equipment. 3. Do the job right and one time only.	Thank you for your feedback. The City of Houston is procuring additional contractors to supplement our internal crews and complete the repairs.
171	none	I think that the office should consider long-term initiatives to reduce overall water burden, such as templates for how to rewrite HOA lawn requirements to be more water-conscious, recurring rebate programs for cultivating native drought-resistant lawns, free native plant seed programs, and more.	Thank you for your feedback. We appreciate your input on long-term initiatives to promote water conservation. We will consider your feedback as we plan for the future.
172	Residential	Why make your billing confusing with the breakdown? In my opinion it is typical government. Confusion to make it appear vital for the service you provide. Why distinguish basic charge and use charge? Simply tell us how much water we used with a single sum. Same with sewer charges. To me it explains nothing. We use water and sewer. Let the bill reflect that. The other offers no special informative need.	Thank you for your feedback. We will consider all suggestions as we move forward.
173		You seriously send this to us the night before public comments close? Apparently you are not expecting well informed, thought provoking responses. This does not surprise me coming from a Houston governmentally controlled “service” organization. Your customers (Houston taxpayers and residents) deserve better. Most of us work for a living and need more time.	Thank you for your feedback. The draft report was uploaded to our website on August 28, 2024, and the first email was sent out that day to our water customers to comment or provide suggestions on the draft 2024 Water Conservation Plan. A second email was sent out on Sept 10. We'll look at extending the public comment period for the next round.
174	Water Dept	How dare you put pressure on the public after years of lax attention to water line breaks!! I have seen water gushing from broken pipes, broken underground lines and sprinkle systems on city properties for MONTHS AT A TIME!! One such issue went on for 2 years in plain sight, on Fondren Road! And yes! It has always been reported! Being from Colorado and a lifetime of water conservation and restrictions, I have been appalled for the 10 years I've lived here at the horrendous response to major water wastage, and the fact that it has always been the city's perview to correct! Shame on you!!	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.Our drinking water master planning efforts will evaluate the cost-effectiveness of innovative technologies and alternative water supplys for future use.

ID	Organization	Comment	City of Houston Response
175	None	The water bill is way too high. No way we used over $400 in water.	Please contact our customer service team with questions or concerns about your water account at customer.service@houstontx.gov or call us at 713-371-1400.
176		I appreciate the tenacity of city workers when we had more water main breaks than the city could fix in a timely manner and everything that is done to keep our water cost low. However, the most water wasted was from the water main breaks not being fixed for weeks and some cases months, not from people watering their lawns. Also, the time restrictions on watering needs to be more lenient because they are not doable for everyone. Thank you.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community. We appreciate your feedback on watering restrictions; we aim to strike a balance that encourages conservation while accommodating the needs of all residents. That is why the drought contingency plan was updated to allow watering until 8 a.m., whereas the previous document only permitted watering until 5 a.m.
177		Too much water wasted in watering the lawns and the maintaining a grass lawn is so obsolete and environmentally unfriendly!! Many cities in US don't allow watering lawns and encourage alternatives to achieve aesthetic landscape. Houston community HOA's should remove the requirements of maintaining a grass yard on properties.	Thank you for your feedback. We appreciate your concern about the environmental impact of traditional grass lawns. Many communities are indeed exploring alternative landscaping options that are both aesthetically pleasing and more sustainable. We will consider these suggestions as we move forward.
178		Under the mandatory water conservation measures, single family residential is limited to 4,000 gallons per month. This is not equitable by any means for many families in our area. The smallest families being 6 people per single family, and the largest being 13 people (11 children and 2 parents). A single person in a single family residential can easily use less than 4,000 gallons per month. A family of 13 people would mean only 10 gallons per day per person (4,000 / (30 * 13)) = 10. Meanwhile, a single person inside an apartment can use (4,000 / (30 * 1)) = 133 gallons per day, which is enough to water a small yard. At the human level, there is little water equity in the drought contingency plan. The allotted water use should have a component based on persons-per-meter, persons-per-household, or persons-per-unit...otherwise, there is not water equity. As it is written, the drought contingency plan burdens families and rewards individuals.	Thank you for your feedback. Please visit OneWaterHouston.org, where we discuss our commitment to equity in more detail. The site includes information on how the One Water initiative is working to provide equitable access to water resources for all of Houston.
179	(myself)	1. Change billing statements to residential customers to report meter readings to the nearest 1 gallon, instead of rounding to multiples of a 1000 gallons as is done now. That would allow customers to use these monthly readings to make more sense of changes that they could try in their consumption of water. 2. Encourage the use of a. Point-of-use water heaters and b. Circulating 140 F water systems and thermostatic mixers at the point-of-use.	Thank you for your feedback. We appreciate your recommendations for point-of-use water heaters and circulating water systems.
180		I would happily have at least two rain barrels except for the fact that you are asking entirely too much money for them. I'm sorry but it's counterproductive to charge that much for a rain barrel. I can make my own or by from a hardware store. Water conservation shouldn't be about how much you can charge your customers.	Thank you for your feedback. We appreciate your interest in rain barrels. Houston Water partners with Rain Water Solutions to host sale events that provide rain barrels to our citizens at a subsidized price of $77.00, which is 50% of the retail price. Houston Public Works will explore future funding options from environmental grants or government programs for future sales.
181		I noticed the water pressure at my home (507 East Janisch Rd, Houston, TX 77022) was low. Thank you for keeping me updated.	Please report your issue to 311 or email 311@houstontx.gov. Our Houston Water team will investigate the cause for your lower water pressure.

ID	Organization	Comment	City of Houston Response
182		Fix the broken pipes, update the water meters, fix the leaking meters and stop wasting water. All year long this is going on and we as the consumers are paying the price! We pay too much in taxes for our water to be mishandled	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community. We appreciate your feedback on watering restrictions; we aim to strike a balance that encourages conservation while accommodating the needs of all residents.
183	Green Mode Designs	The COH Water Conservation Plan is a great idea, however, misses the big picture. Though the "climate impacts" is mentioned in several places in the document, it fails to recognize the impact of precipitation and Flooding in the Houston and what those impacts mean for Houston. Specifically, increased flooding resulting in water levels our primary watershed Lake Houston not falling below critical threshold values. Does Houston really have a water insecurity problem? Changing to low flow showerheads and aerated faucets, watering lawns on specific days of the way are feel good measures. Putting the burden of the costs of water utility on the developer in the form of impact fees hides the true cost to the public. This misguided understanding on water's end user has permeated city planners in Houston and major cities too long. The most effective method to decrease water usage is to increase the cost to the end users. Clean subsidized drinking water is a luxury and should be paid for by the people, not those that build the delivery and sanitation infrastructure.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community. We appreciate your feedback on watering restrictions; we aim to strike a balance that encourages conservation while accommodating the needs of all residents.
184	Private	The city's water distribution system infrastructure is poor and too much water is lost to breakage and repairs are costly. The City government is negligence and only raise fees and taxes and give lip service for bonds to be issued.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community. We appreciate your feedback on watering restrictions; we aim to strike a balance that encourages conservation while accommodating the needs of all residents.
185	home owner	Thanks for providing this informative study! It is clear that a plan and conservation are needed to assure water availability to or growing metropolitan area. I think the three most important items to immediately address are in the following order of importance: 1) Minimize the Water Loss Issues (update the infrastructure); 2) Install metering systems for all users (and monitor their actual use to address and mitigate water use abuse); and 3) continue to pursue the plumbing retrofit updates (to both the public and private sector).	Your feedback is valuable to us and thank you for bringing these important issues to our attention. We recognize their significant impacts and will continue to make improvements. Thank you for your commitment to Houston's future resilience and sustainability!
186		My water bill is exorbitant and I live alone. I hardly use my water. The water here is poisonous. Not even my dog can drink it without getting sick.	Thank you for your feedback. Please remember you can reach out to our customer service team at 713-371-1400 with any questions or concerns about your water account.

