CITY OF BANDERA

WATER CONSERVATION PLAN

Adopted by the Bandera City Council on
May 14, 2024

TABLE OF CONTENTS

Contents

APPENDICES

Water Conservation Plan for
The City of Bandera

1. INTRODUCTION AND OBJECTIVES

Water supply has always been a key issue in the development of Texas. Additional supplies to meet increased demand will be difficult and expensive to develop. It is important that the City of Bandera make efficient use of its water supplies. The City procures its water from the lower and middle Trinity Aquifer.

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has required water conservation plans from public municipal water suppliers and has developed guidelines and requirements governing the development of these water conservation plans. These TCEQ guidelines and requirements are included in Appendix B. The objectives of this water conservation plan are as follows:

- Reduce seasonal peak demands.
- Reduce the loss and waste of water.
- Improve the efficient use of water.
- Maintain quality of life.

The City of Bandera draws its water from the lower Trinity Aquifer & middle Trinity Aquifer.

The three well sites are:

Dallas Street Well Site – 2 Wells
Indian Waters
Mulberry

Water is treated with chlorine at each of the well sites. Each well site has ground storage with the Dallas St. well also having an elevated storage tank. The city has divided its water system into two pressure planes -Dallas and Mulberry. The pressure planes are connected by PRVs. Dallas well site feeds the Dallas Pressure Plane. The Mulberry and Indian Waters wells supply the Mulberry Pressure Plane.

2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES

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 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a water conservation plan is defined as "A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the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 are covered in this report as follows:

TCEQ Rule	Location in Plan	Description
288.2(a)(1)(A)	Section 4.1	Utility Profile
288.2(a)(1)(C)	Section 3	Specification of Goals
288.2(a)(1)(D)	Section 4.2	Accurate Metering
288.2(a)(1)(E)	Section 4.3	Universal Metering
288.2(a)(1)(F)	Section 4.4	Determination and Control of Water Loss
288.2 (a)(1)(G)	Section 4.5	Public Education and Information Program
288.2(a)(1)(H)	Section 4.6	Non-Promotional Water Rate Structure
288.2(a)(1)(I)	Section 4.7	Reservoir System Operation Plan
288.2(a)(1)(J)	Section 4.8	Means of Implementation and Enforcement
288.2(a)(1)(K)	Section 4.9	Coordination with Regional Water Planning Group
288.2(a)(2)(A)	Section 4.10	Leak Detection, Repair, and Water Loss Accounting
288.2(a)(2)(B)	Section 4.11	Record Management System

Additional Conservation Strategies

TCEQ rules also list optional conservation strategies, which may be adopted.

TCEQ Rule	Location in Plan	Description
288.2(a)(3)(B)	Section 5.1	Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures
288.2(a)(3)(F)	Section 5.2	Considerations for Landscape Water Management Regulations

3. SPECIFICATION OF WATER CONSERVATION GOALS

Rule 288.2(a)(1)(C) requires the adoption of specific water conservation goals for a water conservation plan. The City has developed 5-year and 10-year goals for the reduction of per capita municipal use, as expressed in the water utility profile (Appendix C). The TCEQ defines municipal use in gallons per capita per day as "the total average daily amount of water diverted or pumped for treatment for potable use by a public water supply system. The calculation is made by dividing the water diverted or pumped for treatment for potable use by the population served." In this definition, the "water diverted or pumped" refers to the total volume of water metered at the City's four wells and includes the City's water loss.

These reduction goals, expressed in gallons per capita per day (gpcd), are based on the average total gpcd for the City for the last five years (2019-2023) which is 72 gpcd.

	Historic 5-year Average	Baseline	5-year Goal for 2028	10-year Goal for 2033
Total GPCD	72	72	71	70
Residential GPCD	31	31	28	27
Water Loss (GPCD)	6	6	6	5
Water Loss (Percentage)	9.2%	9.2%	8%	7%

4. MINIMUM CONSERVATION PLAN REQUIREMENTS

4.1 Water Utility Profile

The completed profile is included in Appendix C, which includes data on existing and projected service populations, number of connections, historical metered water sales and water production, and general utility system information.

