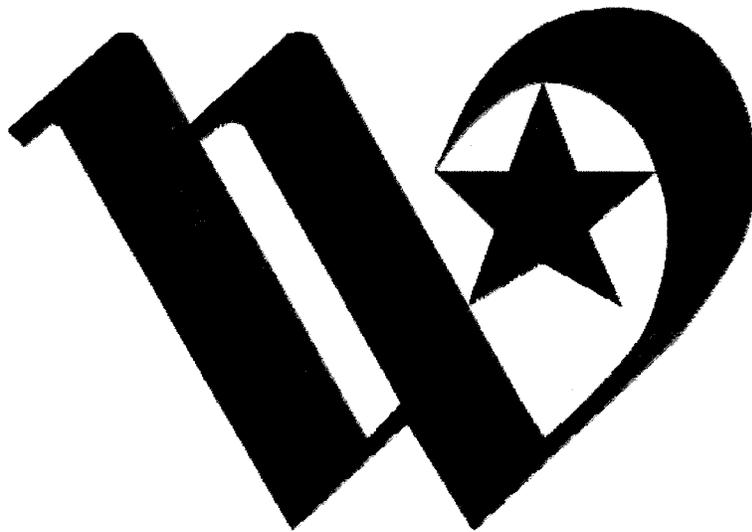


City of Waco

2014 Water Conservation &
Drought Contingency Plan



A – 2014 Water Conservation Plan

B – 2014 Drought Contingency Plan

A

City of Waco

Water Conservation Plan

2014

The City of Waco Water Conservation Plan is intended to enable the city to meet or exceed its own water conservation goals, including: quantified 5 and 10 year GPCD targets and in general, reduce consumption, loss, waste and peak demand while improving water use efficiency and extending the life of the water supply and system.

Water Conservation
Plan: Updated for 2014

CITY OF WACO WATER CONSERVATION PLAN

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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 in Region G have led to growing demands for water. Additional supplies to meet higher demands will be expensive and difficult to develop. Therefore, it is important that we make efficient use of existing supplies and make them last as long as possible. This 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 and drought contingency plans for public water suppliers.

The City of Waco has adopted this water conservation and drought contingency plan pursuant to TAC Title 30, Part 1, Chapter 288. The objectives of the water conservation plan are:

- To reduce water consumption
- To reduce the loss and waste of water
- To reduce summertime peak demand
- To improve efficiency in the use of water
- To extend the life of current water supplies
- To use raw water for agricultural/irrigation use in order to conserve treated water

2. UTILITY PROFILE

Current Service Area:99 square miles

Current Population of Service Area: 129,570

Served by Water and Wastewater: 129,570

(a) Historical Population

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Service
2009	124,805	51,275	124,805
2010	126,053	51,931	126,053
2011	127,083	52,559	127,083
2012	128,288	52,847	128,288
2013	129,570	53,375	129,570

(b) Projected Populations

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Service
2020	137,000	57,111	137,000
2030	150,700	62,822	150,700
2040	165,770	69,104	165,770
2050	182,347	76,015	182,347
2060	200,581	83,616	200,581

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.

(c) Historical System Input

Year	Self-supplied Water in Gallons	Purchase /Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2009	10,192,107,000		334,886,090	9,857,220,910	216
2010	9,961,767,000		986,799,700	8,974,967,300	195
2011	11,818,714,000		1,200,316,600	10,618,397,400	229
2012	10,281,819,000		837,285,100	9,444,533,900	202
2013	10,427,277,000		1,239,694,000	9,187,583,000	194
Historic 5-year Average	10,536,336,800	0	919,796,298	9,616,540,502	207

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.

(d) Water Supply System Data

Designed Daily Capacity of System:	90 MGD
Elevated Storage:	20.5 million gallons
Ground Storage:	10.6 million gallons

(e) Water Supply Sources

Water Supply Source	Source Type*	Total Gallons
Lake Waco	Surface	25,700,000,000
Trinity Aquifer	Ground	289,168,943
Brazos River	Surface	1,800,000,000

(f) Projected Demands

Year	Population	Water Demands (gallons)
2015	184,774	11,501,957,630
2016	186,662	11,547,965,460
2017	188,488	11,594,157,322
2018	190,373	11,640,533,951
2019	192,276	11,687,096,087
2020	194,199	11,733,844,471
2021	196,141	11,780,779,849
2022	198,102	11,827,902,968
2023	200,083	11,875,214,580
2024	202,083	11,922,715,438

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.

(g) High Volume Retail Customers

Retail Customer	Water Use Category*	Annual Water Use	Treated or Raw
Cargill Meat Solutions	Industrial	299,667,900	Treated
Coca Cola North America	Industrial	262,156,000	Treated
Pilgrim's Pride Corporation	Industrial	227,198,000	Treated
Mars Chocolate North America	Industrial	134,816,000	Treated
Allergan, Inc.	Industrial	53,730,100	Treated

(h) Wholesale Customers

Wholesale Customer	Contracted Amount (Acre-Feet)	Previous Year Amount of Water Delivered (Acre-Feet)
Hewitt	-	938.56
Lacy Lakeview	1,120.14	804.29
Robinson	561.00	227.03
West	1,120.08	226.99
Woodway	1,120.15	1,527.75
Central Bosque	96.68	80.11
Bold Springs	560.07	0

(i) Wholesale Customer Service Area Specific, Quantified 5 & 10 Year Targets for Water Savings

	5-Year Goal	10-Year Goal
Total GPCD	221	196
Water Loss Percentage	7%	8%

The basis for determining specific quantified 5 and 10 years targets for the wholesaler's area of service are the 5 and 10 year targets for reduction of total GPCD and water loss of the wholesale provider.