ID	Organization	Comment	City of Houston Response
187	Valued City of Houston Water Customer	I received an email on Tuesday 9/10/2024 @ 8pm from Houston Public Works- CAS - "As part of this process, we ask the public to comment or provide suggestions on these plans." (Drought Contingency Plans). The period for public comment will close on Wednesday, 9/11/2024." The draft plan is 107 pages. I understand from the website, the public period comment has been open since Aug 28th. My suggestion is, if you really want the public comment on the draft, you should send the email invitation requesting the comment in sufficient time that will allow an ample amount of time to actually review it. From the email notice, and the time frame provided it appears you don't really want a comment from the public after all.	Thank you for your feedback. The draft report was uploaded to our website on August 28, 2024, and the first email was sent out that day to our water customers to comment or provide suggestions on the draft 2024 Water Conservation Plan. A second email was sent out on Sept 10. We'll look at extending the public comment period for the next round.
188	Homeowner	This to me is classic municipal governance, the end of the comment period is today and I just received this notice. This is a lengthy document which would require some time to review and digest. Completely not enough time to do so which is my understanding of the city trying to ram this through without any serious review or debate. As a homeowner and taxpayer I am dismayed by this lack of notice. Nowhere in your document do I see mandatory requirement for all new builds of installing low flush toilets. Should have happened 20 years ago. Related to water and conservation is the heat island affect of all the pavement and concrete in the greater Houston area. Why are homes and building roofed in dark roofing tiles which absorb the suns rays and create excess heat in our city? Any new builds should be required to be roofed with white roofing tiles to reflect the sun back up in the atmosphere. Purdue University has created a white paint which reflects 98.5% of the suns rays back to the upper atmosphere. During droughts, homeowners should not be able to water their lawns, a waste of water. Bottom line there are a lot of great solutions contributing to the water challenges we face which I know are not in this document. There has been a complete lack of vision and leadership on these issues, this should have been put in place over 20 years ago. This plan is completely inadequate and I do not support it.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community. We appreciate your feedback on watering restrictions; we aim to strike a balance that encourages conservation while accommodating the needs of all residents.
189	n/a	Have there been any reviews of the public pools that are closed due to staffing and lack of lifeguards but remain full of water and ready to swim in? That seems pretty wasteful. Have there been any newer technologies or companies that get promoted for finding leaks around homes? The worst is getting a bill after the leak has been present for far too long. Will there be an increase on taxes on private clubs (golf, swimming, etc) that use a ton of water? What is the wastewater treatment process and why are they all outside of houston instead of within the city? When will subsidence reports be made available to home buyers again? my parents bought in the 80s and still have the subsidence reports they were provided in advance of a home purchase - fault lines, etc. While water well consumption has decreased, there remains water well consumption so subsidence with overdevelopment of houston landscape is concerning. Is subsidence reporting something a Houston agency provides or does prior to permitting the building of commercial and residential buildings. I thought all water wells were shut down and only surface water was consumed now.	Thank you for your feedback. We understand your concern about public pools that are closed due to staffing shortages. We will look into new technologies to help notify customers of water leaks on their property. The wastewater treatment process involves collecting, treating, and disposing of wastewater to ensure it meets environmental standards before it is released. We invite you to visit OneWaterHouston.org and take our survey. We plan to develop a more robust educational awareness program and would appreciate your feedback as we make changes in our approach.
190		Didn't get through the whole document but wanted to applaud you for being forward-thinking about current and future water issues. The water quality has to serve our entire community, however, please ensure that all residents are treated with equality.	Thank you for your feedback. Please visit OneWaterHouston.org to take our survey and sign up for the newsletter. The results from the survey will be included in our master planning efforts.

ID	Organization	Comment	City of Houston Response
191		Document sufficiently covers the topics of: Reducing the loss or waste of water; Reducing the consumption of water; Improving, or maintaining the efficiency in the use of water; or Increasing recycling and reuse of water. In terms of water conservation, programs such as the following can be included. 1) Rain water harvesting and methods can be prototyped for residents to adopt mainly for use for landscaping needs. 2) Our river system are inundated when Houston receives rain - water conservation can focus on building reservoirs, buttress dams or storage dams across our creeks and rivers not only to help us with water storage but also provide a plan to deal with recurring floods during heavy rain event in Houston. 3) create incentivisation plans residents to adopt water conservation plans, installation of automatic water leak detection systems.	Thank you for your feedback. We encourage you to visit onewaterHouston.org and take our survey, sign up for our newsletter, and join our future community workshops as we coordinate everyone's input into our master planning efforts.
192	retired	Under the Drought Contingency Plan stages 1-4, to have mandatory usage reductions of up to 35% in single family homes is unrealistic for many. Most people I know (for their single-family homes) have already greatly reduced their usage due simply to the high and ever-increasing water rates we pay. Are we supposed to stop flushing toilets and buy all drinking water at the store in a stage 3 or 4 situation?	Thank you for your comments regarding the Drought Contingency Plan. We appreciate your concerns about the mandatory usage reductions outlined for stages 1-4, particularly the impact on single-family homes. The main watering restriction under the drought contingency stages is reducing outdoor watering. In general 60% of the water used in a single-family residence is for outdoor purposes.
193		I have been receiving the same water bill each month regardless of whether I water my lawn or not. This is not fair to charge me $116.32 each month. I would like to speak with someone in management to get clarity as why this is happening.	Thank you for your feedback. Please reach out to our Water Billing customer service team at 713-371-1400 with any questions or concerns about your water account.
194	(myself)	Regarding the statement: "(D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply; A measuring accuracy of 5.0% is worthless to a resident whose monthly statement of truncates his usage to the nearest 1000 gallons.	Thank you for your feedback. Under the Mayor's Water Bill Improvement Plan, we are upgrading remote reading devices to ensure accurate water bills. Learn more at improvewaterbils.org.
195	n/a	This is all well and good on paper, but I don't feel that the customer service and field workers or techs has been addressed as far as taking care of customers in a timely manner and actually doing what they say they are going to do. I have a situation with my account and meter that I have been dealing with since 2022 and it happens the same time every year, from August to November and nothing has changed the whole year, but it still hasn't been resolved and no one has come out, checked the meter, etc. and discussed anything. So explain to me why I should trust this fabulous plan?	Thank you for your feedback. We apologize for any inconvenience with your water account. We have new training for our customer service reps. Please reach out at 713-371-1400 or email improvewaterbills@houstontx.gov so our team can help resolve these issues.
196		In the event of mandatory water restrictions I see that there are penalties in place for violations, but I don't see plans for how to monitor for violations. How would the city determine a violation had occurred, other than through dumb luck? Presumably the public could report a violation and someone from Public Works could be sent out, but what is the expected response time of HPW to a complaint of a violation?	Thank you for your feedback. Currently, our plan relies on a combination of community reporting and field assessments by our Houston Public Works team for suspected violations. We are continuously looking for ways to improve our response efficiency. We will look at additional monitoring technologies and strategies to enhance our enforcement capabilities.
197	Resident	I would like to see a billing system that would account for water that is utilized by a resident to water lawns, etc. Right now, despite the City's acknowledgment that not all water flowing to a resident's home goes into the sewer system, it charges the resident as if it does.	Thank you for your feedback. We will consider your suggestion as we shape our water conservation plans.

