

# EXHIBIT A

## UTILITY PROFILE & WATER CONSERVATION PLAN

FOR MUNICIPAL AND WHOLESALE WATER USE

**May 1, 2024**

**Water Utility Services**  
City of Waco, Texas

**PWS# TX155008**



**CITY OF WACO WATER CONSERVATION PLAN FOR MUNICIPAL & WHOLESALE WATER USE**

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## **1. INTRODUCTION AND OBJECTIVES**

Water supply has always been a key issue in the development of Texas. In recent years, the increasing population and economic development of Central Texas have led to growing demands for water supplies. At the same time, local and less expensive sources of water supply are largely already developed. Additional supplies to meet future demands will be expensive and difficult to secure. Severe drought conditions in the recent past have highlighted the importance of the efficient use of our existing supplies to make them last as long as possible. Extending current supplies will delay the need for new supplies, minimize the environmental impacts associated with developing new supplies, and delay the high cost of additional water supply development.

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 City of Waco has developed this Water Conservation Plan in accordance with TCEQ guidelines and requirements. This Water Conservation Plan replaces the previous plan dated April 2019.

The City of Waco also recognizes that, in order 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 the City of Waco's commitment to enhanced water conservation and efficiency strategies.

The objectives of this Water Conservation 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.
- To extend the life of current water supplies by reducing the rate of growth in demand.

The City's plan will achieve significant conservation savings to help extend the life of existing supplies without burdening the customer with unnecessary additional costs.

## **2. REGULATORY BASIS FOR WATER CONSERVATION PLAN**

### **2.1 TCEQ RULES GOVERNING CONSERVATION PLANS**

The 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 the purpose of 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.

## 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
- 288.2(a)(1)(B) – Record Management System – Section 12
- 288.2(a)(1)(C) – Specific, Quantified Goals – Section 5.3
- 288.2(a)(1)(D) – Accurate Metering – Section 14
- 288.2(a)(1)(E) – Universal Metering – Section 14
- 288.2(a)(1)(F) – Determination and Control of Water Loss – Section 15
- 288.2(a)(1)(G) – Public Education and Information Program – Section 9
- 288.2(a)(1)(H) – Non-Promotional Water Rate Structure – Section 18
- 288.2(a)(1)(I) – Reservoir System Operation Plan – Section 19
- 288.2(a)(1)(J) – Means of Implementation and Enforcement – Section 21
- 288.2(a)(1)(K) – Coordination with Regional Water Planning Groups – Section 10 and Section V
- 288.2(c) – Review and Update of Plan – Section 22
  - Conservation Additional Requirements (Population over 5,000) Section 11.6
  - 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 16
    - 288.2(a)(2)(B) – Requirement for Water Conservation Plans by Wholesale Customers – Section 2.3

## 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 Waco include the following:

- 288.2(a)(3)(A) – Conservation Oriented Water Rates –Section 18 and Conservation Rates in Drought Contingency and Emergency Water Management Plan
- 288.2(a)(3)(B) – Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures – Section 11.1 and Section 11.6
- 288.2(a)(3)(C) – Replacement of Retrofit of Water-Conserving Fixtures – Section 11.6
- 288.2(a)(3)(D) – Reuse and Recycling of Wastewater – Section 7
- 288.2(a)(3)(F) – Considerations for Landscape Water Management Regulations – Sections 11.2, 11.3, 11.4, Stage 1, 2, & 3 Responses, Section XI

In addition to being a public water supplier under TCEQ rules, the City of Waco also acts as a wholesale provider to twelve current and future wholesale customers and 2 water exchange customers; thus, the 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 Water Conservation Plan are listed below.

## **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 – Sections 4 & 22
- 288.5(1)(B) – Specific, Quantified Goals – Sections 4.16 & 11
- 288.5(1)(C) – Measure and Account for Water Diverted – Section 13
- 288.5(1)(D) – Monitoring and Record Management System – Section 12
- 288.5(1)(E) – Program of Metering and Leak Detection and Repair – Section 16
- 288.5(1)(F) – Requirement for Water Conservation Plans by Wholesale Customers – Section 2.3
- 288.5(1)(G) – Reservoir System Operation Plan – Section 19
- 288.5(1)(H) – Means of Implementation and Enforcement – Section 21
- 288.5(1)(I) – Documentation of Coordination with Regional Water Planning Groups – Section 10 & Section V
- 288.5(3) – Review and Update of Plan – Section 22
  - Additional Conservation Strategies for Wholesale Water Suppliers Section 5.2
  - 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 Waco include the following:
    - 288.5(2)(C) – Program for Reuse and/or Recycling – Section 7
    - 288.5(2)(D) – Other Measures - Section 9 (public education), and Sections 11.2, 11.3, 11.4, Stage 1, 2, & 3 Responses. Section XI (landscape water management measures)

## **2.2 GUIDANCE AND METHODOLOGY FOR REPORTING ON WATER CONSERVATION AND WATER USE**

In addition to TCEQ rules regarding water conservation, this Plan also incorporates elements of the Guidance and Methodology for Reporting on Water Conservation and Water Use developed by TWDB and TCEQ, in consultation with the Water Conservation Advisory Council (the “Guidance”). 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. The City of Waco has considered elements of the Guidance in preparation of this Plan.

## **2.3 TEXAS WATER DEVELOPMENT BOARD WATER CONSERVATION PLANNING TOOL**

The TWDB has developed a Municipal Water Conservation Planning Tool to be utilized 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. The tool was released on December 14, 2018, and was available for the development of this Water Conservation Plan. The City of Waco has utilized the tool in development of the per capita goals in this Plan and for comparing cost and savings. In addition, Waco encourages each of its Wholesale Customers to utilize the tool, to the extent practical, for water conservation planning.

### 3. DEFINITIONS

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

Accounts – All Single Family and all Non-Single Family Accounts, collectively

Aesthetic water use – Water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

Athletic Field - A developed recreation area that may contain a playground as well as fields for competitive sports such as baseball, softball, football, or soccer.

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

Conservation – 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.

Customer – Any person, company, or organization using water supplied by the City of Waco.

Domestic water use – water for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

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

Golf course - An area of land laid out for golf with a series of 9 or 18 holes each including tees, fairways, and putting greens and often one or more natural or artificial hazards.

Grey water – Wastewater without fecal contamination generated primarily in households or office buildings from sinks, showers, baths, washing machines or dishwashers. Wastewater from toilets is NOT grey water.

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

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

Mean Sea Level (MSL) – The level of the ocean’s surface, especially the level halfway between high and low tide, used as a standard in recognizing land elevation or sea depths.

Non-essential water use – Water uses that are neither essential nor required for the protection of public, health, safety, and welfare, including:

- Irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;



- Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane, or other vehicle;
- Use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard surface areas;
- Use of water to wash down buildings or surfaces for purposes other than immediate fire protection;
- Flushing gutters;
- Permitting water to run or accumulate in any gutter or street.
- Use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi type pools;
- Use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
- Failure to repair a controllable leak(s) with a reasonable period after having been given notice directing the repair of such leak(s); and
- Use of water from hydrants for construction purposes or any other purposes other than firefighting or system maintenance.

Non-Single Family Account – water service for any category besides a Single Family Residence, such as water service to Multi-Family Residence, Industrial, Commercial, Institutional, and/or Agricultural.

Odd numbered address – Street addresses, box numbers, or rural postal route number ending is 1, 3, 5, 7, or 9.

Single Family Residence – A house, or dwelling unit with 4 or less housing units used as a residence with one family housed in each unit.

Variance – Request for additional consideration to allow for more days to water based on new plants, or other circumstances.

Water shortage emergency – A condition in which the ordinary water demands and requirements of the City’s wholesale and retail customers cannot be met without resulting in insufficient water for human consumption, public health (sanitation), and fire protection. A water shortage emergency may be limited geographically or temporally.

#### **4. DESCRIPTION OF SERVICE AREA AND UTILITY PROFILE**

The City of Waco provides retail water and sewer service to approximately 145,000 people and wholesale water service to 12 wholesale and 2 water exchange customers listed below. Service through wholesale customers account for approximately 60,000 people. In total, Waco provides water directly or indirectly to 205,000 people in McLennan County. Figure 4.1 shows Waco’s retail water service area. Waco’s current wholesale customers include:

- |   |   |
|---|---|
| Bold Springs Water Supply Corporation   | City of West                                |
| Central Bosque Water Supply Corporation | City of Woodway (exchange)                  |
| City of Bellmead                        | FHLM Regional Water Supply Corporation      |
| City of Hewitt                          | Hilltop Water Supply Corporation            |
| City of Lacy Lakeview                   | Leroy Tours Gerald Water Supply Corporation |
| City of McGregor (exchange)             | Ross Water Supply Corporation               |
| City of Robinson                        | Texas State Technical College               |

Service area size was determined through Geographic Information System process to identify served areas. The historical and current served population is based on the City’s Planning Department’s estimate of the City’s population and the population of the wholesale customers’ service area. This estimate is updated annually and is derived from the United States Census Bureau. Projected population is estimated by using growth rate projections for total served water population in 2023 and forward. The same growth rate is applied to retail served water population and total served wastewater population.

Appendix A includes a map showing Waco’s water retail service area, wholesale service area, and Certificate of Convenience and Necessity (CCN) area.

#### 4.1 HISTORICAL POPULATION

Year	Historical Population Served by Retail Water Service	Historical Population Served by Wholesale Water Service	Historical Population Served by Wastewater Service
2019	137,995	56,650	137,995
2020	139,954	57,222	139,954
2021	141,941	57,794	141,941
2022	143,956	58,371	143,956
2023	145,999	60,000	145,999

#### Projected Populations

Year	Projected Population Served by Retail Water Service	Projected Population Served by Wholesale Water Service	Projected Population Served by Wastewater Service
2025	148,343	61,206	148,343
2030	155,908	64,326	155,908
2040	172,215	71,051	172,215
2050	190,226	78,971	190,226
2060	210,123	87,227	210,123

*Population and projected populations calculated using U.S. Census data and assuming 1% growth annually, which has been approximate growth for the previous 30 years.*

#### 4.2 WATER SUPPLY SOURCE

Water rights held by the City of Waco total 28,498,221,643 gallons. Of those gallons 90% of the water rights are in Lake Waco, 9% in the Brazos River and 1% in the Trinity Aquifer. The City of Waco has a water swap contract with the cities of McGregor and Woodway for an additional 365,000,000 gallons of water from Lake Belton.