(j) Retail Connections

Water Use Category*	Active Retail Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Residential – Single Family	37,690		37,690	85%
Residential – Multi-family (units)	445		445	1%
Industrial	12		12	0%
Commercial	6,247		6,247	14%
Institutional			0	0%
Agricultural			0	0%
TOTAL	44,394	0	44,394	

(k) New Retail Connections Historically

Water Use Category*	Net Number of New Retail Connections				
	2009	2010	2011	2012	2013
Residential – Single Family	198	510	128	792	514
Residential – Multi-family (units)	12	46	52	64	17
Industrial					
Commercial		3	8	28	14
Institutional					
Agricultural					
TOTAL	210	559	188	884	545

(l) Historic Water Use

Water Use Category*	Total Gallons of Retail Water				
	2009	2010	2011	2012	2013
Residential - Single Family	3,334,518,400	3,189,542,100	4,104,716,100	3,475,855,600	3,427,263,700
Residential – Multi-family	9,505,500	7,086,800	8,120,500	7,013,300	8,547,200
Industrial	1,045,163,400	1,187,532,500	1,090,510,300	1,088,658,700	1,053,261,600
Commercial	4,373,269,600	4,082,425,000	5,239,358,200	4,961,279,700	4,734,723,600
Institutional					
Agricultural					
TOTAL	8,762,456,900	8,466,586,400	10,442,705,100	9,532,807,300	9,223,796,100

(m) Residential GPCD

Water Use Category*	Residential GPCD				
	2009	2010	2011	2012	2013
Residential - Single Family	73	70	90	75	73
Residential – Multi-family					

(n) Seasonal Water Use

Month	Total Gallons of Treated Retail Water				
	2009	2010	2011	2012	2013
January	649,154,000	598,738,500	572,375,800	602,688,400	605,215,500
February	599,716,000	476,880,600	558,698,400	588,465,700	541,146,100
March	663,672,000	535,613,700	681,345,000	652,146,600	632,095,500
April	667,634,000	648,396,500	845,099,100	686,610,400	635,206,100
May	745,063,000	874,591,000	888,699,800	879,642,300	731,715,500
June	1,154,592,000	1,032,281,000	1,159,034,000	891,576,000	903,378,500
July	1,208,878,000	1,116,122,500	1,263,109,200	982,830,900	1,069,258,200
August	1,283,684,000	1,203,400,700	1,360,501,400	1,086,553,400	1,159,891,600
September	926,520,000	845,826,200	1,128,566,400	884,505,100	1,002,761,600
October	708,750,000	659,862,500	827,847,700	745,714,100	760,478,500
November	631,394,000	666,098,600	707,595,000	755,638,500	604,150,500
December	619,050,000	658,384,700	597,055,600	649,001,700	542,285,400
TOTAL	9,858,107,000	9,316,196,500	10,589,927,400	9,405,373,100	9,187,583,000

(o) Seasonal Raw Water Use

Month	Total Gallons of Raw Retail Water				
	2009	2010	2011	2012	2013
January	4,320,784	5,767,863	4,881,248	201,005,681	1,788,932
February	7,005,797	557,205	9,221,583	202,152,684	6,321,548
March	9,228,100	850,471	14,832,738	726,648	8,136,549
April	6,096,672	7,080,742	30,147,919	5,493,881	6,279,187
May	8,204,928	8,602,466	57,216,528	18,941,834	12,434,550
June	39,092,344	22,320,794	105,410,186	36,137,097	20,659,080
July	40,786,770	32,633,978	134,971,571	33,015,425	34,937,958
August	42,275,909	39,691,910	156,764,619	50,233,498	28,003,806
September	27,795,090	21,092,335	175,276,328	32,230,120	31,402,453
October	1,876,902	33,109,720	190,063,537	18,765,874	11,874,083
November	5,402,610	8,527,521	200,353,975	10,505,500	4,715,092
December	641,926	7,168,722	200,604,882	9,205,347	1,234,982
TOTAL	192,727,832	187,403,727	1,279,745,114	618,413,589	167,788,220

(p) Seasonal vs. Annual Water Use

Water Use	Seasonal and Annual Water Use					Average in Gallons
	2009	2010	2011	2012	2013	
Summer Retail (Treated + Raw)	3,769,309,023	3,446,450,814	4,179,790,976	3,080,346,320	3,216,129,144	3,538,405,269
						Syr Average
TOTAL Retail (Treated + Raw)	10,050,834,833	9,503,600,214	11,869,672,511	10,023,786,668	9,355,371,220	10,160,653,096
						Syr Average

(q) Water Loss

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss as a Percentage
2009	1,068,721,435	23	11%
2010	628,088,664	14	7%
2011	1,244,583,015	27	12%
2012	448,715,131	10	5%
2013	535,479,189	11	6%
5-year average	785,117,487	17	8%

(r) Peak Water Use

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2009	28,671,000	49,492,000	1.73
2010	26,274,000	48,335,000	1.84
2011	32,351,000	53,302,000	1.65
2012	28,107,000	46,063,000	1.64
2013	28,920,000	49,068,000	1.70

(s) Wastewater System Data

Design Capacity of Wastewater Treatment Plants:	46.5 MGD
Percentage of Water Serviced by Wastewater System:	99%

Description of Wastewater Systems of Wholesale Customer Areas

With the exception of Bold Springs and Central Bosque, all wastewater systems of wholesale customer areas, while separate collections systems, all feed into the Waco Metropolitan Regional Sewerage System for transportation to and treatment at one of two wastewater treatment plants. Bold Springs and Central Bosque remain completely reliant on individual septic systems.