ID	Organization	Comment	City of Houston Response
198	Bayou City Waterkeeper	Dear Houston Water Director Greg Eyerly, We appreciate the opportunity to comment on the City of Houston's 2024 Water Conservation Plan. This plan comes at a critical juncture for our city's water infrastructure and conservation efforts. Recent reports have highlighted the severe challenges facing Houston's water system. In 2023, the city lost over 32 billion gallons of water due to broken pipes. The number of reported leaks has increased dramatically, from 9,143 in 2020 to 13,911 in 2023. Moreover, Houston Public Works has only been able to replace 850 miles of pipes over the last decade, far short of the ideal 2,800 miles. These figures underscore the urgent need for robust conservation measures and infrastructure improvements. We commend the city for developing this plan that goes beyond minimum TCEQ requirements in several areas. However, given the scale of our water challenges, we believe there are opportunities to further strengthen the plan.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community. We appreciate your feedback on watering restrictions; we aim to strike a balance that encourages conservation while accommodating the needs of all residents.
199	Bayou City Waterkeeper	(Section 6.1.3) Water loss reduction - We recommend setting more aggressive targets to lower the Infrastructure Leakage Index (ILI) to 5.0 or below by 2034. This would represent a significant improvement from the current ILI of 6.79 reported in the plan. We support the Houston Public Works strategy to continue prioritizing and replacing aging water lines as a way to mitigate water loss. While we recognize the substantial costs associated with pipeline repair and replacement, we encourage the city to explore all available state and federal funding opportunities to support these critical infrastructure improvements. (Section 5.0) Conservation goals - We urge the city to consider setting more ambitious targets, e.g. a target of less than 120 Total GPCD by 2034 would drive more significant water savings.	Thank you for your feedback. We appreciate your suggestion to set more aggressive targets to lower the Infrastructure Leakage Index (ILI) to 5.0 or below by 2034. Achieving a significant improvement from the current ILI of 6.79 is a critical goal, and we agree that prioritizing the replacement of aging water lines will play a key role in mitigating water loss. We will carefully consider your input as we refine our strategy to ensure a sustainable water future for Houston.
200	Bayou City Waterkeeper	Best Management Practices - We recommend prioritizing BMPs with the highest potential for water savings. The plan would benefit from including a ranking or prioritization based on expected water savings. BMP 7.7 - Plumbing Assistance for Economically Disadvantaged Customers. The 2023 partnership with the Houston Housing and Community Development Department for high-efficiency installations is a good start. We look forward to engaging with HPW on piloting the Plumbing Assistance for Economically Disadvantaged Customers program in addressing substantial repairs. Additionally, assistance for repairs like private sewer laterals can significantly impact water conservation and affordability for economically disadvantaged residents. BMP 7.5 - The Native Plants Programs are a positive step, but we recommend the city to invest in more green infrastructure projects to better incentivise water conservation. Green infrastructure projects can support city water conservation efforts through: Stormwater management: green elements capture and absorb rainwater and reduce the amount that enters the sewer system, alleviating pressure on the wastewater treatment plants and reducing the need for additional water treatment capacity. Improved water quality: green infrastructure can filter pollutants from stormwater runoff, reducing the amount of treatment required to make water safe for drinking. Reduced water demand: green infrastructure can create more sustainable environments that require less water; native plants require less irrigation than non-native species. Increased public awareness about water conservation and the importance of sustainable water management, therefore fostering a sense of stewardship and encourages consumers to adopt water saving practices	Thank you for your feedback. We will explore additional opportunities to incorporate these sustainable practices and look forward to fostering broader public awareness of water conservation efforts.

ID	Organization	Comment	City of Houston Response
201	Bayou City Waterkeeper	(Section 6.1.2) Financial considerations - We recommend including a brief discussion of how conservation efforts might impact water rates and how the city plans to balance conservation with revenue needs and supply costs. (Section 5.2) Reporting and public transparency - To enhance reporting and public transparency, we recommend creating a public dashboard to track key metrics such as GPCD, water loss, and progress on implementing BMPs. This would help increase public engagement and accountability in water conservation efforts. (Section 6.1.5; 6.4) Education and Public Awareness - We recommend expanding education and public awareness efforts by partnering with community-based and water-focused organizations like Bayou City Waterkeeper to develop and implement targeted outreach programs. These partnerships can leverage local knowledge and existing community relationships to enhance the effectiveness of water conservation and education efforts.	**Thank you for your feedback. Financial Considerations (Section 6.1.2):** We appreciate your suggestion to discuss how conservation efforts might influence water rates. Balancing conservation with the city's revenue needs and supply costs is essential, and we will explore how best to communicate this aspect in the plan. **Reporting and Public Transparency (Section 5.2):** We agree that enhancing public transparency is vital for fostering engagement and accountability in our water conservation initiatives. The idea of creating a public dashboard to track key metrics such as GPCD, water loss, and BMP implementation progress is excellent. We will work towards developing this tool to keep the community informed and involved. **Education and Public Awareness (Sections 6.1.5; 6.4)**: We recognize the importance of education and outreach in promoting water conservation. We encourage you to visit onewaterHouston.org to learn more about our long-term strategic planning efforts.You can participate in our survey, sign up for our newsletter, and join our future community workshop as we incorporate the community's feedback into our planning efforts.
202	Bayou City Waterkeeper	Integrating One Water Houston Plan - Given that the City is developing a One Water plan, we recommend including a section in the Water Conservation Plan that outlines how conservation efforts will align with and support the broader One Water approach. With this effort, Houston can achieve more sustainable and equitable water management practices, while also conserving water resources and protecting the environment. This integration would help ensure that the Water Conservation Plan is not operating in isolation but is part of a comprehensive, sustainable approach to water management in Houston. These efforts could include: identifying opportunities for water reuse across drinking water, wastewater, and stormwater systems; exploring how green infrastructure initiatives can contribute to both stormwater management and water conservation goals; discussing how conservation efforts can be integrated with flood mitigation strategies; and, enhancing cross-departmental collaboration to ensure that water conservation is considered in all aspects of city planning and management. One Water planning can bolster the existing community involvement and educational campaigns to support water conservation (6.1.5; 6.4). Meaningfully involving citizens in the One Water planning process can foster a sense of ownership and responsibility for water resources. This can lead to public support for water conservation measures while raising awareness about the importance of water quality and benefits of sustainable water management practices.	Thank you for your feedback and suggestions. We aim to strengthen our educational campaigns to raise awareness about the importance of water quality and sustainable management practices. We will incorporate all suggestions in our planning efforts.
203	Bayou City Waterkeeper	We believe these recommendations will strengthen Houston's Water Conservation Plan and help address the significant water challenges facing our city. We look forward to continued engagement with Houston Public Works on these critical issues. Sincerely,	Thank you for your feedback. We look forward to our continued partnership and building towards a more resilient Houston water system.