Water Supply Source	Source Type	Total Gallons
Lake Waco	Surface	25,700,000,000
Brazos River	Surface	2,509,052,700
Trinity Aquifer	Ground	289,168,943

For more than 100 years, the City of Waco has been committed to providing clean, safe, reliable, high quality, sustainable, and affordable water to its customers. The City owns and operates three major surface water treatment plants (WTPs).

The Dissolved Air Flotation (DAF) plant was built to provide pretreatment to contain taste and odor issues. These issues are caused by the phosphorus loading in the North Bosque River from the dairies and waste application fields in the North Bosque River watershed that then deposit into Lake Waco. The DAF draws water from Lake Waco, removes the majority of the organics, and disinfects with Ozone prior to pumping the now clarified water to the Mt. Carmel and Riverside conventional treatment plants. The DAF has the capability to treat 90 million gallons a day (MGD) but the water must run through the two conventional treatments for filtration and final disinfection before it is delivered to the community.

As of 2024, the total treatment capacity is 84 million gallons per day (MGD) with water storage capacity of 43,100,000 gallons. The water system is comprised of over 1,150 miles of water mains and 6 major pressure planes (zones). A breakdown of treatment capacity by plant and storage capacity is provided below.

<b>Treatment Plant</b>	<b>Water Type</b>	<b>Million Gallons Per Day</b>
Dissolved Air Flotation Plant	Pretreatment (nonpotable)	90,000,000
Mt. Carmel Water Treatment Plant	Potable	51,600,000
Riverside Water Treatment Plant	Potable	32,400,000
<b>TOTAL</b>	<b>Potable Only</b>	<b>84,000,000</b>

<b>Water Storages</b>	<b>Storage Capacity</b>
Storage at Treatment Plants	11,500,000
Elevated Water Storage	21,000,000
Ground Storage	10,600,000
<b>TOTAL</b>	<b>43,100,000</b>

<b>Year</b>	<b>Self-Supplied Water in Gallons</b>	<b>Purchased/Imported Water in Gallons</b>	<b>Exported Water in Gallons</b>	<b>Total System Input</b>	<b>Total GPCD</b>
2019	11,239,392,032	0	1,026,375,700	10,213,016,332	201
2020	11,093,679,037	488,000	996,938,600	10,096,740,437	196
2021	11,125,878,595	0	969,068,600	10,156,809,995	196
2022	10,882,399,533	0	1,113,570,800	9,768,828,733	186
2023	11,146,240,700	0	1,108,320,700	10,026,646,900	168
Historic 5 Yr. Average	11,097,517,979	97,600	1,042,854,880	10,052,408,479	189

*Historical water use data reflects treated water, determined from master meter at the point where treated water leaves the treatment plant and enters the distribution system.*

### 4.3 PROJECTED DEMANDS

Projected water supply demands for the City’s service area over the next ten years are shown in the table below and the chart. They are based on population trends, historical water use, economic growth, and expected conservation savings.

Projected diversions were estimated using baseline future water demands and estimated water planning strategy savings developed as part of the Integrated Water Resource Plan (IWRP). The IWRP looks at water supplies and demands over a 100-year time frame. The baseline future water demands were developed from an average of 2019, 2020, 2021, and 2022 water consumption and represent future conditions based on demographic projections of populations, housing, and employment in Waco, along with passive conservation. A climate adjustment factor was applied to the baseline future water demands.

Year	Population	Water Demand (gallons)
2025	209,549	11,129,678,648
2026	211,644	11,174,197,362
2027	213,860	11,218,894,151
2028	215,998	11,263,769,727
2029	218,157	11,308,824,805
2030	220,338	11,354,060,104
2031	222,541	11,399,476,344
2032	224,766	11,445,074,249
2033	227,013	11,490,854,545
2034	229,283	11,536,817,963

*Projected populations calculated using U.S. Census data and assuming 1% growth annually, which has been approximate growth for the previous 30 years. Projected water demands calculated using 0.4% increase annually which is slightly higher than historical trends to account for anticipated economic growth in the downtown/river area.*

### 4.4 WATER CUSTOMERS

Water Use Category	Active Retail Connections			
	Metered	Unmetered	Total Connections	% of Total Connections
Residential - Single Family	44,160		44,160	87%
Residential - Multi Family	1,033		1,033	2%
Industrial	74		74	0.14%
Commercial	5,531		5,531	11%
Institutional	0		0	0%
Agricultural	0		0	0%
TOTAL	50,798		50,798	100%

#### Connections

Water Use Category	Net number of New Retail Connections				
	2019	2020	2021	2022	2023
Residential - Single Family	588	814	1,925	1,103	646
Residential - Multi Family	1	3	51	7	71
Industrial	0	36	0	0	4
Commercial	0	0	0	0	102

Institutional	0	0	0	0	
Agricultural	0	0	0	0	
TOTAL	589	817	1,925	1,110	823

#### 4.5 HIGH-VOLUME RETAIL CUSTOMERS

Retail Customer	Water Use Category	Annual Water Use	Treated or Raw
City of Waco Cameron Park Zoo	Commercial	586,267,200	Treated & Pretreated
City of Woodway	Commercial	453,269,000	Treated
Baylor University	Commercial	357,230,700	Treated
Refresco Beverages US, Inc	Industrial	336,730,600	Treated
Pilgrim's Pride Industries	Industrial	257,105,500	Treated

#### 4.6 HISTORIC WATER USE

Water Use Category	Total Gallons of Retail Water				
	2019	2020	2021	2022	2023
Residential - Single Family	3,276,818,590	3,345,222,800	3,104,373,100	3,702,435,700	3,382,987,700
Residential - Multi Family	811,958,800	814,235,600	855,195,800	958,425,500	946,732,100
Industrial	1,168,073,540	882,039,700	1,268,453,600	1,188,087,400	1,072,348,900
Commercial	4,046,754,870	3,593,349,500	3,288,717,600	3,552,541,300	3,627,896,400
Institutional					
Agricultural					
TOTAL	9,303,306,800	8,634,847,600	8,516,740,100	9,401,489,900	9,029,965,100

#### 4.7 SUMMARY OF HISTORIC WATER USE

Water Use Category	Historic Average	Percent of Connections	Percent of Water Use
Residential - Single Family	3,362,367,578	87%	38%
Residential - Multi-Family	877,309,560	2%	10%
Industrial	1,115,800,628	0.14%	12%
Commercial	3,621,851,934	11%	40%
Institutional	0	0	0
Agricultural	0	0	0

#### 4.8 SEASONAL WATER USE

Month	Total Gallons of Treated Retail Water				
	2019	2020	2021	2022	2023
January	667,446,200	573,022,900	603,424,634	709,605,550	700,388,076
February	689,037,700	535,930,800	642,567,674	636,343,342	628,371,580
March	614,819,400	203,489,900	694,697,942	739,241,687	765,228,015
April	651,441,100	506,563,300	738,854,525	812,864,544	707,184,662
May	575,257,000	580,121,700	702,947,910	900,750,676	753,951,235
June	744,226,100	757,090,700	813,238,340	1,129,217,047	986,701,100
July	647,205,000	961,073,500	869,855,430	1,255,467,471	1,128,930,400
August	1,154,988,900	1,064,890,700	939,710,834	1,084,131,405	1,180,704,600
September	1,182,494,300	1,024,670,400	984,574,905	961,615,300	971,082,700
October	969,165,800	865,357,100	866,986,457	956,940,913	895,063,500
November	789,012,700	724,983,600	764,060,940	732,668,411	742,690,000
December	747,182,600	572,152,900	746,301,326	721,371,009	660,768,000
TOTAL	9,432,276,800	8,669,347,500	9,367,220,917	10,640,217,355	10,026,646,900

#### 4.9 SEASONAL RAW WATER USE

Month	Total Gallons of Raw Retail Water				
	2019	2020	2021	2022	2023
January	35,417,000	48,862,000	18,788,000	28,507,500	13,942,000
February	17,609,000	16,100,000	5,225,100	37,703,200	18,482,900
March	13,156,000	12,446,000	2,804,900	9,809,000	16,948,600
April	42,309,000	41,075,000	15,332,300	35,585,800	24,252,400
May	14,780,990	14,780,990	17,448,600	35,985,100	70,747,000
June	53,858,000	47,739,000	14,958,100	40,585,000	34,591,000
July	53,247,000	57,217,000	39,178,000	35,504,500	27,390,000
August	52,784,000	56,694,000	37,211,500	26,267,000	21,638,000
September	50,866,000	25,701,000	40,778,500	36,626,700	27,480,000
October	46,686,000	10,085,000	33,442,000	31,099,400	8,577,000
November	56,457,000	10,541,000	37,320,400	34,346,000	10,784,000
December	48,689,000	9,360,000	39,520,600	30,087,300	16,821,900
TOTAL	516,890,000	350,600,990	302,008,000	382,006,500	291,654,800

#### 4.10 SEASONAL VS. ANNUAL WATER USE

Water Use	Seasonal and Annual Water Use					5 Year Average in Gallons
	2019	2020	2021	2022	2023	
Summer Retail (Treated + Raw)	2,703,309,000	2,783,054,900	3,739,505,609	4,569,414,423	3,379,955,100	3,435,047,806
TOTAL Retail (Treated +Raw)	9,949,166,800	9,019,948,490	9,669,228,917	11,022,223,855	10,318,301,700	9,995,773,952

#### 4.11 WATER LOSS

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss %
2019	865,078,857	13	9.0%
2020	281,873,163	12	3.0%
2021	159,901,557	3	1.82%
2022	229,693,724	4	2.37%
2023	229,693,724	4	3.1%
5-year average	335,248,205	7	3.85%

#### 4.12 PEAK WATER USE

Year	Average Daily use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2019	26,453,000	47,996,000	1.81
2020	26,350,000	45,742,400	1.74
2021	23,333,534	37,603,300	1.61
2022	25,757,506	46,911,400	1.82
2023	27,667,425	43,834,455	1.58

#### 4.13 HISTORIC GPCD

Water Use Category	Residential GPCD				
	2019	2020	2021	2022	2023
Total System GPCD	201	196	196	186	168
Residential – Single & Multi-Family	65	66	88	75	81

#### 4.14 PROJECTED GPCD

	5-year goal	10-year goal
TOTAL GPCD	196	176
Water Loss Percentage	5%	4%

### 5. WHOLESALE CUSTOMERS

All water delivered to wholesale contract customers is treated water. The following is a list of City wholesale customers, the contracted amount of potable water, and their annual usage for contract year 2023.