(t) Wastewater Connections

Water Use Category*	Active Wastewater Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal		34,040	34,040	90%
Industrial		60	60	0%
Commercial		3,654	3,654	10%
Institutional			0	0%
Agricultural			0	0%
TOTAL	0	37,754	37,754	

(u) Historic Gallons of Wastewater Treated

Month	Total Gallons of Treated Wastewater				
	2009	2010	2011	2012	2013
January	646,130,000	908,320,000	757,860,000	878,040,000	804,840,000
February	612,790,000	1,126,090,000	677,650,000	1,105,100,000	668,150,000
March	780,280,000	1,146,440,000	700,030,000	1,234,050,000	731,670,000
April	691,692,600	879,575,000	603,400,000	791,730,000	667,490,000
May	725,080,000	760,910,000	563,570,000	743,590,000	719,950,000
June	598,140,000	774,510,000	556,730,000	711,860,000	651,060,000
July	651,990,000	720,370,000	596,400,000	717,770,000	693,310,000
August	635,460,000	697,160,000	697,530,000	729,820,000	637,530,000
September	830,760,000	774,850,000	690,670,000	705,840,000	665,220,000
October	1,126,090,000	671,840,000	693,960,000	748,160,000	808,990,000
November	863,870,000	669,070,000	643,240,000	662,830,000	825,250,000
December	804,150,000	673,660,000	884,860,000	680,740,000	740,790,000
TOTAL	8,966,412,600	9,802,795,000	8,065,900,000	9,709,530,000	8,614,250,000

(v) Reuse Information

Type of Reuse	Total Annual Volume (in gallons)
Industrial	88,790,000

3. SPECIFIC, QUANTIFIED 5 & 10-YEAR TARGETS

The projected reductions are shown at 5 and 10 year increments as required by HB 2660. These targets and goals will be updated every five years, or whenever the Water Conservation Plan is revised.

	Historic 5-yr Average	Baseline	5-yr Goal for 2019	10-yr Goal for 2024
Total GPCD	225	226	221	196
Residential GPCD	76	74	69	64
Water Loss (GPCD)	19	16	16	15
Water Loss Percentage	8%	7%	7%	8%

4. IMPLEMENTATION

- Metering and measuring the amount of raw water diverted from Lake Waco will continue as an essential part of city’s treatment process control and reporting requirements.
- The meter replacement program will be maintained, replacing all meters within 8 years or 1.5 million gallons. Accuracy of meters and fail rates will be continually monitored and appropriate adjustments made to the replacement program.
- Annual water audits to determine water loss will continue to be conducted. The

city will continue maintaining 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 is 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 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 plans, multiple notices will be inserted in all customer bills, items promoting conservation will also be offered as "give-away" items at the customer service center and any public events or speaking engagements.
- 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.

5. 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/make will be compared in order to evaluate the replacement cycle.
- Water loss accounting will be evaluated by 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 time period.

- Public information and education efforts will be evaluated by documenting actions, such as: number of press releases issued, number of 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 time 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 historic trends and adjustments will be made to the rate structure as appropriate.

6. 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 spreadsheet of water use (treated water) is updated on a daily basis.

7. UNIVERSAL METERING

The City maintains meters to ensure that accurate readings (meters registering at an accuracy of no less than ninety-five percent (95%) or no higher than one hundred five percent (105%) expressed as a 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. The most common size meter in the City is 5/8", which are replaced at 1.5 million gallons of usage.

The City of Waco requires meters for all connections and bills by volume of use. The City collects and tabulates metered water usage data on Commercial, Industrial, Residential (Single-Family, Multi-Family, and Duplex), Municipal and Wholesale accounts. Further, the City collects data on dedicated irrigation meters for all the above-mentioned classes.

8. 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.

9. 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. Crews and personnel look for and report 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 70 full-time distribution line employees 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.

10. CONTINUING PUBLIC EDUCATION AND INFORMATION

The City of Waco's water utility will produce written materials in the form of

- Brochures
- Newsletter articles
- Media releases
- Public service announcements.

These are distributed to the customers, the local media, and to nonprofit local organizations such as neighborhood associations and civic improvement organizations so they may educate their members as well.

The water utility ensures that multimedia materials are also available through the utility's web site, <http://www.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:

- Interactive screens on the city's web site
- Interviews with city experts in irrigation and plant water demand on the local access channel
- Interviews with city water utility management on the local access channel and with local television stations
- Press conferences to promote key educational programs
- Press events, such as giveaways or educational events focused on reducing water use
- Booths at public events sponsored by neighborhood associations, civic organizations, not-for-profit education groups, and other city departments.

The water utility creates and distributes promotional items encouraging water

conservation on a regular basis.