ID	Organization	Comment	City of Houston Response
204		Is use of grey water still not allowed? I read up on it years ago but realized that Houston did not allow it. I understand the risks because people just do and ignore critical thinking. If we make education important and make accessibility to everyone, I think this could help. Reuse, Recycle, and all that right? I also love the rain barrel program we have! I tell everyone, but... a huge part of our community is in apartments. My friends would love to have one but do not have the space. I wonder if there are better types for people or communities with limited space? How about putting regulations on developers to use more native plants or materials that don't need as much water? Y'all know lawns are just useless for most of us and suck up so much water... I know they build without forethought and leave the problems up to the city and people later, while they rake in BILLIONS, why not put that burden on them when they do it to us? I think putting back in natural habitats might help the entire ecosystem (instead of stupid faux fountains?) I'm honestly kinda guessing here.. I read up things ages ago but haven't checked back on the subject. But, seeing things like reforestation projects in desert Africa and the area becoming more green makes you think, heal the land as a whole and the rest will be easier to mitigate makes sense. Hope throwing out these ideas spark something helpful!	Thank you for your feedback and suggestions. We are working on ways to promote sustainable practices that benefit the environment and reduce water consumption with native plants within our community. We recognize the potential benefits of greywater reuse and continue to evaluate our policies. Education and community outreach are essential to ensure safe practices. We encourage you to visit onewaterHouston.org to learn more about our long-term strategic planning efforts.
205	Private/ Corporation	In an effort to reduce the consumption of our pressure recourse water eminence amount of city water can be conserved by lifting the ban on personals wells for long irrigation. This would reduce the demented of drinkable water expend by the city. This would put the expense of the homeowner/ business. This would conserved drinkable water.	Thank you for your feedback. We are committed to finding a balance between the needs of homeowners and businesses with the preservation of our community's water resources.
206	N/A	The process by which water leaks reported by the public are addressed is wholly inadequate. To cite a personal example, I reported a leak in my neighborhood to 311, and I know for a fact that it was not addressed for over 6 months. Checking the 311 system, I found my initial report closed with no action taken. I even made follow up reports with 311, only to have them also closed with no action taken. For over 6 months, I observed water flowing from a broken valve cover into the adjacent drainage ditch. How many thousands of gallons were wasted? If the repair could not be addressed due to lack of resources or because there were other, more severe leaks that took precedence, I can understand, but at the very least, the 311 case should have been closed with a note stating this. Further, I think that increased transparency regarding infrastructure maintenance should be required. Perhaps a quarterly report showing the amount of money allocated in the annual budget, the amount of money actually used on maintenance, and the number of repairs performed.	Thank you for your feedback. We are working with 311 to improve our how we address calls for water leak repairs. Houston Public Works (HPW) is in the process of creating a leak dashboard that will help to improve communication and trust with the community. We recognize the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
207		I would suggest Smart meters that would provide notifications of high water usage online. This would allow users to correct issues quicker.	Thank you for your feedback. The city is replacing remote reading devices (RRD) as part of the mayor's Water Bill Improvement Plan. These upgraded devices will include smart meters to help customers track their water usage and set up high-usage alerts. Learn more at improvewaterbills.org.
208		Wash at night, with cold water, different days to water lawn , use rain tubs, use air conditioner water for plants, Thank you, GOD bless.	Thank you for your feedback and for recognizing great ways to conserve water!

ID	Organization	Comment	City of Houston Response
209		Seeing as how the city of Houston 'lost' BILLIONS of gallons of water this year due to our failing infrastructure, I would say we'd need to start there moving forward. Understanding that we're not just paying for water, I don't mind that our water bill up over time. In 1992 my water bill was around 20.00.....we're now around 50.00, with '"empty nest". Certainly not complaining, just want to see our money at work for the good of our whole community. My husband & I do our best to conserve, reuse, and recycle. Thank you	Thank you for your feedback. Houston Public Works (HPW) is in the process of creating a leak dashboard that will help to improve communication and trust with the community. We recognize the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
210	Resident	Drought Contingency Plan: - Runoff should be defined in Definitions. - Stage II descriptions of "runoff" are inconsistent - "Any outdoor water use resulting in water leaving the customer's property ... is unlawful" - "Excessive irrigation or uncorrected leaks that result in City water leaving the customer's property ... is unlawful" Which one is it? Zero runoff for outdoor water use is impractical. In general, "Except for Water Used for Commercial Production" is not well defined for Stage III. Just reducing by 10% does not take into account whether the total usage (necessary or unnecessary) can be easily reduced or may be very difficult to reduce depending on the business operations. Has Houston EVER been in a Stage III or Stage IV? I don't recall ever being in this situation since moving here in 1990. I would recommend limiting the current Plan to Stages I and II only. I would like to see all Stages beyond Stage I be required to go to a public vote for approval to initiate. I would also like to see that Stage II, III or IV designations automatically expire after a reasonable period (e.g., 12 months) where voter approval is required to extend. On another note, Houston should invest in desalination. Most of Texas will be short on water going forward. Desalination done properly, in consideration of the saltwater estuaries, etc. would prevent Houston from likely ever reaching Stages III or IV, and investments in desalination facilities and distribution could be recouped through sale of water to drought areas.	Thank you for your feedback. We will include a clear definition of "runoff" in the document to eliminate any confusion. We will clarify inconsistencies in Stage Two descriptions to ensure a consistent message. It is important to be prepared for potential Stage Three or Stage Four scenarios. We encourage you to visit onewaterHouston.org to see our long-term strategic planning efforts. There you can participate in our survey, sign up for our newsletter, and join our future community workshops.
	resident	Water-loss improvement goals seem too low. When Water Loss is 22% of 'usage,' it seems tackling this should be the very first conservation measure. For instance, leak repairs need to be made faster: 4,000 leaks repaired in a year is about 11/day every day - I think we need more capable crews - perhaps doubling whatever the current number of qualified repair crews might be - this will save water, money, and the cost of street repairs that are necessary after erosion caused by the leak.	Thank you for your feedback and suggestions. Houston Public Works (HPW) is in the process of creating a leak dashboard that will help to improve communication and trust with the community. We recognize the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
212	Sierra Club	I wish to make the following comment. Conservation needs to begin with human population reduction. The planet is overpopulated. City sizes need to be reduced as well. Our cities like Houston, Texas are truly insupportable.	Thank you for your feedback.