#### 5.1 WHOLESALE WATER CUSTOMERS & WATER USAGE

Wholesale Customer	Contracted Amount (acre feet)	Water Delivered in C/Y 23 (acre feet)
City of Bellmead	1,344	0
City of Hewitt		293
City of Lacy Lakeview		
City of Robinson	561	509
City of West		112
Bold Springs WSC	560	.46

Central Bosque WSC	112	112
FHLM (Axtell & EOL)	336	0
Hilltop WSC	97	0
LTG WSC	224	0
Ross WSC	336	0
TSTC	n/a	153
<b>TOTAL</b>	<b>7,994</b>	<b>1,899.46</b>

**Water Exchange Customers & Water Usage**

	<b>Contracted Amount</b>	<b>Water Delivered by Waco or Received by Waco in Acre Feet</b>
City of McGregor	1,120	164.14
City of Woodway	1,120	1,487
<b>TOTAL</b>	<b>2,240</b>	<b>1,651.14</b>

**5.2 WHOLESALE CONTRACT PROVISIONS**

All wholesale water contracts entered, renewed, or extended after adoption of this Plan will include a provision that, in the event of a shortage of water resulting from drought or other circumstances where water must be restricted, the water to be distributed will be divided in accordance with Texas Water Code §11.039. Additionally, all wholesale water contracts entered, renewed, or extended after adoption of this Plan, will adopt a Conservation Plan and Drought Contingency and Water Emergency Management Plan that mirrors the provisions or requirements of the City of Waco’s Plan, each time it is amended, or a Plan that is more stringent. If said wholesale customer intends to resell the water, then said contract for water resale must require any successive water customer to implement water conservation measures in accordance with the City of Waco’s Plan.

All wholesale customers are metered and the meters are tested twice annually for accuracy. Each customer is billed monthly.

**5.3 WHOLESALE CUSTOMER SERVICE AREA SPECIFIC, QUANTIFIED 5 & 10 YEAR TARGETS FOR WATER SAVINGS**

	<b>5year goal</b>	<b>10year goal</b>
TOTAL GPCD	196	176
Water Loss Percentage	6%	5%

**6. RAW WATER CONTRACT PROVISIONS**

All raw water contracts entered, renewed, or extended after adoption of this Plan, will include a provision that in the event of a shortage of water resulting from drought or other circumstances where water must be restricted, the City Manager or designee may reduce or suspend the taking of raw water by the contract holder.

All raw water customers are metered. The meters are tested annually for accuracy.



## 6.1 RAW WATER CONTRACTS

<b>Customer</b>	<b>Contract Amount (in acre feet)</b>
Bear Ridge Golf Management, LLC	250
Lake Waco Golf Course, LLC	100
Peavy, Lanny	6
Ramsower, Regan	6
Ridgewood Country Club	350
<b>Total Under Contract</b>	<b>712</b>
<b>Total Available for Contract</b>	<b>188</b>

## 7. WASTEWATER SYSTEM

The design capacity of the City of Waco wastewater treatment plants is currently 46.5 million gallons per day (MGD).

The City has two wastewater treatment plants that provide wastewater treatment for not only Waco customers but to eight cities surrounding Waco. The Central Wastewater Treatment Plant (CWTP) has a capacity of 45MGD and provides wastewater treatment to the cities of Waco, Bellmead, Lacy Lakeview, Hewitt, McGregor and Woodway. This plant also accepts waste from septic haulers and many industries. This WWTP processes biosolids and provides local landowners with nutrient rich soil enhancement pellets to be applied to fields.

The Bull Hide Creek WWTP is a 1.5 MGD and is in design to be expanded to a 4MGD plant. This plant receives wastewater from the cities of Waco, Hewitt, and Lorena.

In addition, the wastewater system includes 70 lift stations and 970 miles of wastewater mains.

The City of Waco continues to work on effluent reuse opportunities such as the Flat Creek Reuse Water line. This project has received additional funding to begin building the storage and pumping necessary to implement this project.

### 7.1 WASTEWATER CONNECTIONS

<b>Water Use Category</b>	<b>Active Wastewater Connections</b>			<b>% of Total Connections</b>
	<b>Metered</b>	<b>Unmetered</b>	<b>Total Connections</b>	
Municipal		39,986	39,986	91%
Industrial		5	5	0.1%
Commercial		3,908	3,908	8.9%
Institutional	0	0	0	0%
Agricultural	0	0	0	0%
<b>TOTAL</b>	<b>0</b>	<b>43,899</b>	<b>43,899</b>	

## 7.2 WHOLESALE WASTEWATER CUSTOMERS

Wholesale wastewater customers have separate collection systems but all feed into the City of Waco’s sewerage systems for transportation to and treatment at one of two wastewater treatment plants. All wholesale wastewater customers are metered. Those meters are tested annually.

### Wholesale Wastewater Treatment Contracts

Customer	Contract Amount in Gallons Per Day
City of Bellmead	2,308,300
City of Hewitt	2,504,300/720,000
City of Lacy Lakeview	1,054,600
City of Lorena	320,000
City of Robinson	1,571,100
City of Woodway	2,670,000
TOTAL	11,148,300

## 7.3 WASTEWATER DATA FOR SERVICE AREA

Month	Total Gallons of Treated Wastewater				
	2019	2020	2021	2022	2023
January	1,135,150,000	637,844,000	877,636,000	654,791,000	684,089,000
February	728,725,000	816,927,000	721,156,000	665,610,000	789,559,000
March	806,559,000	974,90,000	741,092,000	681,884,000	766,243,000
April	1,105,990,000	982,686,000	671,836,000	667,884,000	769,973,000
May	1,309,880,000	857,294,000	938,050,000	678,103,000	877,706,000
June	841,568,000	690,694,000	1,025,155,000	587,226,000	673,138,000
July	740,472,000	666,154,000	804,224,000	593,844,000	613,880,000
August	632,065,000	582,324,000	693,480,000	585,480,000	600,503,000
September	573,439,000	842,398,000	632,926,000	575,360,000	609,742,000
October	631,962,000	653,557,000	703,260,000	636,052,000	660,010,000
November	563,994,000	584,104,000	640,560,000	738,837,000	632,754,000
December	550,377,000	638,906,000	653,001,000	709,115,000	685,450,000
TOTAL	9,820,181,000	8,927,828,000	9,102,376,000	7,773,319,000	8,363,047,000

## 8. PUBLIC INVOLVEMENT

Opportunity for the public to provide input into the preparation of the Plan was provided by the City of Waco by means of publishing the Plan on the City of Waco Water Utility Services website ([www.wacowater.com](http://www.wacowater.com)), making the plan available for review at the Public Libraries, and inviting water customers to send comments electronically or in writing.

## 9. PUBLIC EDUCATION

The City of Waco will provide the public with information about the Conservation Plan. This information will be provided by means of press releases, bill inserts, presentations to community organizations, website updates and other outreach methods as appropriate.

**10. COORDINATION WITH REGIONAL WATER PLANNING GROUPS**

The service area of the City of Waco is located within the Brazos G Regional Water Planning Group. The City of Waco has provided a copy of this Plan to the Brazos G Regional Water Planning Group. This plan is consistent with Waco’s role as a leader in water supply planning in the Brazos G Regional Planning Group and meets the standards for water conservation planning in TAC Chapter 288.

**11. YEAR-ROUND WATER CONSERVATION STRATEGIES FOR MUNICIPAL & WHOLESALE WATER USE**

This section provides information about Waco’s water conservation efforts, current integrated water resource planning efforts, upcoming programs, and five- and ten-year water savings goals.

**11.1 WATER USE MANAGEMENT**

Waco’s Water Utility Services Department, with the assistance of Code Compliance, implements and enforces a comprehensive Water Conservation Code (26-91) that applies to all retail water customers. This code includes a baseline Conservation Stage with strong year-round conservation requirements.

**11.2 YEAR-ROUND OUTDOOR WATER CONSERVATION MEASURES**

Year-round outdoor water conservation measures are structured to use water in the most beneficial and efficient manner to protect the long-term water supply and to achieve conservation goals. These are conservation measures outside of a declared Drought Stage.

**Three Days Per Week Outside Watering Schedule**

<b>Last Digit of Address</b>	<b>Allowed Landscape Water Days</b>
Odd Number (1,3,5,7,9)	Sunday, Tuesday, Thursday
Even Number (0,2,4,6,8)	Monday, Wednesday, Saturday
<b>No Water Friday - Storage Recovery</b>	

Apartments, office building complexes, or other properties containing multiple addresses, will be identified by the lowest physical street address number. Where there are no numbers, a number will be assigned by the Building Official.

<b>Time-of-Day Watering</b>	Watering Prohibited between 10:00 AM and 7:00 PM.	
<b>Buried Drip Irrigation</b>	No restrictions but must be buried a minimum of 6 inches	
<b>Handheld Hose</b>	<b>Conservation &amp; Drought Stages</b>	When Allowed or Restricted
	<b>Conservation Plan</b>	No restrictions if held in hand and automatic shut off device such as a hose–end nozzle or sprayer that requires continuous human

		action (such as squeezing of a lever) to dispense water is used
	<b><i>Drought Stage 1</i></b>	No restrictions if held in hand and automatic shut off device such as a hose–end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b><i>Drought Stage 2</i></b>	No restrictions if held in hand and automatic shut off device such as a hose–end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b><i>Drought Stage 3</i></b>	Use is only allowed on the users designated water day. Time of day restrictions apply. Must be held in hand and automatic shut off device such as a hose–end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b><i>Drought Stage 4</i></b>	Not allowed.
<b>Impervious Surface</b>	Water Use on impervious surfaces - such as washing down a driveway or sidewalk, is discouraged unless for health and safety purposes. Such use is allowed on assigned outside water days and times.	
<b>Water Waste/Runoff</b>	Runoff of more than 10 feet from the edge of the property will be considered water waste.	

Conserving water and limiting days and time-of-day usage benefits the overall water system and reduces the need for additional infrastructure to meet peak time-of-day usage for irrigation. One of the largest water savings and peak day water use reduction measures is a restriction being adopted that limits irrigation water use to 3-days a week. This code includes time of day restrictions that allow irrigation to occur before 10:00 a.m. or after 7:00 p.m. on the designated day. This schedule allows efficient irrigation methods, buried drip irrigation, to operate with no restrictions. Water hoses held in hand, with an automatic shut off device, can water any day, any time (except in Drought Stage 3 when it would be limited to one day during allowed hours and Drought Stage 4 where it would be prohibited). The code also contains prohibitions on water waste, which includes failing to repair a controllable leak and allowing water to spray or pond on impervious surface more than 10-feet from the landscape being irrigated.