11. NON-PROMOTIONAL 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 (Inside City)			Residential Water Rates (Outside City)		
<i>Rate is based on your meter size + usage tier</i>			<i>Rate is based on your meter size + usage tier</i>		
5/8 inch meter	\$15.00		5/8 inch meter	\$17.40	
1 inch meter	\$24.24		1 inch meter	\$28.03	
1.5 inch meter	\$34.90		1.5 inch meter	\$40.28	
2 inch meter	\$48.10		2 inch meter	\$55.47	
3 inch meter	\$75.94		3 inch meter	\$87.48	
0 - 15,000 Gallons	\$2.54	<i>per 1,000</i>	0 - 15,000 Gallons	\$2.92	<i>per 1,000</i>
15,001 - 25,000 Gallons	\$2.98	<i>per 1,000</i>	15,001 - 25,000 Gallons	\$3.43	<i>per 1,000</i>
Over 25,000 Gallons	\$3.82	<i>per 1,000</i>	Over 25,000 Gallons	\$4.40	<i>per 1,000</i>

12. 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 Army Corps of Engineers.

13. WHOLESALE WATER CONTRACT PROVISIONS

For every water supply contract or wholesale water supply contract entered into, renewed or extended after official adoption of the water conservation plan, each successive wholesale customer is contractually obligated to develop and implement a water conservation plan or water conservation measures in accordance with 30 TAC Chapter 288. If the customer intends to resell the water, then the customer is contractually obligated to ensure that the contract for the resale of the water has water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of 30 TAC Chapter 288. Customers with older contracts not requiring water conservation provisions are asked to voluntarily implement a water conservation plan or water conservation measures similar to those implemented by the City of Waco.

14. AGRICULTURAL WATER USE

Agricultural use is for 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. City staff monitors the water distribution system—including a meter system and pump stations—on a daily basis in order to detect, repair, and account for water loss. The City currently uses meters that are within an accuracy of plus or minus 5.0% to measure and account for the amount of water diverted from the source of the supply; City wholesale contracts require meter performance to comply with the American Water Works Association water metering standards. 30 TAC §§ 288.4(a)(2) and (a)(3) are not applicable to the City of Waco.

15. 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.

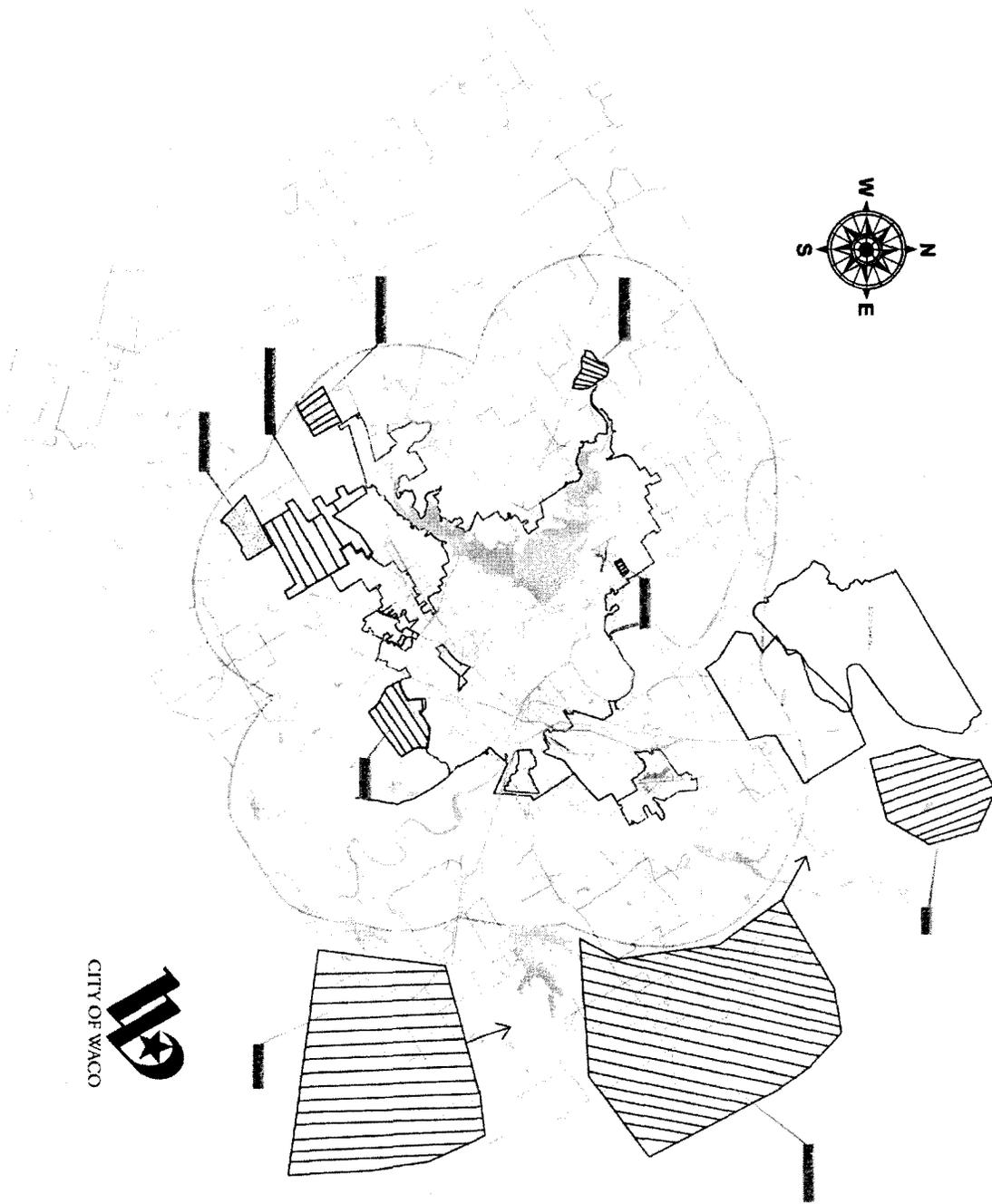
16. COORDINATION WITH REGIONAL WATER PLANNING GROUP

The service area of the City of Waco is located within the Brazos G Regional Planning area and the City of Waco has provided a copy of this Water Conservation and Drought Contingency Plan to the Region Planning Group (RPG). A copy of the transmittal letter to the planning group is provided in Appendix B.