4.2 Accurate Metering of Treated Water Delivery from the District

The City's has four (4) groundwater wells that supply all of the water used by the City. The well meters are calibrated annually.

4.3 Universal Metering, Meter Testing and Repair, and Periodic Meter Replacement

The City currently requires metering of all connections. Defective meters are replaced as needed. Abnormal consumption is flagged by the billing system algorithm, whether consumption is unusually high or low. The City will notify the customers of any abnormal uses and will investigate the meter for potential issues or adjacent leaks.

4.4 Determination and Control of Water Loss

Water loss is the difference between the amount of water supplied by the wells and the amount of water delivered (sold) to customers plus authorized but unmetered uses such as fire fighting, releases for flushing of lines, and uses associated with new construction. Water loss can include several categories:

- Inaccuracies in customer meters.
- Unmetered uses such as firefighting.
- Losses due to water main breaks and leaks in the water distribution system.
- Losses due to illegal connections and theft.
- Other.

The city's water loss for the last five years is reported in the Utility Profile in Appendix C. This water loss percentage has averaged around 9% over the last 5 years.

Other actions the city is taking to reduce loss include the following:

- The Public Works Department is currently in process to change over all water meters to AMR smart water meters and is currently 90% complete. The project is on schedule to finish by 2025.
- As of February 2024, the City has completed and implemented system wide SCADA monitoring equipment that will provide real-time pressure readings and available storage levels in the tank. This will allow the City to better track water production and monitor system inconsistency that may be indicative of leaks or failures.
- The fire department will continue to meter how much water they take and will select hydrants that are scheduled to be flushed or exercised.
- City employees and the public works department work together to identify possible leaks in the distribution system. Leaks are fixed as quickly as possible.

4.5 Continuing Public Education and Information Campaign

The continuing public education and information campaign on water conservation will be expanded to include the following elements:

- Insert water conservation information with water bills. Inserts will include material developed by City staff and material obtained from the Texas Water Development Board (TWDB), the TCEQ, and other sources.
- Encourage local media coverage of water conservation issues and the importance of water conservation.
- The City encourages and invites the local school district to schedule a water treatment plant tour with the City, at which the Public Works Department would present water conservation strategies.
- Make water conservation brochures, and other water conservation materials available to the public at City Hall.
- Information on water conservation was made available on its website in 2023 and include a link to the Texas AgriLife Extension Native and Adapted Landscape Plants, An Earthwise Guide to Central Texas.

4.6 Water Rate Structure

The City presently charges residents who live within the city limits, and have a standard 3/4" connection, a monthly service charge of $25.01 per water meter for customers that use less than 1,500 gallons of water. Customers who use more than 1,500 gallons of water but less than 2,000 gallons of water, they are charged a service charge of $30.01. This tiered service charge is set up to incentivize customers to conserve water.

In an effort to further promote water conservation, the City charges more per gallon for those customers who consume larger volumes of water. Water used is charged at a rate of $5.41 per 1000 gallons for customers who use more than 2,000 gallons up to 5,000 gallons. Residents who use over 5,000 gallons are charged $7.51 per 1000 gallons. These rates continue to increase until the rate of $10.01 per 1000 gallons is charged to consumers who use over 25,000 gallons.

4.7 City's Reservoir System Operation Plan

The City pumps and treats groundwater and does not have surface water supplies for which to implement a reservoir system operation plan.

4.8 Implementation and Enforcement

Appendix D contains an ordinance adopted by the City Council regarding this water conservation plan. The ordinance designates responsible officials to implement and enforce the water conservation plan.

4.9 Coordination with Region J Water Planning Group

The Chair of the Region J Water Planning Group will be provided a copy of this water conservation plan.