### 11.3 VARIANCES

Newly installed landscaping has a different water need than established landscaping. Customers with newly installed landscape that need additional watering days to become established, must apply for a variance from the mandatory watering schedule. If a variance is approved, the following additional water days will be allowed on the subject property under the following requirements:

<b>Variiances</b>	<b>Conservation &amp; Drought Stages</b>	<b>MAXIMUM DAYS ALLOWED (from date of plant installation)</b>
	<b>Conservation</b>	60
	<b><i>Drought Stage 1</i></b>	45
	<b><i>Drought Stage 2</i></b>	30
	<b><i>Drought Stage 3</i></b>	0
	<b><i>Drought Stage 4</i></b>	0
<b>Plants</b>	Variance can only be used for the plants and area listed in the variance	
<b>Effective Time Frame</b>	A variance will take effect on the date which it is approved by the City. Variance end date will be based on the date of plant installation.	

- Variances can only be utilized for the plants and planting area designated.
- Variances granted will expire upon a declaration of drought or an escalation of the Plan to the next higher Stage or upon termination of the declaration of drought.

Water Utility Services will provide a link to Texas A & M Agrilife for a list of turf grasses that are considered drought tolerant at [wacowater.com](http://wacowater.com). This list is not meant to be all inclusive but is for guidance.

#### **11.4 ATHLETIC FIELDS AND GOLF COURSES**

Additional water use restrictions during year-round conservation include mandatory water plans for all athletic fields and golf courses. These plans are due annually by March 1st of each year, (except the first year (2024), when the plan is due by July 1, 2024), and must include an evaluation of how much water is intended to be used, how and who is monitoring, the water meters included in the plan, and how water will be reduced in accordance with water reduction goal in each Drought Stage when Waco declares a Drought Stage. The Director of Water Utilities or designee can deny a plan that does not include appropriate conservation measures and reduction in water usage and waste. **Any athletic field or golf course owner who does not submit a water plan or whose water plan has been denied, will be required to adhere to the Year-Round Outdoor Water Conservation Plan and Drought Contingency and Water Emergency Management Plan Measures schedule.**

##### **Athletic Fields and Golf Courses Conservation Measures**

Annual Water Plan (AWP)	Due July 1, 2024 and March 1st each year thereafter
Water amount and method of evaluation	Amount of water to be used during Year-Round Conservation and for each drought stage. Each Drought Stage water total should be reduced by the minimum percentage amount stated for that stage.
Meter Number	Any meter that measures water on an athletic field or golf course.
Person and method	Who will monitor the plan, their contact information, and how they will monitor the plan to achieve the water reduction

Drought Stage 4	No Outside Watering
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### 11.5 IRRIGATION SPRINKLER SYSTEMS

All new automatically controlled irrigation sprinkler systems are required to include sensors or other technology designed to inhibit or interrupt operation of the irrigation system during periods of moisture or rainfall. Rain or moisture shut off technology must be installed in accordance to the manufacturers published recommendations. Repairs to existing automatic irrigation systems that require replacement of an existing controller must include a sensor or other technology designed to inhibit or interrupt operation of the irrigation system during periods of moisture or rainfall (TAC 30, Part 1, Chapter 344, Subchapter F, Paragraph j). Irrigation systems must direct flow away from impervious surfaces. Newly installed irrigation systems must include an isolation valve for the irrigation system.

#### Irrigation Sprinkler Systems

New Systems or new operational system	Rain - moisture Sensor/automatic shut off required
Design	Must direct flow away from impervious surfaces
Isolation Valve	New systems must have an isolation valve

### 11.6 OTHER CONSERVATION PROGRAM YEAR-ROUND STRATEGIES

- Outdoor pools, hot tubs, spas, etc. are encouraged to be covered when not in use.
- Hosing of paved surfaces/areas is discouraged except to alleviate an immediate health or safety hazard, or preparation for painting.
- The name(s) listed on the water account will be responsible for all violations involving minors.
- One-or two-day events that utilize water, such as a water slide or charity car wash (by hand), will be allowed through Drought Stage 2.
- Water service may be discontinued if three or more violations occur at a service address within a 30-day period. Service discontinued under such circumstances will be restored only upon payment of (1) the service call fee set by the City of Waco Fee Schedule, and (2) any and all penalties incurred by violating the ordinance.
- Grey water use will not be restricted if the system of delivery and configuration conform to the current International Plumbing Code. A grey water system cannot be physically connected to the potable water supply and the grey water system must be installed so that there is no chance of grey water contamination into the public water supply.
- Texas Administrative Code 290.252 requires plumbing fixtures to meet water savings performance standards (290.252(b)) and be on the list of approved fixtures (290.253)
- Each violation (of Division 2, Article IV, Chapter 26 of the Waco Code of Ordinances) shall be classified as a misdemeanor and can incur a fine up to \$2,000.00 for each offense. Each violation will be counted as a separate offense. Each day any violation of a city ordinance continues shall be a separate offense.

## **11.7 CITY OF WACO CONSERVATION MEASURES**

- City of Waco will continue to meter and measure the amount of raw water diverted from Lake Waco and/or other water sources.
- All meters will continue to be a part of a rigorous testing and replacement program.
- Annual water audits to determine water loss will be conducted.
- The city will continue to maintain accurate records of leaks, repairs, flushing, construction, and firefighting exercises.
- The city will continue monitoring daily diversion amounts with daily water treatment production to determine water loss prior to distribution. Production amounts will also be compared to metered consumption to determine distribution loss.
- Leaking water lines will continue to be repaired or replaced as quickly as possible. On-call, after-hours crews will continue responding to leaks at all hours. In situations where repair is not immediately possible, water loss will be mitigated by reduction of pressure.
- The city will continue to monitor and respond to its acoustic leak detection devices.
- The city will continue efforts to inform and educate the public on water conservation issues. In addition to year-round efforts, each year, as the high use season of summer approaches, these efforts will be increased and expanded. Just prior to and during the summer months, press releases will be issued regarding the city's Conservation and Drought Contingency and Water Emergency Management Plans and multiple notices will be inserted in all customer bills.
- The current non-promotional, inclining block rate will continue to be the rate structure for the City of Waco. The rate structure will be evaluated on an ongoing basis and adjustments will be made as appropriate.
- The City of Waco will continue to promote My Waco Water and the ability for our customers to monitor, manage, and stay informed about their water usage.
- Information and items promoting conservation will also be offered as "give away" items at public events or public bldgs. speaking engagements.

## **12. METHOD FOR TRACKING IMPLEMENTATION AND EFFECTIVENESS**

Overall progress toward conservation goals of reducing consumption, loss, waste, and peak demand and improving efficiency of usage will be evaluated annually when the water conservation annual report is completed. The following methods will be used to evaluate individual portions of the plan:

- Records regarding meter replacement will be maintained and examined annually. Failure rates, along with "re-read" work orders (orders to re-read a meter are automatically generated whenever there is a high or low discrepancy outside normal variance), leaks and meter/model will be compared to evaluate the replacement cycle.
- Water loss accounting will be evaluated periodically examining multi-year loss trends, with the specific goal of identifying any discrepancies or variances and determining the cause.
- Leak detection and repair will be evaluated annually by examining comprehensive records showing number of leaks, locations, time before repair, estimated loss of water through leak, estimated loss of water through flushing. This information will be compared to water loss information for the same period.
- Public information and education efforts will be evaluated by documenting actions, such as: number of press releases issued, number or stories written or produced, number of

interviews given, number of bill inserts sent, number of presentations given, and number and location of advertisements placed. This information will then be evaluated with consumption during the same period and compared against data from previous years.

- The City's water rate structure will continue to be evaluated by examining consumption trends. Records will be kept on consumption for each rate class. This information will be compared along with cost-of-service considerations, with historical trends and adjustments will be made to the rate structure as appropriate.

### **13. METHOD FOR MEASURING WATER DIVERTED FROM SOURCE**

Raw Water diversions from Lake Waco are metered, calculated, and tracked at least daily as part of the treatment process control and reporting agreement with the U.S. Army Corps of Engineers. A recording of water use (treated water) is updated daily.

### **14. UNIVERSAL METERING**

The city maintains meters to ensure that accurate readings (meters registering at an accuracy of no less than 95% or no higher than 105% expressed as percentage of the full scale of the meter and performing to American Water Works Association water metering standards) are being recorded. This ensures fair and equitable billing and reduces unaccounted for water.

### **15. MEASURING AND CONTROLLING WATER LOSS**

The City of Waco performs periodic visual inspections along distribution lines as well as maintaining accurate water leak and repair records. The city also measures and collects data on firefighting, construction, and main flushing. Annual internal audits of water usage are conducted to determine water loss.

### **16. LEAK DETECTION AND REPAIR**

Measures to control unaccounted water are part of the routine operations of the City of Waco. Meter readers and operations crews watch for and report signs of illegal connections so they can be addressed quickly. Over 10,000 acoustic leak detection devices have been installed to monitor for leaks. Crews and personnel look for and report any evidence of leaks in the water distribution system. Repair crews respond quickly to repair leaks reported by the public and city personnel. The city has 82 full-time distribution line/and meter positions and two on-call crews after hours responding to all leaks as quickly as possible. Areas of the water distribution system in which numerous leaks and line breaks occur are targeted for replacement as funds are available.

### **17. CONTINUING PUBLIC EDUCATION AND INFORMATION**

The City of Waco's Marketing & Communications Department will produce written materials in the form of

- Printed Promotional Items
- Newsletter Articles
- Media Releases
- Public service announcements

These are distributed to customers, the local media, and to non-profit local organizations such as neighborhood associations and civic organizations so they can inform their members.

The water utility ensures that multimedia materials are also available through the Water Utility's website, [wacowater.com](http://wacowater.com). The information is also broadcast over the city public access channel, and



in cooperation with local media outlets for the release of information for both television and radio audiences.

Specific efforts include:

- Specialized alerts are displayed on the City of Waco’s website – [www.waco-texas.com](http://www.waco-texas.com).
- Interviews with city experts in irrigation and plant water demand on the local access channel.
- Interviews with city management.
- Press conferences to promote key educational programs.
- Public events or educational events with conservation and/or drought information.
- Booths at public events sponsored by neighborhood associations, civic organizations, not-for-profit education groups, and other city departments.