This Plan is consistent with Waco's role as a leader in water supply planning in the RPG, and meets the standards for water conservation planning in TAC Chapter 288.

17. CCN MAP

(following page)



APPENDIX A

City of Waco Ordinance No. 2014 – 434

ORDINANCE NO. 2014-434

AN ORDINANCE OF THE CITY OF WACO, TEXAS ADOPTING AND AMENDING THE CITY'S 2014 WATER CONSERVATION AND DROUGHT CONTINGENCY PLAN AT CHAPTER 26, UTILITIES, ARTICLE IV, DIVISION 2, OF SAID CODE, MODIFYING CONSERVATION TRIGGERING CONDITIONS, DECREASING THE NUMBER OF DROUGHT RESPONSE STAGES TO FOUR, ESTABLISHING GOALS FOR EACH OF THE FOUR STAGES; PROVIDING A SAVINGS CLAUSE; REPEALING CONFLICTING ORDINANCES; PROVIDING FOR A PENALTY; PROVIDING FOR INCLUSION IN THE CODE; AND FINDING AND DETERMINING THAT THE MEETING AT WHICH THIS ORDINANCE IS PASSED IS OPEN TO THE PUBLIC AS REQUIRED BY LAW.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF WACO, TEXAS:

Section 1. That Article IV, Division 2 in Chapter 26, Utilities, of the Code of Ordinances of the City of Waco, Texas, shall be amended to read as follows: (additions; ~~deletions~~)

Sec. 26-93 Plan adoption and application.

(a) By this division, the city approves and adopts the 2014 Water Conservation and Drought Contingency Plan for the City of Waco, Texas. A copy of the Plan adopted by this section is attached to Ord. No. 2014-___ as Exhibit "A" and shall be on file with the director of utilities and city secretary and available for inspection.

Sec. 26-96 Violations and penalty.

If a person is observed violating a stage 2 or greater, restriction including but not limited to vehicle washing, landscape watering, or construction water use, for a second time, the city shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur.

Sec. 26-98. Drought or emergency contingency stages.

(a) *Generally.*

(1) Upon the occurrence of a water ~~shortage~~ ~~storage~~ emergency, 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 State is dependent on climatic and water system conditions, and does NOT necessarily require a progression from Stage 1 through Stage 3 to reach Stage 4.

- (2) In the “Response” section of each of the four Stages, specific water supply or water demand management measures to be implemented are discussed.
- (3) Pro rata curtailment of water delivery to or diversions by wholesale water customers may be implemented during any Stage of the Plan in accordance with Texas Water Code § 11.039.
- (4) Currently 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. At any Stage of the Plan, the City of Waco may utilize any future available alternative water source with the prior approval of the executive director as appropriate.

(b) *Stage 1 triggers—Mild water shortage.*

(1) *Criteria for implementation of stage 1.*

- a. A decrease in the Lake Waco reservoir level to **455** msl (at which the reservoir is at about **72** percent of its capacity). Upon recommendation of the city manager, stage **1** procedures shall become effective.
- b. Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water.

(2) *Criteria for termination.* Stage **1** shall be terminated at the discretion of the city manager.

(3) *Stage 1 responses: Mandatory restrictions.* Upon implementation by the city, the following restrictions shall apply unless specifically exempted:

- a. The city shall limit use of water for municipal purposes to those activities necessary to maintain the public health, safety and welfare and any computer-controlled irrigation systems that incorporate evapotranspiration data in setting irrigation run times.
- b. The city shall monitor "excessive watering" and issue notifications to customers. "Excessive watering" occurs where run-off extends for a distance greater than ten 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. Criminal penalties do not apply during stage **1** restrictions.

(4) *Stage 1 Goal.* Reduction of previous three-year average daily use by 1 percent.

(c) *Stage 2 triggers – Moderate water shortage.*

(1) *Criteria for implementation of stage 2.*

- a. A decrease in the Lake Waco reservoir level to **452** msl (at which the reservoir is at about **60** percent of its capacity) or inability to recover approximately 90 percent in all storage facilities within a **24** hour period. Upon recommendation of the city manager, stage **2** procedures shall become effective.
- b. Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water.

(2) *Criteria for termination -* Stage **2** shall be terminated at the discretion of the City Manager.

(3) *Stage 2 responses: Mandatory restrictions.* Upon implementation by the city, the following restrictions shall apply unless specifically exempted:

a. All landscape and other outdoor water usage and each service address shall be limited to two days a week based on the last digit of the meter service address or the type of connection, however, landscape and outdoor usage is prohibited from 6:00 a.m. to 7:00 p.m.