ID	Organization	Comment	City of Houston Response
213		I would like to see an emphasis in using more responsible service repair contractors who are competent in all public water issues. My community has experienced work orders being filed as completed when the work has not been done. Sometimes it has taken daily calls for weeks to get a follow-up to show up and finish the job. May I suggest that one contractor be responsible for a job from start to completion, and show proof with pictures. Instead of how it often happens, that a second and even third crew shows up to continue the job never bothering to alert us of what is being done nor warning us when water may be cut off. In such multiple cases, does each contractor bill the City separately? That might be where a lot of the $$$ waste is happening? Just throwing in ideas...Thanks for the opportunity.	Thank you for your feedback and suggestions. Houston Public Works(HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
214		I'm glad to be able to comment. As an educator, I was thinking about an official coming into the school to explain I'm glad to be able to comment. As an educator, I was thinking about an official coming into the school to explain water conservation the importance and affects of water conservation to the students. I see from your table 3-1 That an education program is in effect. Also, I saw that an incentive program for avoiding water-waste in our homes is in place but I didn't know about it. Perhaps you can add a memo about it on our bills that you send every month. I would be happy to save a little each month by using water in large appliances between certain hours, for example.	Thank you for your feedback and suggestions. We are happy to provide a presentation to schools on water conservation. Please reach out to our team by emailing waterconservation@houstontx.gov.
215	Home owner	I am very concern that this will cause a problem in my neighborhood.. I have witness one of my toilet unable to flush after every heavy rain fall.. I believe this is intentional. The iss added water concern will be a larger problem.	Thank you for your feedback. A malfunctioning toilet after heavy rainfall can indicate underlying drainage or infrastructure issues on the private side of the meter. Has a plumber been to your home to inspect these concerns?
216	private homeowner	Most of the water conservation ideas presented are good ideas but nearly all of them require the voluntary cooperation of residents. Furthermore, it's not clear how many of these can be implemented effectively in multi-family residences. What is really disappointing to me is that there is no discussion or planning to add water storage or refinement capacity. Water is the lifeblood of Houston. Let's work on the supply and demand side of the issue.	Thank you for your feedback. We will consider your suggestions as we continue to develop our water conservation strategies.
217	Homeowner	If your repair department would just fix a water leak on Hurst Street, that has been continually leaking thousands of galloons of water daily for over 3 years into the bayou drainage culvert at the corner of Hurst St & Shirkmere Rd, 77008 we might not need to conserve as much water as you think. This is only one example of the water waisted by Houston Public Works not prioritizing leaking infrastructure that should be fixed before mandating other water conservation efforts.	Thank you for your feedback. Please reach out to 311 at 311@houstontx.gov and provide details on the leak. We are happy to investigate the location and fix the issue.
218		Fix all the broken water lines and pipes owed by the city.	Thank you for your feedback. Houston Public Works(HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
219	Resident of Harris County	What is the point of a water conservation when your organization does not fix busted water lines and pipes in a timely manner? On the Bellaire Blvd from beltway 8 to Hwy 6 there have been instance of 3 areas of busted pipes that have not been fixed for months at a time during peak drought conditions. Do not ask residents to conserve water when the equivalent of millions of gallons are wasted due to the cities poor leadership and ineptitude. Stop wasting our tax dollars and actually use it to employ workers to actually fix our failing infrastructure.	Thank you for your feedback and suggestions. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community. Please remember to report water leaks to 311 by phone or by email 311@houstontx.gov so our crews can investigate and repair.

ID	Organization	Comment	City of Houston Response
220	The Universe	This is very peculiar for over 54 years we never had a drought. I have heard of the state of California having droughts but not Texas. The planet has more water than land so please make this make sense. Please don't mess with Texas with these lies and weird inflation for housing food gas utilities.	Thank you for your feedback.
221		I support clean water for our city. The cost has increased, for my household over the last couple years. I'm okay with the increase to have access to clean water, but there should be a cap. Too many increases can cause a financial strain for many Houstonians.	Thank you for your feedback. Balancing the need for infrastructure improvements and water quality with affordability is a priority for us.
222	Retired homeowner	I truly appreciate that you are soliciting comments. However, the draft plan is 107 pages long and, while it is well laid out, it is difficult for a "common" person to get through it, digest it, and then make meaningful and insightful comments. Plus, experience has shown me that my opinion doesn't really count. Officals listen politely and then do whatever they were going to do in the first place. With that said, I actually printed the whole thing and will refer to it in the future to see if anything changes. I hope so. Water is kinda important.	Thank you for your feedback. We will create a simplified version of the plan that outlines the key points in a clear and accessible format for the community.
223	KBL Complete Services	KBL Complete Services has devised a program to divert and filter water lost when flushing fire hydrants and water lines. By connecting a temporary line to the existing waterline (s), we divert the water through mobile filtration units and back into the line to ensure zero water loss. As we clean the lines, the filtration system captures debris, ensuring that clean, filtered water returns to your system. We have other programs available as well to replace water line and hydrant flushing that we would love to discuss with you.	Thank you for your feedback. We will consider your suggestions as we continue to develop our water conservation strategies.
224	Retired professional engineer and former DPW	1. Notice of this opportunity was not received until September 11, with a response date of September 11! 2. The second largest loss of water is leaks in the distribution system (22%). Much of this occurs because leaks are not repaired in a timely manner and the loss continues. Quick temporary repairs would reduce this loss significantly. A typical scenario would include up to date as built's to identify valves, turning off the nearest upstream valve as soon as a leak is reported, clearing the leak area to find the leak, and making temporary repairs. In most cases this can be done by the use of a "saddle". This is a fixture that usually consists of two halves fastened together around the leak area. The inside diameter of the joined halves is the same as the outside diameter of the leaking line. Although not usually used as a permanent repair, they have been when replacement pipe was no longer available. Rapid temporary repairs will save millions of gallons lost in unrepaired leaks.	Thank you for your comment. The draft report was uploaded to our website on August 28, 2024, with the first email sent to our water customers to comment on the plan on the same day. The second notification went out on September 10, 2024. We understand many customers may not have received the notifications. Please email waterconservation@houstontx.gov to ensure you are receiving these emails. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
225	retired school teacher	Thanks for all you do to keep the water on!!!	Thank you for your feedback. We appreciate your support and recognition of our efforts to ensure a reliable water supply for our community.