The Water Utility works with the City’s Marketing and Communications Department to create and distribute promotional items encouraging water conservation on a regular basis.

### 18. WATER RATE STRUCTURE

Waco’s conservation water rate is an increasing block rate, which increases as the quantity used increases. Prices per thousand gallons increase at specific “tiers” in consumption. Each tier of the rate structure is designed to send a price signal to consumers as their discretionary consumption of water increases.

#### Residential Water Rates

<b>(Inside City)</b>		<b>(Outside City)</b>	
Rate is based on meter size + usage tier		Rate is based on meter size + usage tier	
3/4” meter	\$16.50	3/4” meter	\$20.63
1” meter	\$27.50	1” meter	\$34.38
1.5” meter	\$55.00	1.5” meter	\$68.75
Base Charge	\$16.50	Base Charge	\$20.63
0 – 3,000 Gallons	\$3.14 Per 1,000	0 – 3,000 Gallons	\$3.93 Per 1,000
3,001 – 8,000 Gallons	\$4.17 Per 1,000	3,001 – 8,000 Gallons	\$5.21 Per 1,000
8,001 – 15,000 Gallons	\$6.28 Per 1,000	8,001 – 15,000 Gallons	\$7.85 Per 1,000
15,001 – 25,000 Gallons	\$8.17 Per 1,000	15,001 – 25,000 Gallons	\$10.21 Per 1,000
Over 25,000 Gallons	\$10.99 Per 1,000	Over 25,000 Gallons	\$13.74 Per 1,000

### 19. RESERVOIR SYSTEMS OPERATIONS PLAN

A reservoir systems operations plan is not applicable to the City of Waco. The operation of the reservoir systems is conducted by the U.S. Army Corps of Engineers

### 20. AGRICULTURAL WATER USE

Agricultural use is for the golf course and sports field irrigation, not for irrigation in the production of crops, so no production process is applicable to the City of Waco’s Plan. Therefore, the city does not intend to use state-of-the-art equipment or process modifications to improve water use efficiency. The amount of usage will remain constant. The city does not anticipate any water savings because the intent is to use all acre feet (per year) allowed for irrigation; therefore, the city

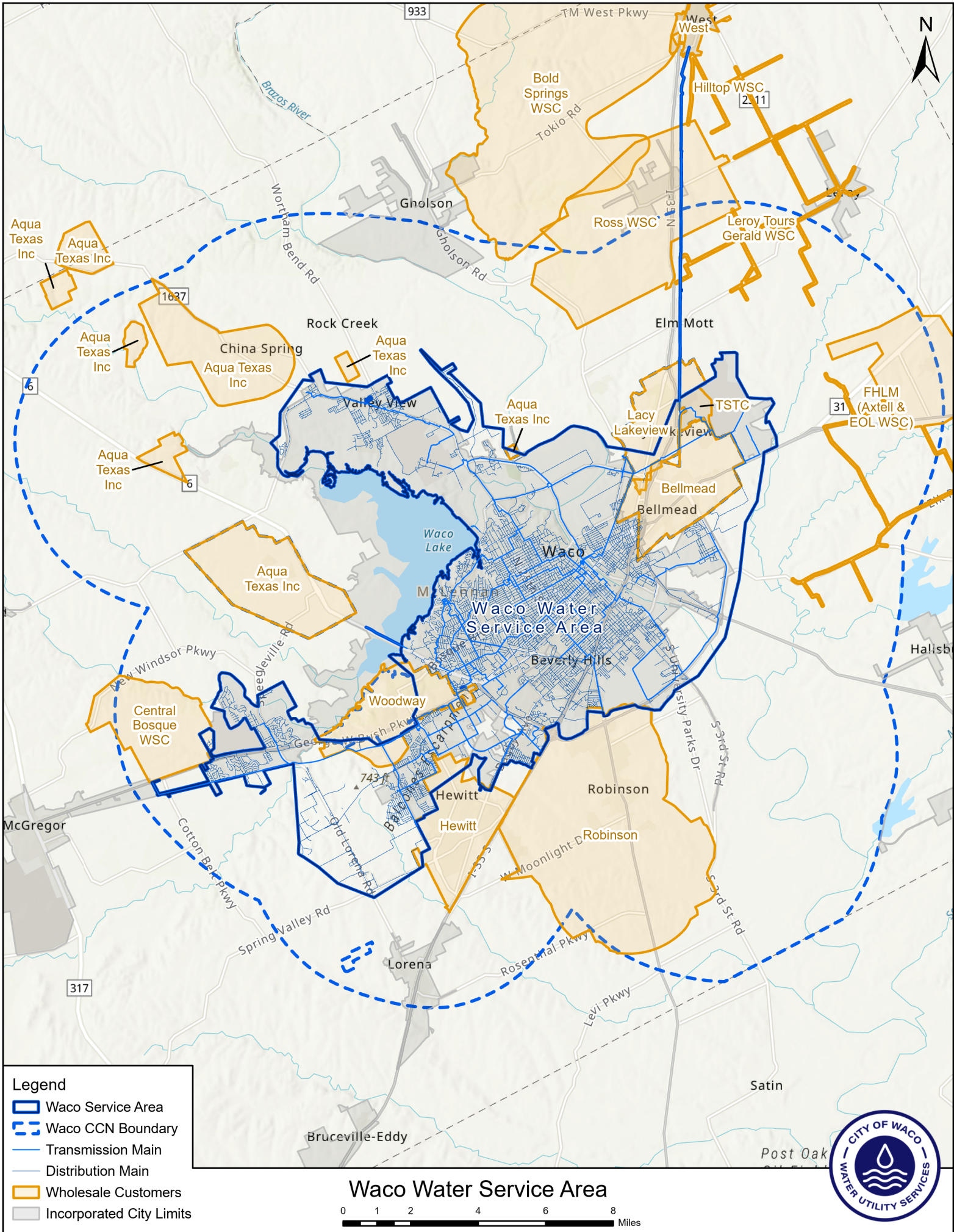
does not have specific, quantified five-year and ten-year targets for water savings. The city uses meters that are within an accuracy of plus or minus 5% to measure and account for water diverted from the source of supply. City staff monitors the meters monthly to detect, repair and account for water loss in the water distribution system 30 TAC § 288.4(a)(2) and (a)(3) are not applicable to the City of Waco.

## **21. IMPLEMENTATION AND ENFORCEMENT**

This plan is part of an ordinance approved by the City of Waco, City Council. A copy of the ordinance is provided in Appendix A. Criminal penalties apply to the Conservation Plan. Enforcement of the Plan is further discussed in said Ordinance.

## **22. REVIEW AND UPDATE OF THE CONSERVATION AND DROUGHT CONTINGENCY AND WATER EMERGENCY MANAGEMENT PLANS**

These plans will be reviewed annually and updated as needed. An approved, updated plan will be sent to the Texas Water Development Board.



**APPENDIX A**

Copy of Transmittal Letter to Brazos G Regional Planning Group

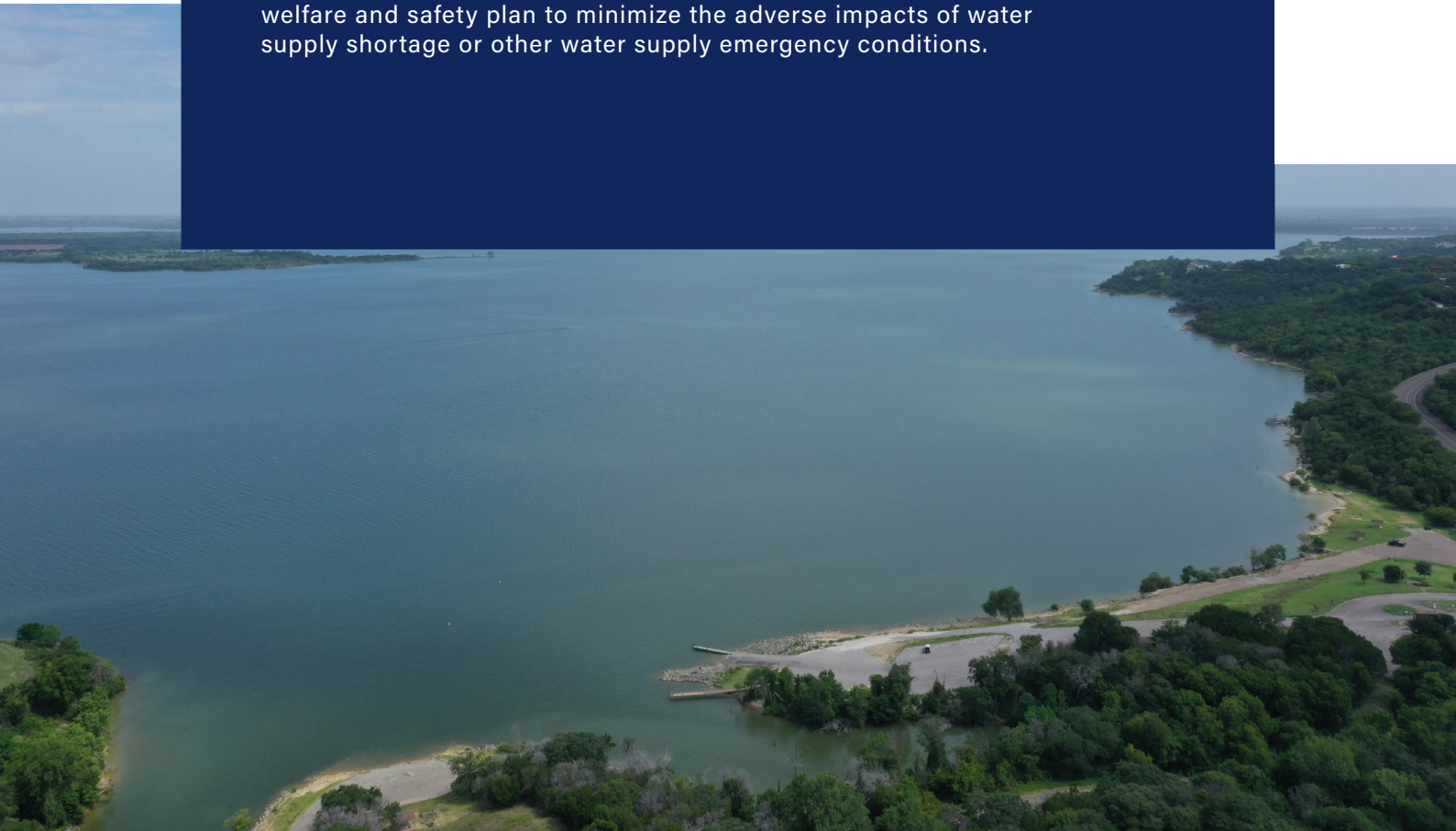
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# DROUGHT CONTINGENCY PLAN

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## Updated for 2024

The city of waco drought contingency plan is intended to conserve the available water supply and protect the integrity of water supply facilities, with particular regard to domestic water use, to sanitation and fire protection, and to protect and preserve public health, welfare and safety plan to minimize the adverse impacts of water supply shortage or other water supply emergency conditions.