Last Digit Address Residential	Allowed Landscape Water Days
Odd	Tuesday and Saturday
Even	Wednesday and Sunday
All non-residential accounts	Monday and Friday
Thursday	No watering, storage recovery day

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. **Criminal penalties do apply during stage 2 restrictions.**

b. Watering of newly installed landscaping is exempt from Stage 2 restrictions for no more than one month from the date of planting. After the first month, the landscape water day’s schedule and hourly restrictions must be followed.

(4) *Stage 2 Goal.* Reduction of previous three-year average daily use by 5 percent.

(d) *Stage 3 triggers—Severe water shortage.*

(1) *Criteria for implementation of stage 3.*

a. A decrease in the Lake Waco reservoir level to **449** msl (at which the reservoir is at about **50** percent of its capacity) or inability to recover approximately 90 percent of water stored in all storage facilities within a 30-hour period. Upon recommendation of the city manager, stage **3** procedures shall become effective.

b. Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water.

c. The total amount of water available to the city from its developed water sources—as determined by the water utilities director—is less than a 24-month supply.

(2) *Criteria for termination.* Stage **3** shall be terminated at the discretion of the city manager.

(3) *Stage 3 responses—Mandatory restrictions.* Upon implementation by the city, the following restrictions shall apply unless specifically exempted:

a. All landscape and outdoor water usage at each service address shall continue the allowed landscape water days schedule identified **below**; however, landscape and outdoor water usage is prohibited from 6:00 a.m. to 7:00 p.m.

Last Digit Address	Allowed Landscape Water Day
0, 1	Monday

2, 3	Tuesday
4, 5	Wednesday
6, 7	Thursday
8, 9	Friday
Saturday and Sunday	No watering, storage recovery days

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.

- b. Existing swimming pools, hot tubs, spas, ornamental ponds and fountains may be replenished with a hand-held hose to maintain operational purposes only.
- c. Permitting of new swimming pools, hot tubs, spas, ornamental ponds, or fountain construction is **prohibited**, except that those previously permitted or 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 75 percent of the water capacity is placed in the structure or facility.
- d. 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 feet from the customer's property.
- e. Washing or hosing down of buildings, sidewalks, driveways, patios, porches, parking areas, or other paved surfaces is prohibited.

(4) *Exceptions:*

- a. 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.
- b. Commercial full-service or self-service car wash facilities, including those at service stations and automobile dealership facilities, shall cease using water to clean pavement and sidewalk areas except for health and safety reasons and are exempt from stage 3 restrictions if they meet one or more of the following conditions:
 - 1. Commercial car wash facilities using conveyerized, touchless, and/or rollover in-bay technology if they reuse a minimum of 50 percent of water from previous vehicle rinses in subsequent washes.
 - 2. Commercial car wash facilities using reverse osmosis to produce water rinse with a lower mineral content if they incorporate the unused concentrate in subsequent vehicle washes.
 - 3. Self-service spray wands used that emit no more than three gallons of water per minute.

c. Golf course landscape watering is exempt from stage 3 restrictions so long as golf course irrigation systems are operated with a computer controlled irrigation system that incorporates evapotranspiration data in setting irrigation run times.

(5) *Stage 3 Goal*. Reduction of previous three-year average daily use by 7 percent.

(e) *Stage 4 triggers—Emergency water shortage*.

(1) Criteria for implementation of stage 4.

a. A decrease in the Lake Waco reservoir level to 445 msl (at which the reservoir is at about 40 percent of its capacity) or determination by the city manager that the existence 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.

b. Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water.

c. The total amount of water available to the city from its developed water sources—as determined by the water utilities director—is less than a 12-month supply.

(2) *Criteria for termination*. Stage 4 shall be terminated at the discretion of the city manager.

(3) *Stage 4 responses: Mandatory restrictions*. Upon implementation by the city, the following restrictions shall apply unless specifically exempted:

a. 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.

b. 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.

c. Use of water from fire hydrants is prohibited except for fire fighting and related activities.

(4) *Stage 4 Goal*. Reduction of previous three-year average daily use by 10 percent.

Section 2. If any provision, section, subsection, sentence, clause, or phrase of this Ordinance, or the application of same to any person or set of circumstances is for any reason held to be unconstitutional, void or invalid, the validity of the remaining portions of this ordinance of their application to other persons or sets of circumstances shall not be affected thereby, it being the intent of the City Council in adopting this ordinance that no portion hereof or provision or regulation contained herein shall be come inoperative or fail by reason of any unconstitutionally, voidness or invalidity of any other portion hereof, and all provisions of this Ordinance are declared to be severable for that purpose.

Section 3. That all ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed, and all other provisions of the ordinances of the City of Waco not in conflict with the provisions of this ordinance shall remain in full force and effect.

Section 4. That a violation of this ordinance shall be a Class C misdemeanor and the penalty for violating this ordinance shall be as provided for in Sec. 1-14 of the Code of Ordinances of the City of Waco, which shall be a fine of not less than one dollar (\$1.00) and no more than two thousand dollars (\$2,000.00), and each day a violation exists shall be a separate offense.

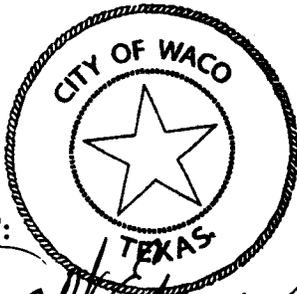
Section 5. That it is the intention of the City Council and is hereby ordained that the provisions of this Ordinance shall become and be part of the Code of Ordinances of the City of Waco, Texas, and that sections of this Ordinance and of the Code of Ordinances may be renumbered or relettered to accomplish such intention.