ID	Organization	Comment	City of Houston Response
226	Texas PACE Authority	The Texas PACE Authority (TPA) applauds HPW's Water Conservation Plan for its detailed roadmap of how the City's own operations as well as the community's efforts can provide water resources for a fast growing and economically robust city well into the future. We especially appreciate HPW's explicit mention of Houston PACE program. We welcome this opportunity to refine and clarify the following sections. Section 6.1.5 Education and Public Awareness BMPs (commencing on page 27) In the discussion of BMP 6.3, regarding effective education and outreach, consider mentioning the importance of also educating customers about options for financing water conservation measures, including the City's PACE program. In the discussion of BMP 6.4, regarding partnerships with nonprofits, consider mentioning the City's partnership with the Texas PACE Authority on page 27. Specifically, HPW can add the need for ICI, nonprofit, and multi-family customers to learn about PACE financing of their water conservation measures. Then later on page 32, where HPW lists its existing nonprofit partnerships, the Plan can summarize TPA's contribution as follows: Texas PACE Authority The Texas PACE Authority (TPA) is a nonprofit focused on administering PACE programs for 102 local governments, including the City of Houston. Thus far, TPA has helped Houston ICI, nonprofit, and multi-family customers finance over $34.8 million in energy and water conservation, and distributed generation projects in Houston, and $500 million statewide. TPA conducts outreach in-person, with webinars, and with flyers and case studies in English and Spanish, and has online training for service providers. TPA is one of the eight PACE administrators in the nation who are approved by the U.S. Department of Housing and Urban Development (HUD) to use PACE financing on HUD projects. TPA works with property owners, lenders, service providers, and local governments to bring energy and water savings to large and small businesses and nonprofits.	Thank you for your feedback. We appreciate the Texas PACE Authority's engagement in this process and your suggestions for enhancing our plan. We encourage you to visit onewaterHouston.org to learn more about our long-term strategic planning efforts for sustainable water management. Please participate in our survey, sign up for our newsletter and join our future community workshop.
226	Texas PACE Authority CONTINUED	Section 7.1 Property Assessed Clean Energy (PACE) Program (BMP 7.1) TPA was thrilled to see PACE included as its own BMP on page 34. Indeed, its one of the few BMPs mentioned that offer a means of financing water conservation measures. Please consider rewriting this section as follows (if HPW would prefer a redline version, please share an email and we can provide one): Houston's commercial Property Assessed Clean Energy (PACE) program provides an additional tool for Houston property owners to finance energy efficiency, distributed generation, and water conservation projects. The State of Texas authorized municipal and county PACE Programs in 2013. Houston City Council adopted an ordinance establishing a Houston PACE program on November 4, 2015, that includes Houston's extraterritorial jurisdiction (ETJ). As of August 27, 2024, PACE programs are available in 53 Texas counties and 49 Texas cities, representing 75% of the Texas population. PACE is a nationally renowned, voluntary public-private financing program that allows owners of commercial, industrial, nonprofit, and multi-family residential properties (with five or more dwelling units) to obtain low-cost, long-term loans for water conservation, energy-efficiency improvements, and distributed generation. This is achieved at no cost to taxpayers. The Texas PACE Act mandates that an assessment not exceed the useful life of the improvements installed. This makes PACE a positive cash flow option. In exchange for funds provided by a private lender to pay for the improvements, the property owner voluntarily requests that the City of Houston place an assessment secured with a senior lien on the property until the assessment is paid in full. Thus far, Houston's PACE program has seen $34.8 million loaned for ten projects that have realized a total of over 28 million gallons of water saved per year. Read more about Houston's PACE program here: https://www.texaspaceauthority.org/houston-pac	

ID	Organization	Comment	City of Houston Response
227	personal homeowner	The OBVIOUS problem is water leakage and the CORRUPTION OF THE HOUSTON WATER DEPARTMENT. Why don't you clean up that before you PUNISH the taxpayer with the ridiculous cost of water!!! In Kingwood our bill is $400 per month when someone with a similar home and yard is $100 in the Woodlands. Houston is corrupt! You should all be embarrassed and ashamed of yourself. But of course you are not because You are the corruption!	Thank you for your feedback. We are working to restore the public's trust and eliminate corruption within the department and any contractors working for the city. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
228	Homeowner	The plan looks very good and our family definitely conserves the use of water. Somehow more time, effort and money should be invested into reducing the huge amount of water that was lost due to broken pipes during 2023 (32 billion gallons according to the news). In our opinion, this should be the highest priority goal along with everyone trying to reduce their use of water. Sincerely, John and Beronica	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
229	N/A	The City of Houston seems to going in the right direction re: conservation, recycling, & reuse. The repair/replacement of broken city water pipes needs to be MUCH MORE aggressive than it has been in recent years. I applaud the climate change oriented plans, and request continued, on-going progress along this continuum, regardless of political and/or corporate pressure to creep backwards.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
230		Houston does not seem to have a water/rainfall issue. Mainly, it has a storage issue. From the data that I was able to see online, even in the 2011 drought Lake Houston had a minimal drawdown. In reality, my guess is that Lake Houston quite often has controlled discharges due to an over abundance of water. The Houston area needs a deeper, larger reservoir located in the west or southwestern part of the county that can take overflow water from the Addicks Reservoir and act as an additional source of fresh water for the surrounding area as growth occurs; not to mention the side benefit of allowing for an alternate flow of drainage water where now rainwaters main exit from the west and northwest is right through the middle of the city on the Buffalo Bayou. Common sense would seem to call for a solution to divert and capture a large percentage of the millions of gallons of water that are wasted as it flows down our bayou systems to the ocean. Thank you.	Thank you for your feedback. You raise an important issue on how to effectively manage our water resources. We encourage you to visit onewaterHouston.org to participate in our survey. The website gives more insight on our long-term planning goals.
231	Citizen	I think there should be an automatic fund for W. A.T.E.R to help our seniors. The plan to balance our billing is fine as long as it is truly accurate. I also feel that we need to hire people and open up more customer service centers, because not having any face to face interaction with customers, it has been extremely difficult to dispute the aggravated customer abuse when we have been overcharged. Having the plan fix the way our usage is measured needs to have better checks and balances to ensure accuracy.	Thank you for your feedback. We are looking for ways to grow our W.A.T.E.R. fund. We've expanded our customer service to include in-person and virtual appointments for water customers. Please visit improvewaterbills.org to schedule an appointment.

ID	Organization	Comment	City of Houston Response
232		A number of years ago, following a vote of the people in the Conservation District, water rates spiked on the back of the stated goal of preventing floods such as those created by Hurricane Harvey. In addition to the rate spike, a provision was approved that created a surcharge for properties that had too much impervious surface. In my case, I was deemed by satellite photography to have a home lot that met the criteria for too much impervious surface. This determination raised my monthly bill by approximately $12. I filed a protest in accordance with Houston Water rules under the premise that my wooden deck was not impervious and that with the re-classification of said deck my home lot did not meet the excessively impervious threshold. Houston Water never responded to my protest. Approximately six years later I filed another protest with Houston Water identical to the first. Houston Water agreed this time that my home lot did not meet the threshold. However, my monthly bill has not changed and remains at the level it has been since the rate first spiked up. When dealing with an organization that cannot review a protest under their own rules and then will not adjust rates when they self-determine a rate adjustment should take place cannot be trusted to honestly address the technical comments I have to this Conservation Plan. Even though I am a degreed Civil Engineer in water resource management I will not provide comments on this Plan. It is not my loss since there is no evidence the District can address what they request - a properly filed protest - and have appropriately filed, such as this public comment.	Thank you for your feedback. Please reach out to our team by emailing waterconservation@houstontx.gov to address any issues you face with your account.
233	Community member	As an educator in Houston, I see the plan has many learning opportunities for schools and educators but I have never been made aware of any of these programs or opportunities to learn more about water conservation. HPW should make teachers aware of field trip opportunities and provide resources and activities to raise more awareness about water conservation.	Thank you for your feedback. Raising awareness among students is crucial for fostering a culture of conservation in our community. Educators can request a presentation by emailing our team at waterconservation@houstontx.gov. We continue to explore the options of water treatment plant field trips. We haven't had the staff to coordinate this effort in the past.
234		It is a good strategy for everyone .	Thank you for your feedback.
235	None - Houston resident	In efforts to improve our City, I have attempted to report numerous water leaks through the city. Many times successful, but this time not. I've reported a very large leak for over 5 months and no one has even looked at it. The location is 2300 block of Holcombe / at the Morningside intersection. The 311 operator insists on a building number, but I tell them that it's in an intersection. The address provided is as close as anyone can get as to where the issue has been. Please send someone to fix so Houston can continue to conserve water. Thank you!	Thank you for reporting this leak. Do you mind sending us the service request number so our team can investigate why there is a delay in the repairs? You can email us at waterconservation@houstontx.gov. Thank you.
236	Home owner	The problem starts government community development: poor or no government infrastructure planning to meet demand; developers irresponsibility without any consequences resulting in the community paying for the irresponsibility of government and the greed of developers.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.