**CITY OF WACO DROUGHT CONTINGENCY & EMERGENCY WATER MANAGEMENT PLAN**

**SECTION I: DECLARATION OF POLICY, PURPOSE, AND INTENT ..... 34**

**SECTION II: PUBLIC INVOLVEMENT ..... 34**

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## **SECTION I: DECLARATION OF POLICY, PURPOSE, AND INTENT**

The purpose of this Drought Contingency and Emergency Water Management Plan (subsequently referred to as the “Plan”) is as follows:

- To conserve the available water supply in times of drought and emergency
- To maintain supplies for domestic water use, sanitation, and fire protection
- To protect and preserve public health, welfare, and safety
- To minimize the adverse impacts of water supply shortages
- To minimize the adverse impacts of emergency water supply conditions

In order to conserve the available water supply and protect the integrity of water supply facilities, the City of Waco hereby adopts the following regulations and restrictions on the delivery and consumption of water through Ordinance No. 2024 - XXX. A copy is attached as Appendix A.

Water uses regulated or prohibited under this Plan are considered to be non-essential and continuation of such uses during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Section IX of this plan.

## **SECTION II: PUBLIC INVOLVEMENT**

Opportunity for the public to provide input into the preparation of the Plan was provided by the City of Waco by means of a public meeting and by publishing the Plan on the Water Utility Services website ([www.wacowater.com](http://www.wacowater.com)). A public notice was provided regarding a public meeting, which was held to accept input on the Plan. Additionally, citizens were invited to send comments electronically after viewing the Plan online.

## **SECTION III: PUBLIC EDUCATION AND NOTIFICATION**

The City of Waco will provide the public 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 means of press releases, bill inserts, presentations to community organizations, website updates and other outreach methods as appropriate. Upon implementation and/or termination of any stage of the plan, the public will be notified through local media and website updates.

## **SECTION IV: WHOLESALE CONTRACT PROVISIONS**

All wholesale water contracts entered into, renewed or extended after adoption of this plan, will include a provision that in case of a shortage of water resulting from drought, the water to be distributed will be divided in accordance with Texas Water Code, §11.039.

## **SECTION V: COORDINATION WITH REGIONAL WATER PLANNING GROUPS**

The service area of the City of Waco is located within the Brazos G Regional Water Planning Group. The City of Waco has provided a copy of this Plan to the Brazos G Regional Water Planning Group.

## **SECTION VI: AUTHORIZATION**

The City Manager or his/her designee is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. When criteria have been met (as described for each Drought Stage), the City Manager or his/her designee has the authority to initiate or terminate drought or other water

supply emergency response measures described in this Plan. The City Manager or designee will notify the Director of Water Utility Services or designee of the initiation or termination of a drought stage. The following actions will occur when a stage is initiated or terminated:

- The public will be notified through the local media and City of Waco Web site by the Communications & Marketing Department.
- City of Waco’s wholesale customers will be notified by telephone with a follow up e-mail that provides the reasons for initiation of the drought or emergency stage and when that stage is terminated by the Director of Water Utility Services or designee.
- The City of Waco Water Utility Department will notify the Executive Director of the TCEQ and the local TCEQ office within 5 business days when a drought or emergency stage is activated or terminated.

The Plan may be applied to the entire city or service area, or geographic portions of the city or service area, as necessary. If the Plan is applied only to a limited area, the boundaries will be defined by roadways, rivers, creeks and other easily distinguishable features.

### **SECTION VII: APPLICATION**

The provisions of this Plan will apply to all persons, customers, and property utilizing water provided by the City of Waco. The terms “person” and “customer” as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

### **SECTION VIII: DEFINITIONS**

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

Accounts – all Single Family and all Non-Single Family Accounts, collectively.

Aesthetic water use – Water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

Athletic field – A developed recreation area that may contain a playground as well as fields for competitive sports such as baseball, softball, football or soccer.

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

Conservation – Those [triggering conditions] practices, techniques, and technologies greater than the baseline conservation practices, 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. Baseline conservation practices are those actions expected from customers as good citizens; including, but not limited to:

- Turning off or re-programming automatic sprinkler systems during precipitation events or in soil-saturated conditions;
- Implementing landscape irrigation to maximize impact, e.g., not irrigating in the afternoon or highest evaporative loss hours;

Customer – Any person, company, or organization using water supplied by the City of Waco.

Domestic water use – Water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

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

Golf course – an area of land laid out for golf with a series of 9 or 18 holes each including tees, fairways, putting greens and often one or more natural or artificial hazards.

Grey water – Wastewater without fecal contamination generated primarily in households or office buildings from sinks, showers, baths, washing machines or dishwashers. Wastewater from toilets is NOT grey water.

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

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

Mean Sea Level (msl) – The level of the ocean’s surface, especially the level halfway between high and low tide, used as a standard in reckoning land elevation or sea depths.

Non-essential water use – Water uses that are neither essential nor required for the protection of public, health, safety, and welfare, including:

- a) irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
- b) use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;
- c) use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
- d) use of water to wash down buildings or structures for purposes other than immediate fire protection;
- e) flushing gutters;
- f) Permitting water to run or accumulate in any gutter or street;
- g) use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi- type pools;
- h) use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
- i) failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
- j) use of water from hydrants for construction purposes or any other purposes other than fire fighting and system maintenance.

Non-Single Family Account – water service for any category besides a Single Family Residence, such as water service to Multi-Family Residence, Industrial, Commercial, Institutional, and/or Agricultural.

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

Plan – the 2024 Water Conservation Plan and 2024 Drought Contingency Plan, collectively, which will be the water conservation and drought/emergency contingency plan for the city, as adopted or hereby amended.

Single Family Account – water service at a Single Family Residence

Single Family Residence – a house, or dwelling unit with 4 or less housing units used as a residence with one family housed in each unit.

User – any person connected to the city’s water system, including owners and/or occupants of any premises connected to the city’s system and wholesale customers.

Variance – request for additional consideration to allow for more days to water based on new plants or other circumstances.

Water – water taken from any city water including, raw water, clarified (pretreated) water, or potable (drinking) water.

Water shortage emergency – A condition in which the ordinary water demands and requirements of the City’s wholesale and retail customers cannot be met without resulting in insufficient water for human consumption, public health (sanitation), and fire protection. A water shortage emergency may be limited geographically or temporally.

## **SECTION IX: CRITERIA FOR INITIATION AND TERMINATION OF DROUGHT/EMERGENCY RESPONSE STAGES**

The City Manager or his/her designee will monitor water supply and/or demand conditions on a daily basis and will determine when conditions warrant initiation or termination of each stage of the Plan, that is, when the specified triggers are reached.

Criteria triggering the implementation of various stages of the Drought Contingency and Water Emergency Management Plan, include, but are not limited to, the following:

1. General, geographical, or weather-related condition or emergency, including but not limited to drought conditions resulting in a decrease in the Lake Waco reservoir level
2. Water system failures/emergencies (i.e., pressure zone deficiencies, chemical spills, broken water mains, power outages, electrical failures, failures of storage tanks or other equipment, treatment plant breakdown, and water contamination)
3. An inability to recover approximately ninety (90) percent of water stored in all Storage facilities within a defined period
4. A catastrophic decrease in the Lake Waco reservoir level and/or delivery capabilities resulting in an inability, presently or in the immediate future, to recover resources sufficient to provide services necessary for the public health, safety, and welfare

The level of the Lake Waco reservoir shall be determined based on the official reading by the U.S. Army Corps of Engineers and stated as an elevation above mean sea level (msl).

## **TRIGGERING STAGES, RESPONSES AND GOALS**

Generally, should a water shortage emergency occur, the City Manager may exercise his or her discretion to: 1) request special voluntary water restrictions, 2) initiate Stages 1 - 4 mandatory restrictions, and/or 3) prohibit wastage and restrict certain uses of water deemed nonessential during

the emergency. Initiation of a specific Stage is dependent on climatic and water system conditions and does NOT necessarily require a progression from Stage One through Stage Three to reach Stage Four.

Pro rata curtailment of water delivery to wholesale water customers, as provided in Texas Water Code, §11.039, may be triggered by criteria within or without the plan and may be implemented during any stage of the plan.

The City of Waco has no alternative source of water from which to draw or make use of as a water supply management measure during a water shortage.

**Stage 1 Triggers – MILD Water Shortage**

Criteria for implementation of Stage 1. The city manager will implement stage 1 restrictions when any of the following conditions exist:

- The Lake Waco reservoir level decreases to 457msl (at which the reservoir is at about 80% of its capacity);
- Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water; and/or
- Other unforeseen events, such as a water treatment plant, pipe or pump failure or source of supply or system contamination that necessitates the public’s participation in a reduction of water usage.

Criteria for termination – Stage 1 will be terminated at the discretion of the City Manager but may be based on:

- An increase in the level of Lake Waco;
- Weather forecast and stream flow conditions that, in the opinion of the city manager, warrant removal of restrictions on the use of water; and/or
- The ending of unforeseen events that necessitated the public’s participation in water restrictions.

**Stage 1 Responses**

Mandatory restrictions – Upon implementation by the city, the following restrictions shall apply unless specifically exempted:

1. The city will reduce use of water for municipal purposes by
  - Submittal of a water plan that includes following the mandated day and times allowed for watering and meeting the water reduction goal.
2. The city will monitor “excessive watering” and issue notifications to customers.
3. Criminal penalties apply during Stage 1 restrictions.
4. All landscape and other outdoor water usage at each service address shall be limited to two days a week based on the last digit in the physical street address; however, landscape and outdoor water usage is prohibited from 10:00 A.M. to 7:00 P.M.