Section 6. That it is hereby officially found and determined that the meeting at which this Ordinance is passed is open to the public and that public notice of the time, place and purpose of said meeting was given as required by law.

PASSED AND APPROVED:

First Reading: the 15th day of July, 2014.

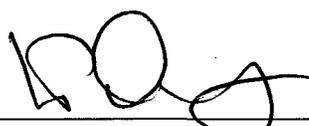
Second Reading: this 5th day of August, 2014.



ATTEST:

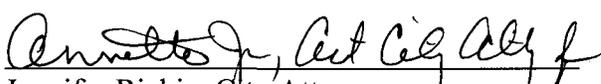


Patricia W. Ervin, City Secretary



Malcolm Duncan Jr., Mayor
City of Waco, Texas

APPROVED AS TO FORM & LEGALITY:



Jennifer Richie, City Attorney

APPENDIX B

Copy of Transmittal Letter to Brazos G Regional Planning Group



CITY OF WACO

Water Utilities
Post Office Box 2570
Waco, Texas 76702-2570
254 / 299-2489
www.waco-texas.com

September 25, 2014

Wayne Wilson, Chair – Brazos G RWPG
C/O
Trey Buzbee
Brazos River Authority
P.O. Box 7555
Waco, TX 76714

Re: Further Amendments to City of Waco Water Conservation Plan

Dear Wayne:

The City of Waco recently made further amendments to its Water Conservation and Drought Contingency Plan. This Plan remains consistent with Waco's role as a leader in water supply planning in Region G and meets the standards for water conservation planning in TAC Chapter 28.

Enclosed you will find copies of the amended Water Conservation and Drought Contingency Plan. If any additional information is needed for the Planning Group, please feel free to contact me at 254-750-8079.

Sincerely,

Joseph Bernosky
Director

B

City of Waco

Drought Contingency Plan

2014

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 to minimize the adverse impacts of water supply shortage or other water supply emergency conditions.

Drought Contingency
Plan: Updated for 2014

CITY OF WACO DROUGHT CONTINGENCY PLAN

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Appendix A – City of Waco Ordinance No. 2014 – 206 434

Section I: Declaration of Policy, Purpose, and Intent

In order 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 to minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the City of Waco hereby adopts the following regulations and restrictions on the delivery and consumption of water through Ordinance No. 2014 – 206. A copy is attached as appendix A.

Water uses regulated or prohibited under this Drought Contingency Plan (the 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 XI 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). 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 Water Contract Provisions

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

Section V: Irrigation Use

Water supply criteria and water allocation procedures, along with explanations of the rationale for the criteria, are included in the different Drought Stages in Section X, most specifically at “Triggers” and “Responses” of the Stages. To determine use accounting during water allocation, the City monitors a meter system. Procedures for the enforcement of water allocation are

included in Section XI: Enforcement.

The City contracts with individual users to allocate irrigation supplies. Penalties for exceeding contracted water amounts are included in the contract. Transfer of water allocations among individual users is prohibited: purchaser may only irrigate land owned by the purchaser, and purchaser may not assign any contractual rights without the prior written approval of the City. Contracts also include provisions concerning discontinuance of the diversion of raw water. Raw water purchasers are required to follow the City's water conservation and drought management plans. Section X (below) specifically refers to times when irrigation use will be limited. These provisions are not construed as requiring the transfer of irrigation water supplied to non-irrigation use on a compulsory basis or without just compensation.

Section VI: 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 VII: 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. The City Manager or his/her designee shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

Section VIII: Application

The provisions of this Plan shall 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 IX: Definitions

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

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

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.

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 or permitting water to run or accumulate in any gutter or street;
- (f) use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi-type pools;
- (g) use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
- (h) failure to repair a controllable leak(s) within a reasonable period after having been given

- notice directing the repair of such leak(s); and
- (i) use of water from hydrants for construction purposes or any other purposes other than fire fighting.

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

Water shortage emergency: a condition in which the ordinary water demands and requirements of the City's wholesale and retail customers cannot be met such that there would be insufficient water for human consumption, public health (sanitation), and fire protection. A water shortage emergency may be limited in either areal or temporal extent.

Section X: Criteria for Initiation and Termination of Drought Response Stages

The City Manager or his/her designee shall monitor water supply and/or demand conditions on a daily basis and shall 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 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 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.

- (1) 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.
- (2) In the “Response” section of each of the four Stages, specific water supply or water demand management measures to be implemented are discussed.
- (3) Pro rata curtailment of water delivery to or diversions by wholesale water customers may be implemented during any Stage of the Plan in accordance with Texas Water Code Section 11.039.
- (4) Currently 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. At any Stage of the Plan, the City of Waco may utilize any future available alternative water source with the prior approval of the executive director as appropriate.

Stage 1 Triggers –MILD Water Shortage

1. Criteria for implementation of Stage 1. The city manager shall implement stage 1 restrictions when:
 - (a) The Lake Waco reservoir level decreases to 455 msl (at which the reservoir is at about 72% of its capacity).
 - (b) Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water.
2. Criteria for termination - Stage 1 shall be terminated at the discretion of the City Manager.