ID	Organization	Comment	City of Houston Response
237	West Street Recovery	West Street Recovery is a community based disaster recovery and environmental justice organization that works in Northeast Houston. We believe that the City of Houston Water Conservation plan is a good step towards water conservation and equity. However, we urge the city of Houston to reckon with the deep infrastructural injustice that shapes lives in Northeast Houston. The City should ensure that communities who have historically received the least investment are prioritized and that the lived experience of the most vulnerable residents is given appropriate weight in making decisions. WSR supports all of the water conservation approaches in the plan, especially the distribution of low flow appliances and water barrels. It is important that residents benefit from this plan and those are two approaches that will ensure that this is the case. On the other hand, people in NE Houston do not trust the water quality and any conservation plan should try to address this. Despite constant reassurance almost no one in NE Houston drinks the tap water. It is regularly discolored and smells like eggs or sewage often. No amount of public statements can counter the stench of tap water. The water conservation plan takes some steps to address this. It is clear that fewer leaks will improve pressure and higher pressure water is less likely to sit and become odiferous. People with bad water pay for it twice. They are forced to buy it from the city and then they buy it on the private market as well. Water conservation will reduce the long term cost, but the city must ensure that it doesn't also increase the short term cost for the poorest residents. It is critical that the city does work to address leaks when water can get out of a pipe, it can also get into it, especially during heavy rains that are increasingly common. It is critical that the city communicates this benefit of the plan to the communities who rightly do not trust city infrastructure. The plan fails to explain how the improvements will be paid for. The city of Houston already diverts tens of millions of dollars away from drainage infrastructure each year. This has been found by judges and the city has failed to acknowledge it, let alone provide a remedy. This plan will certainly cost	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community. The goal of One Water is to provide more water equity across Houston.
238	citizen	First, the city of houston needs to fix the sewer problem. Myself and a few of my neighbors keep on having to make a report to the city of the sewer problem on our street and nothing is getting fixed. We keep make multiple reports and the city keeps coming out but they just take pictures . I do not see them repairing the actual leak.	Thank you for your feedback. Please continue to report any issues you encounter so our team can investigate and make any needed repairs. Thank you for your patience.
239	residence	Every month our water bill is more than electrictal bill, seeming it's unblevible. We water yard some time. how to cut down the bill?	Thank you for your feedback. Some tips to help reduce your water bill: Check to make sure your home is using low-flow faucets, showerheads and toilets, water your yard in the early morning or late evenings, check around the house for leaks and wash only full loads of laundry. Please reach out to our customer service team with any specific issues related to your account by calling 713-371-1400 or emailing customer.service@houstontx.gov.
240	Self	I find it completely disrespectful, you e-mail this Plan comment form less than one day before it is closed. You offer no opportunity for any regular citizen who works for a living, the time to review it and offer any comment. I am certain it is listed/shown somewhere in public record, but I heard nothing of it on any local news outlet or publication. I wonder if your omission is intentional or maybe just incompetent. Either way it appears to me COH Public Works really isn't interested in community dialog or feedback at all.	Thank you for your feedback. The draft report was uploaded to our website on August 28, 2024, with an email going to customers to help comment on the plan that same day. A second reminder email was sent out on September 10, 2024. We apologize if you didn't receive the first email. Please reach out to our team by emailing waterconservation@houstontx.gov to ensure you are on our distribution list.

ID	Organization	Comment	City of Houston Response
241		Fix the pipes!! Stop wasting water with broken pipes. Do maintenance regularly! Prosecute all the employees and other thieves stealing taxpayer money.	Thank you for your feedback. We are working to restore the public's trust and eliminate corruption within the department and any contractors working for the city. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
242	Resident	Please note this conservation form , though having good intentions, is likely under-performing in terms of the demands vs supply. Why? 1. Rate of growth of Houston population is only consider 1.26% , where as its close to 1.47% YOY, as per US census 2023 reports and 2024 projections. Hence would like the report makers to check the data presented in Appendix : Section I Utility Data ,page 76 to 79 of the document. Data is assumed and given by TWBD, HGAC and city of houston water infratructre planning. They could be short on assumptions based on the budget they are allocated to grow, however the conservation budget should be based on the population rising in houston based on US census and other agencies. https://www.macrotrends.net/global-metrics/cities/23014/houston/population#google_vignette 2. Wastewater credits to 6.1.6 Rebate, Retrofit, and Incentive Programs BMPs, Industrial, Commercial, and Institutional (ICI) Building Assessments (BMP 7.1), if they have waster water treatment facilities in their properties, before getting out of their usage. 3. Rain Barrel Program (BMP 8.2) - Increase the frequecny twice - thrice in year to resident with connections. Award discount to Gutter installation companies/contractors for purchase of rain barrel and irrigation, throughout the year. 4. Provide credits annually to residents for not using sprinklers/landscape watering, and trying to use only rain water harvesting. Should be addition to Residential Landscape Irrigation Evaluations (BMP 5.5). 5. (Future)Please include other water leakage and loss indexs other than ILI in the conservation plan for future. 6. (future)Please include re-usage of non-portable water in all government/ Texas usage bodies. Include strong rain water harvesting and usage in the Government and road watering/irrigation systems. 7. (Future) All man-made lakes, new development communities with high water usage to start with reservoir systems and year long non-portable water distribution systems. To support irrigation during peak seasons. Thank you for giving a chance to comment on the draft plan.	Thank you for your feedback and suggestions. We appreciate your engagement and the opportunity to enhance our approach to water conservation in Houston. The population projections are in line with the Regional Water Supply Plan and population projections therein. The 0.21% difference in the 2030 population projection represents a difference of 5,876 people. The 2020 National Census had a standard error of 0.24%. We will review the data presented in the Appendix and ensure that our data aligns with the most current statistics from the U.S. Census Bureau. We will explore how wastewater credits can be integrated into BMP 6.1.6 and BMP 7.1 in the future. Houston Public Works partners with council districts and nonprofits throughout the year for rain barrel sales. We will consider ways to make these additional programs accessible to our customers. We are currently working on a leak dashboard so we can be transparent with customers on how many leaks are in our system and the timeline for their restoration.
243	Urban Harvest, Inc.	In review of the plans and consideration to 80% of surface water is run off in urban areas versus 20% in rural areas, no consideration or strategies are offered to home owners in retaining and capturing water through rain gardens, native wetland plants, and swales or divets incorporated in design and strategies for Houston residents. This component of earthworks and strategy of capturing runoff will recharge help in recharging the water table, requiring less watering. These small and slow changes that private home owners can implement through added education can have a big effect in total.	Thank you for your feedback. We plan to incorporate everyone's suggestions into our planning efforts.
244	private citizen	why do you let us the consumers pay for all the expansion programs improvements.do you not tap to other resourses,private entities.we pay already so much tax.I am working hard.	Thank you for your feedback. Houston Public Works is committed to exploring alterantive funding souces to keep water rates low. Balancing the needs of our community with sustainable funding solutions is a top priority.