Last Digit of Address	Allowed Landscape Water Days
Odd	Sunday and Friday
Even	Monday and Saturday
<b>No Watering Tuesday, Wednesday, Thursday - Storage Recovery Day</b>	

<b>Time-of-Day Watering</b>	Watering Prohibited between 10:00 AM and 7:00 PM.	
<b>Buried Drip Irrigation</b>	No restrictions but must be buried a minimum of 6 inches	
<b>Handheld Hose</b>	<b>Conservation &amp; Drought Stages</b>	When Allowed or Restricted
	<b>Conservation Plan</b>	No restrictions if held in hand and automatic shut off device such as a hose-end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 1</b>	No restrictions if held in hand and automatic shut off device such as a hose-end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 2</b>	No restrictions if held in hand and automatic shut off device such as a hose-end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 3</b>	Use is only allowed on the users designated water day. Time of day restrictions apply. Must be held in hand and automatic shut off device such as a hose-end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 4</b>	Not allowed.
<b>Impervious Surface</b>	Water Use on impervious surfaces - such as washing down a driveway or sidewalk, is discouraged unless for health and safety purpose. Such use is allowed on assigned outside water days and times.	
<b>Water Waste/Runoff</b>	Runoff of more than 10 feet from the edge of the property will be considered water waste.	

5. Apartments, office building complexes, or other properties containing multiple addresses, will be identified by the lowest physical street address number. Where there are no numbers, a number will be assigned by the Building Official.
6. Variances will be reduced to 45 days for newly installed plants. All other variance

requirements in the Conservation Plan remain in effect.

7. Golf course landscape watering and Athletic Field watering must adhere to the water plan that was submitted or adhere to the twice a week water schedule.
8. Washing down of impervious surfaces such as sidewalks and driveways, or buildings is discouraged and is only allowed on outside watering days and times per Stage 1 Drought water restrictions.
9. Any other measure that the City Manager determines is necessary and in the best interest of the public to maintain an adequate water supply.

### **Stage 1 Goal**

Reduction of previous three-year average daily use by 1%

### **Stage 2 Triggers – MODERATE Water Shortage**

Criteria for implementation of Stage 2. The city manager will implement stage 2 restrictions when any of the following conditions exist:

- The Lake Waco reservoir level decreases to 452 msl (at which the reservoir is at about 60% of its capacity);
- There is an inability to recover approximately ninety (90) percent of water stored in all storage facilities within a twenty-four (24) hour period;
- Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water; and/or
- Other unforeseen events, such as a water treatment plant, pipe or pump failure, or source of supply or system contamination that necessitates the public's participation in a reduction of water usage.

Criteria for termination – Stage 2 will be terminated at the discretion of the City Manager or designee but may be based on:

- An increase in the level of Lake Waco;
- An ability to recover ninety (90) percent of water stored in all storage facilities within a twenty-four (24) hour period;
- Weather forecast and stream flow conditions that, in the opinion of the city manager, warrant removal of restrictions on the use of water; and/or
- The ending of unforeseen events that necessitated the public's participation in water restrictions.

### **Stage 2 Responses**

Mandatory restrictions – Upon implementation by the city, the following restrictions shall apply unless specifically exempted:

1. The city will reduce use of water for municipal purposes by
  - Submittal of a water plan that includes following the mandated day and times allowed for watering and meeting the water reduction goal.
  - Reduced hours for such things as spray parks.
2. The city will monitor “excessive watering” and issue notifications to customers. “Excessive

watering” occurs where run-off extends for a distance greater than ten (10) feet from the customer’s property or where there is washing or hosing down of buildings, sidewalks, driveways, patios, porches, parking surfaces or other paved surfaces.

3. Criminal penalties apply.
4. All landscape and other outdoor water usage at each service address shall be limited to two days a week based on the last digit in the physical street address; however, landscape and outdoor water usage is prohibited from 10:00 A.M. to 7:00 P.M.

<b>Last Digit of Address</b>	<b>Allowed Landscape Water Days</b>
Odd	Sunday and Friday
Even	Monday and Saturday
<b>No Watering Tuesday, Wednesday, Thursday - Storage Recovery Day</b>	

<b>Time-of-Day Watering</b>	Watering Prohibited between 10:00 AM and 7:00 PM.	
<b>Buried Drip Irrigation</b>	No restrictions but must be buried a minimum of 6 inches	
<b>Handheld Hose</b>	<b>Conservation &amp; Drought Stages</b>	When Allowed or Restricted
	<b>Conservation Plan</b>	No restrictions if held in hand and automatic shut off device such as a hose-end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 1</b>	No restrictions if held in hand and automatic shut off device such as a hose-end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 2</b>	No restrictions if held in hand and automatic shut off device such as a hose-end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 3</b>	Use is only allowed on the users designated water day. Time of day restrictions apply. Must be held in hand and automatic shut off devise such as a hose-end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 4</b>	Not allowed.



<b>Impervious Surface</b>	Water Use on impervious surfaces - such as washing down a driveway or sidewalk, is discouraged unless for health and safety purpose. Such use is allowed on assigned outside water days and times.
<b>Water Waste/Runoff</b>	Runoff of more than 10 feet from the edge of the property will be considered water waste.

5. Apartments, office building complexes, or other properties containing multiple addresses, will be identified by the lowest physical street address number. Where there are no numbers, a number will be assigned by the Building Official.
6. Criminal penalties apply during Stage 2 restrictions.
7. Watering of newly installed landscaping variances is reduced to 30 days from the date of planting. After the first month, the landscape water day's schedule and hourly restrictions must be followed. All other variance requirements in the Conservation Plan remain in effect.
8. Golf course landscape watering and Athletic Field watering must adhere to the water plan that was submitted or adhere to the twice a week watering schedule.
9. Washing down of impervious surfaces such as sidewalks and driveways, or buildings is discouraged and is only allowed on outside watering days and times per Drought Stage 2 water restrictions. Any other measure that the City Manager determines is necessary and in the best interest of the public to maintain an adequate water supply.
10. Conservation Rates take effect.

### Residential Conservation Rates

Volumes	Stage 1	Stage 2	Stage 3	Stage 4
0-3000 gallons	No change	No change	No change	No change
3,001-8,000 gal	No change	No change	No change	No change
8,001 – 15,000 gal	No change	No change	10% increase	20% increase
15,001 – 25,000 gal	No change	10% increase	20% increase	25% increase
25,001 + gal	No change	20% increase	40% increase	50% increase

### Irrigation Conservation Rates

0-25,000 gallons	No change	10% increase	20% increase	25% increase
25,001 + gallons	No change	20% increase	40% increase	50% increase

### Stage 2 Goal

Reduction of previous three-year average daily use by 2% November – March and 8% April – October.

### **Stage 3 Triggers – SEVERE Water Shortage**

Criteria for implementation of Stage 3. The city manager will implement stage 3 restrictions when any of the following conditions exist:

- The Lake Waco reservoir level to 449 msl (at which the reservoir is at about 50% of its capacity);
- There is an inability to recover approximately ninety (90) percent of water stored in all storage facilities within a twenty-four (24) hour period;
- Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water;
- The total amount of water available, as determined by the water utilities director, to the city from its developed water sources is less than a 24-month supply; and/or
- Other unforeseen events, such as a water treatment plant, pipe or pump failure, or source of supply or system contamination that necessitate the public's participation in a reduction of water usage.

Criteria for Termination – Stage 3 will be terminated at the discretion of the City Manager or designee and may be based on:

- An increase in the level of Lake Waco;
- An ability to recover ninety (90) percent of water stored in all storage facilities within a twenty-four (24) hour period;
- Weather forecast and stream flow conditions that, in the opinion of the city manager, warrant removal of restrictions on the use of water;
- An increase in the total amount of water available; and/or
- The ending of unforeseen events that necessitated the public's participation in water restrictions.

### **Stage 3 Responses**

Mandatory restrictions – Upon implementation by the city, the following restrictions shall apply unless specifically exempted:

1. The city will reduce use of water for municipal purposes by
  - a. Submittal of a water plan that includes following the mandated day and times allowed for watering and meeting the water reduction goal.
  - b. Reduced hours for such things as spray parks.
2. The city will monitor “excessive watering” and issue notifications to customers. “Excessive watering” occurs where run-off extends for a distance greater than ten (10) feet from the customer's property or where there is washing or hosing down of buildings, sidewalks, driveways, patios, porches, parking surfaces or other paved surfaces.
3. Criminal penalties apply during Stage 3 restrictions.
4. All landscape and outdoor water usage at each physical street address shall continue according to the landscape water days schedule identified below (1 day a week); however, landscape and outdoor water usage is prohibited from 10:00 A.M. to 7:00 P.M.

<b>Last Digit Address:</b>	<b>Allowed Landscape Water Day</b>
0, 1	Monday
2, 3	Tuesday
4, 5	Wednesday
6, 7	Thursday
8, 9	Friday
<b>Saturday and Sunday – No Watering, Storage Recovery days</b>	

<b>Time-of-Day Watering</b>	Watering Prohibited between 10:00 AM and 7:00 PM.	
<b>Buried Drip Irrigation</b>	No restrictions but must be buried a minimum of 6 inches	
<b>Handheld Hose</b>	<b>Conservation &amp; Drought Stages</b>	When Allowed or Restricted
	<b>Conservation Plan</b>	No restrictions if held in hand and automatic shut off device such as a hose–end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 1</b>	No restrictions if held in hand and automatic shut off device such as a hose–end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 2</b>	No restrictions if held in hand and automatic shut off device such as a hose–end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 3</b>	Use is only allowed on the users designated water day. Time of day restrictions apply. Must be held in hand and automatic shut off devise such as a hose–end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) to dispense water is used
	<b>Drought Stage 4</b>	Not allowed.
<b>Impervious Surface</b>	Washing down or hosing down of impervious surfaces such as buildings, sidewalks, driveways, patios, porches, parking areas or other paved surfaces is prohibited.	
<b>Water Waste/Runoff</b>	Runoff of more than 10 feet from the edge of the property will be considered water waste.	