Stage 1 Responses

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

1. The city shall limit use of water for municipal purposes to those activities necessary to maintain the public health, safety and welfare and any computer-controlled irrigation systems that incorporate evapotranspiration data in setting irrigation run times.
2. The city shall 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. Criminal

penalties do not apply during Stage 1 restrictions.

Stage 1 Goal

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

Stage 2 Triggers –MODERATE Water Shortage

1. Criteria for implementation of Stage 2. The city manager shall implement stage 2 restrictions when:
 - (a) The Lake Waco reservoir level decreases to 452 msl (at which the reservoir is at about 60% of its capacity)
 - (b) There is an inability to recover approximately ninety (90) percent of water stored in all storage facilities within a twenty-four (24) hour period. Upon recommendation of the City Manager, Stage 2 response procedures shall become effective.
 - (c) Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water.
2. Criteria for termination - Stage 2 shall be terminated at the discretion of the City Manager.

Stage 2 Responses

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

1. 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 meter service address or the type of connection; however, landscape and outdoor water usage is prohibited from 6:00 A.M. to 7:00 P.M.

Last Digit Address Residential:	Allowed Landscape Water Days
Odd	Tuesday and Saturday
Even	Wednesday and Sunday
All Non-Residential accounts	Monday and Friday

Thursday – No Watering, Storage Recovery day

2. 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. Criminal penalties do apply during Stage 2 restrictions.

3. Watering of newly installed landscaping is exempt from Stage 2 restrictions for no more than one month from the date of planting. After the first month, the landscape water day's schedule and hourly restrictions must be followed.

Stage 2 Goal

Reduction of previous three-year average daily use by 5%

Stage 3 Triggers – SEVERE Water Shortage

1. Criteria for implementation of Stage 3. The city manager shall implement stage 3 restrictions when:
 - (a) The Lake Waco reservoir level to 449 msl (at which the reservoir is at about 50% of its capacity) or inability to recover approximately ninety (90) percent of water stored in all storage facilities within a thirty (30) hour period.
 - (b) Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water.
 - (c) 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.
2. Criteria for Termination – Stage 3 shall be terminated at the discretion of the City Manager.

Stage 3 Responses

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

1. All landscape and outdoor water usage at each service address shall continue according to the landscape water days schedule identified below; however, landscape and outdoor water usage is prohibited from 6:00 A.M. to 7:00 P.M.

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

2. 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.

3. Existing swimming pools, hot tubs, spas, ornamental ponds and fountains may be replenished with a hand-held hose to maintain operational purposes only.
4. Permitting of new swimming pools, hot tubs, spas, ornamental ponds or fountain construction is **prohibited**, except that those previously permitted or 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.
5. 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.
6. Washing or hosing down of buildings, sidewalks, driveways, patios, porches, parking areas, or other paved surfaces is prohibited.

Exceptions:

- (a) 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.
- (b) Commercial full-service or self-service car wash facilities, including those at service stations and automobile dealership facilities, shall cease using water to clean pavement and sidewalk areas except for health and safety reasons and are exempt from Stage 3 restrictions if they meet one or more of the following conditions:
 - (i) Commercial car wash facilities using conveyORIZED, touchless, and / or rollover in-bay technology if they reuse a minimum of fifty percent of water from previous vehicle rinses in subsequent washes.
 - (ii) Commercial car wash facilities using reverse osmosis to produce water rinse with a lower mineral content if they incorporate the unused concentrate in subsequent vehicle washes.
 - (iii) Self-service spray wands used that emit no more than three gallons of water per minute.

- (c) Golf course landscape watering is exempt from Stage 3 restrictions so long as golf course irrigation systems are operated with a computer controlled irrigation system that incorporates evapotranspiration data in setting irrigation run times.

Stage 3 Goal

Reduction of previous three-year average daily use by 7%

Stage 4 Triggers –EMERGENCY Water Shortage

1. Requirements for implementation of Stage 4. The city manager shall implement stage 4 restrictions when:
 - (a) The Lake Waco reservoir level to 445 msl (at which the reservoir is at about 40% of its capacity)
 - (b) There is a determination by the City Manager that 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.
 - (c) Weather forecasts and stream flow conditions, in the opinion of the city manager, warrant restrictions on the use of water.
 - (d) 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.
2. Criteria for termination – Stage 4 shall be terminated at the discretion of the City Manager.

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.
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 fire fighting and health and safety related activities.

Stage 4 Goal

Reduction of previous three-year average daily use by 10%

Section XI: 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. Parents shall be presumed to be responsible for violations of their minor children, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this plan and that the parent could not have reasonably known of the violation. 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.
3. 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.
4. If a person is observed violating a Stage 2 or greater restriction, including but not limited to vehicle washing, landscape watering, or construction water use, for a second time, the city shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur.

5. 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.
6. Services discontinued under such circumstances shall be restored only upon payment of reconnection charge established by city policy and any other costs incurred by the city in discontinuing service. In addition, suitable assurance must be given to the city that the same action shall not be repeated while the plan is in effect.
7. 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 XII: Variances

1. A customer may file an application for a variance from this plan for the property receiving water service with the City Manager. The City Manager may determine the proper information and require that the applicant provide such information to evaluate the variance request.
2. The City Manager 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.
3. Variances granted under this section will expire upon escalation of the plan to the next higher phase or termination of the plan.

Section XIII: 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.

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APPENDIX A

City of Waco Ordinance No. 2014 – 434

See Appendix A of (previous) Section A of this document.