ID	Organization	Comment	City of Houston Response
245	home owner	The introduction to the draft plan talks about water being a limited and precious resource. The study then says that currently 22% of water is lost, approximately the same percentages as consumed by residential users users. Projections for reduction in losses are shown to be relatively modest over the coming years. It would seem to me that much more emphasis should be placed on reducing losses than is included in the plans. As I recall the text of the plan it says something like the loss rate is typical for areas where water supply is plentiful and low cost. Why the difference in philosophy form introduction to loss rate classification? It would seem to me that the district and the people of Houston would be better served by assuming that water is not cheap and plentiful and planning and implementing measures to reduce water loss accordingly. It also appears to me that almost all of the noted conservation measures fall directly on the consumer rather than on the district. Isn't reduction in loss a form of conservation? Since system losses are shown to be one of the largest use categories if water losses were cut in half, say to 11%. the benefits to Houston and the people would be the greatest benefit of the program. I suggest that much more emphasis should be placed on reduction o system losses.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
246		Less water usage	Thank you for your feedback.
247	private citizen via Conservation Inbox	Plan does not adequately address how the City is going to solve the water leak problem in the distribution system. The system leaks millions upon millions of gallons of water per year. The Conservation plan brings scant attention to this problem or what is going to be done to correct the system leaks and the failyure to promptly repair leaks. There is only vague language in report indicating that the City will try to do better and be more responsive. Improvement goals are expressed as as small percentage goals of improvement over years long time periods. There are no specifics about what action the City will take to reduce this problem. Water leaks may be the biggest waste facing or water system. The report provides only a few paragraphs on this most critical item. What is written is weak. The plan has no reasonable measurable goals, nor any assigned responsibilities or budgets. Address this most obvious problems with an action plan.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
248	private citizen via Conservation Inbox	Good morning.. I truly appreciate your support and understanding of saving our precious water throughout the year.. It's not the lack of rain that causes water shortages.. No 1 . Large busted pipes throughout the city of Houston, don't get repaired in a timely manner. They usually leak for days, even weeks. I know because I see them, since I drive all day long!! Precious water flowing away the drain pipes...No 2.. Citizens don't fix there small toilet or pipe leaks. Constantly small leaks being wasted.. No 3..Rain barrel should be more affordable for low income families.. taught to save there rain water or ac dripping water for future use.. Just my opinion. Thank you for reaching out to me.	Thank you for your feedback and suggestions. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
249	private citizen via Conservation Inbox	I might have missed it, but I did not see anything about a gray water program. Is that something the city supports? I've read that it's pretty beneficial in other cities. Thank you for the work you're doing!	Thank you for your feedback. We are looking at graywater reuse as an option alongside rainwater harvesting and condensate reuse. We appreciate your ideas on alternative water sources and the potential for technological upgrades in water treatment.
250	private citizen via Conservation Inbox	So you put this out late on September 10 asking for comments that close September 11. Hardly enough time to review and comment therefore I can only surmise that you don't want public comments to your plans!	Thank you for your feedback. The draft report was uploaded to our website on August 28, 2024, with an email going to customers to help comment on the plan that same day. A second reminder email was sent out on September 10, 2024. We apologize if you didn't receive the first email. Please reach out to our team by emailing waterconservation@houstontx.gov to ensure you are on our distribution list.
251	private citizen via Conservation Inbox	Hello, I am a citizen of Houston and I do not agree with mandatory restrictions or actions deemed a violation.	Thank you for your feedback.

ID	Organization	Comment	City of Houston Response
252	private citizen via Conservation Inbox	I work with a Catholic religious order that has missionaries throughout sub-Saharan Africa. Among other responses to the needy, we assist these missionaries in providing funds for rainwater catchment systems for schools and other structures in the communities in which they live. In these locations rainwater is scarce, precious, and provides life! I am originally from Seattle, have lived in many locations in this country, and none of them compare to Houston for annual rainfall. In the 32 + years I have lived here I have been unaware of any program that requires focuses on the issue of recovering and storing rainwater, other than offering a discount on rain barrels. How do you intend to bring this issue to the forefront in your planning?	Thank you for your feedback. We are evaluating options of rainwater storage.
253	private citizen via Conservation Inbox	Next up will be monthly fees for residential trash pickup and recycling in the city of Houston , cost and program to be announced. The compost and water containers do not work for many without yards.	Thank you for your feedback.
254	private citizen via Conservation Inbox	My suggestion is beyond personal things we can do and ventures into the realm of legislation. Don't take the easy way out, ie put it back on the shoulders of citizens.	Thank you for your feedback.
255	private citizen via Conservation Inbox	I am in full agreement with water conservation, my question to the Public Works Department is what you are doing to fix and repair broken water mains in a timely manner. I seem to recall that the city lost over 9 Billion gallons of water in 2023. It is one thing to push the citizens to conserve water now the city needs to step up and do it's part!	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.
256	private citizen via Conservation Inbox	From a homeowner's perspective I would like to submit a simple approach to water conservation as it specifically applies to homes. We need the assistance of government officials to work with HOA's to embrace a new approach to residential landscaping with an emphasis on native landscaping, hard landscaping, and less St Augustin grass as the main landscaping feature. It's very difficult for residents themselves to convince these different governing bodies to forget longstanding Deed Restrictions that have become obsolete. Join with other officials and work with HOA's!	Thank you for your feedback. We will work to improve our collaboration between Houston Public Works (HPW) and homeowners' associations (HOAs) to promote more sustainable landscaping practices.
257		You should have a curriculum in the schools to teach water conservation. It would be along the lines of the 1960s don't litter campaign, or Smokey the bear fighting fires	Thank you for your feedback. Raising awareness among students is crucial for fostering a culture of conservation in our community. Educators can request a presentation by emailing our team at waterconservation@houstontx.gov. We continue to explore the options of water treatment plant field trips. We haven't had the staff to coordinate this effort in the past.
258		Water Conservation, Thank you for the conservation tips, I am doing everyone of your ideas, except the toilet. Will correct that. My lawn is living proof that I hate to water the lawn, evaporation in this climate is a joke! Again , thank you, and keep getting those good ideas out there.	Thank you for your feedback and commitment to water conservation.
259		I am horrified about the amount of water which has been wasted due to leaks and problems which have been called into the Water Company in recent years by numerous people. These leaks were ignored for months on end, even though the utilities repairmen were in the area. The repairmen cited that they could not fix the leaks, even though they were a block away because they were forced to go across town to fix another leak and not return until months later. Many times, these leaks were due to improperly repaired structures done by utilities repairmen in the past few years. I think more attention should be made to this terrible loss of Houston water and the apparent inefficiencies in the system for repairs.	Thank you for your feedback. Houston Public Works (HPW) recognizes the importance of investing in improving our infrastructure. HPW is actively working to reduce water loss through various measures, including upgrading infrastructure, enhancing leak detection and repair processes, and improving system management. Our goal is to minimize water loss as much as possible while also promoting conservation practices across the community.