5. Watering by handheld hose with an automatic shut off device such as a hose-end nozzle or sprayer that requires continuous human action (such as squeezing of a lever) is permitted on the water day and times reflected above. Buried drip irrigation is still permitted as long as it is buried at least 6 inches deep.
6. Apartments, office building complexes, or other property containing multiple addresses will be identified by the lowest physical address number. Where there are no numbers, a number will be assigned by the Building Official.
7. No variances for newly installed plantings will be given.
8. Existing swimming pools, hot tubs, spas, ornamental ponds and fountains may be replenished with a handheld hose to maintain operation only.
9. Permitting of new swimming pools, hot tubs, spas, ornamental ponds or fountain construction is prohibited, except that those under construction at the time Stage 3 restrictions are initiated may complete construction and may be filled one time only. Filling occurs when an amount of water equal to at least seventy-five (75) percent of the water capacity is placed in the structure or facility.
10. Excessive water run-off from any landscaped area onto streets, alleys, or parking lots is prohibited. Run-off is excessive when it extends for a distance greater than ten (10) feet from the customer's property.
11. Washing or hosing down buildings, sidewalks, driveways, patios, porches, parking areas, or other paved surfaces is prohibited.
12. Commercial car washes will not be allowed to operate during Drought Stage 3.
13. Use of water from fire hydrants is prohibited except for firefighting and health and safety related activities.
14. Any other measure that the City Manager determines is necessary and in the best interest of the public to maintain an adequate water supply.
15. Conservation Rates take effect.

### Residential Conservation Rates

Volumes	Stage 1	Stage 2	Stage 3	Stage 4
0-3000 gallons	No change	No change	No change	No change
3,001-8,000 gal	No change	No change	No change	No change
8,001 – 15,000 gal	No change	No change	10% increase	20% increase
15,001 – 25,000 gal	No change	10% increase	20% increase	25% increase
25,001 + gal	No change	20% increase	40% increase	50% increase

### Irrigation Conservation Rates

0-25,000 gallons	No change	10% increase	20% increase	25% increase
25,001 + gallons	No change	20% increase	40% increase	50% increase

### Exceptions:

- Commercial landscape nurseries are exempt from Stage 3 restrictions (except for restrictions on hours when watering may occur), but all such nurseries shall cease using water to clean pavement and sidewalk areas except for health and safety reasons.
- Golf course landscape watering and Athletic Field watering must adhere to the water plan that they submitted or adhere to the once-a-week watering.

### **Stage 3 Goal**

Reduction of previous three-year average daily use by 2% November – March and 15% from April – October.

### **Stage 4 Triggers – EMERGENCY Water Shortage**

1. Requirements for implementation of Stage 4. The city manager will implement stage 4 restrictions when any of the following conditions exist:
  - The Lake Waco reservoir level to 445 msl (at which the reservoir is at about 40% of its capacity);
  - There is a determination by the City Manager of catastrophically decreasing lake reservoir levels and/or delivery capabilities with an inability to recover to provide services necessary for public health, safety, and welfare exist;
  - Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water;
  - The total amount of water available, as determined by the water utilities director, to the city from its developed water sources is less than a 12-month supply; and/or
  - Other unforeseen events, such as a water treatment plant, pipe or pump failure, or source of supply or system contamination that necessitate the public's participation in a reduction of water usage.
2. Criteria for termination – Stage 4 will be terminated at the discretion of the City Manager or designee and may be based on:
  - An increase in the level of Lake Waco;
  - An improvement in delivery capabilities and ability to provide services necessary for public health, safety, and welfare;
  - Weather forecast and stream flow conditions that, in the opinion of the city manager, warrant removal of restrictions on the use of water;
  - An increase in the total amount of water available; and/or
  - The ending of unforeseen events that necessitated the public's participation in water restrictions.

### **Stage 4 Responses**

Mandatory restrictions – Upon implementation by the city, the following restrictions shall apply unless specifically exempted:

1. Any and all outdoor/landscaping water usage is prohibited until the emergency is alleviated. This applies to all metered water users using the city's public water supply and includes all residential (single or multi-family), commercial (car wash, nurseries, business), recreational (public/private golf courses, parks, athletic fields), religious, health care, school and municipal entities. This applies to watering with a handheld hose and drip irrigation.
2. Use of water for municipal purposes shall be limited to only those activities necessary to maintain the public health, safety and welfare, as determined by the city.
3. Use of water from fire hydrants is prohibited except for firefighting and health and safety related activities.
4. Any other measure that the City Manager determines is necessary and in the best interest of the public to maintain an adequate water supply.
5. Conservation Rates take effect.

**Residential Conservation Rates**

Volumes	Stage 1	Stage 2	Stage 3	Stage 4
0-3000 gallons	No change	No change	No change	No change
3,001-8,000 gal	No change	No change	No change	No change
8,001 – 15,000 gal	No change	No change	10% increase	20% increase
15,001 – 25,000 gal	No change	10% increase	20% increase	25% increase
25,001 + gal	No change	20% increase	40% increase	50% increase

**Irrigation Conservation Rates**

0-25,000 gallons	No change	10% increase	20% increase	25% increase
25,001 + gallons	No change	20% increase	40% increase	50% increase

**Stage 4 Goal**

Reduction of previous three-year average daily use by 5% November – March and 20% April – October. The City Manager or his/her designee can set a goal for greater water use reduction as circumstances warrant.

**SECTION X: ENFORCEMENT**

1. No person shall intentionally, knowingly, recklessly or with criminal negligence allow the use of water from the city for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Division or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by the city, in accordance with provisions of this Division.
2. Any person, including a person classified as a water customer of the city, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation.
3. The account holder will be responsible for violations that occur on the property, even if the account holder does not physically reside at or on the property. Proof that the notices required under Section 26-94 have been given shall constitute a rebuttal presumption that the person has knowledge of and/or is aware of the declaration of a drought or emergency contingency stage, but such presumption may be rebutted by evidence that the person was out of city at the time of the declaration and could not reasonably have become aware of the declaration since returning to the city.
4. Any person who violates this Division is guilty of a misdemeanor and upon conviction shall be punished by a fine as provided in Section 1-14, General Penalty. Each day that one or more of the provisions in this plan is violated shall constitute a separate offense.
5. If a person is observed, on at least two occasions during Drought/Emergency Stage 2 through Stage 4, violating any water restrictions established for the applicable Drought/Emergency Stage, the city shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur.

6. The City may utilize the Automatic Metering Management System to determine the time-of-day usage for any or all customers. A citation may be written for violating the time of day or day usage by a customer. The citation will be issued to the account holder in such instances.
7. If a person is convicted of three (3) or more distinct violations of this Division, the city shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur.
8. Water service may be discontinued if three or more violations occur at a service address within a 30-day period. Service discontinued under such circumstances will be restored only upon payment of: (1) the Service Call Fee set out in the City of Waco Fee Schedule, and (2) any and all penalties incurred by violating the ordinance. In addition, suitable assurance must be given to the city that the same action shall not be repeated while the plan is in effect.
9. The City is entitled to pursue all other criminal and civil remedies to which it is entitled under statutes or other ordinances. Compliance with this Division may also be sought through injunctive relief in the district court.

**SECTION XI: VARIANCES**

A customer may file an application for a variance from this plan for the property receiving water service with the City Manager or designee. The City Manager or designee may determine the proper information and require that the applicant provide such information to evaluate the variance request.

The City Manager or designee may grant a variance from the Plan upon his/her determination that special circumstances exist that upon strict enforcement of the plan will adversely affect the health, sanitation, or fire protection for the public or the applicant.

- Newly installed landscaping has a different water need than established landscaping. Customers with newly installed landscaping that need additional watering days to become established, must apply for a variance from the mandatory watering schedule. If a variance is approved, the following additional water days will be allowed on the subject property under the following requirements:

Variances	Conservation & Drought Stages	MAXIMUM DAYS ALLOWED (from date of plant installation)
	Conservation	60
	Drought Stage 1	45
	Drought Stage 2	30
	Drought Stage 3	0
	Drought Stage 4	0
<b>Plants</b>	Variance can only be used for the plants and area listed in the variance	
<b>Effective Time Frame</b>	A variance will take effect on the date which it is approved by the City. Variance end date will be based on the date of plant installation.	

- Variances can only be utilized for the plants and planting area designated.

- Variances granted will expire upon a declaration of drought or an escalation of the Plan to the next higher Stage or upon termination of the declaration of drought.

Water Utility Services will provide a link to Texas A & M Agrilife for a list of turf grasses that are considered drought tolerant at [wacowater.com](http://wacowater.com). This list is not meant to be all inclusive but is for guidance.

**ATHLETIC FIELDS AND GOLF COURSES**

Additional water use restrictions during year-round conservation include mandatory water plans for all athletic fields and golf courses. These plans are due annually by March 1st of each year, (except the first year (2024), when the plan is due by July 1, 2024), and must include an evaluation of how much water is intended to be used, how and who is monitoring, the water meters included in the plan, and how water will be reduced in accordance with water reduction goal in each Drought Stage when Waco declares a Drought Stage. The Director of Water Utilities or designee can deny a plan that does not include appropriate conservation measures and reduction in water usage and waste. **Any athletic field or golf course owner who does not submit a water plan will be required to adhere to the Year- Round Outdoor Water Conservation and Drought Contingency and Water Emergency Management Plan Measures schedule.**

**Athletic Fields and Golf Courses Conservation Measures**

Annual Water Plan (AWP)	Due July 1, 2024 and March 1st each year thereafter
Water Amount and method of evaluation	Amount of Water to be used during Year-Round Conservation and for each drought stage. Each Drought Stage water total should be reduced by the minimum percentage amount stated for that stage.
Meter Number	Any meter that measures water on an athletic field or golf course.
Person and method	Who will monitor the plan, their contact information, and how they will monitor the plan to achieve the water reduction
Drought Stage 4	No Outside Watering

**SECTION XII: STATE MANDATED WATER RESTRICTIONS**

1. If a State agency with jurisdiction over water rights and use lawfully orders that drought response restrictions on water usage be imposed, the water restrictions shall be implemented, regardless of whether any of the criteria for implementation stated in Sec. 26-97 or Sec. 26-98 have been met.
2. The city manager shall notify the public of the implementation of the state mandated restrictions as provided in Sec. 26-94. Said notice shall set out the specific restrictions to be implemented.
3. No person shall intentionally, knowingly, recklessly, or with criminal negligence allow the use of water from the city for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner:
  - a. Contrary to the notice issued under subsection 2 above; or
  - b. Contrary to the state mandated restriction; or
  - c. In excess of state mandated usage limits.
4. If a violation of the mandated restriction occurs, notice of the violation may be given as provided in Sec. 26-95 and the violation may be punished as provided in Sec. 26-96.