4.10 Leak Detection, Repair, and Water Loss Accounting

The City currently maintains a leak detection program designed to reduce the loss of water due to leaks and water main breaks. Most leaks are discovered by the visual observation from both members of the public and meter readers. City maintenance crews regularly check and service transmission and storage facilities to ensure that any leaks or main breaks in these areas are quickly contained and repaired. The City has sufficient crews to repair discovered leaks within 24 hours.

4.11 Record Management System

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), the City's current record management system allows for the separation of water sales and uses into residential and commercial

The City identifies high residential water users through database management and notifies the resident if a leak is suspected. The customer is advised to check faucets. Dye is freely distributed to customers to check their toilets for a possible leak. The customer is also advised to check all outdoor plumbing and sprinkler systems.

5. OTHER WATER CONSERVATION MEASURES

5.1 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures

The State of Texas has required water-conserving fixtures in new construction and renovations since 1992. The state standards call for flows of no more than 2.5 gallons per minute (gpm) for faucets, 3.0 gpm for showerheads, and 1.6 gallons per flush for toilets. Similar standards are now required nationally under federal law. These state and federal standards assure that all new construction and renovations will use water-conserving fixtures.

5.2 Landscape Water Management Regulations

The City has adopted the following landscape water management regulations intended to minimize waste in landscape irrigation:

- The City has adopted a drought management plan that restricts watering during times of drought. Restrictions are broken into 6 stages. As the severity of the drought increases the Mayor has the authority to increasingly restrict the use and timing of outdoor and nonessential use of water.

5.3 Treated Wastewater Re-Use Program

The City is in process of moving and updating their wastewater treatment facilities. The City has put forward a desire to update their wastewater treatment facilities to provide re-use treated effluent to be used for various purposes. If implemented, this could help conserve drinking water from being used.

5.4 Review of the Water Conservation Plan

The City will continue to review and develop recognized Best Management Practices (BMPs) that are suitable for its customer water use profile over the duration of this plan. This developmental process will include an annual evaluation of BMPs and recommend which measures should be increased, maintained, or eliminated. The entire water conservation plan will be revised and resubmitted to the TCEQ by January 31, 2029.

APPENDIX A

LIST OF REFERENCES

(1) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, last updated August 16, 2018

(2) City of Bandera Code of Ordinances, Ordinance 431, adopted 1/2/2023, Article 13.08 Drought Contingency Plan.

Texas Water Development Board

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

CONTACT INFORMATION

Name of Utility: CITY OF BANDERA

Public Water Supply Identification Number (PWS ID): TX0100012

Certificate of Convenience and Necessity (CCN) Number: 13190

Surface Water Right ID Number:

Wastewater ID Number: 21055

Contact: First Name: John Last Name: Hegemier

Title: Public Works Foreman

Address: P. O. Box 896 City: Bandera State: TX

Zip Code: 78003 Zip+4: Email: wwtp@banderatx.gov

Telephone Number: 8306881990 Date:

Is this person the designated Conservation Coordinator? (•) Yes ( ) No

Regional Water Planning Group: J

Groundwater Conservation District:

Our records indicate that you:

☑ Received financial assistance of $500,000 or more from TWDB

☐ Have 3,300 or more retail connections

☐ Have a surface water right with TCEQ

A. Population and Service Area Data

1. Current service area size in square miles: 2

Attached file(s):

File Name	File Description
City of Bandera City Limits and ETJ.pdf	City Limits and ETJ of Bandera

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

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

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Water Service
2023	3,066	0	1,932
2022	3,066	0	1,930
2021	3,198	0	1,930
2020	3,198	0	1,927
2019	2,301	0	1,925

3. Projected service area population for the following decades.

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Water Service
2030	2,160	0	2,130
2040	2,316	0	2,283
2050	2,380	0	2,346
2060	2,420	0	2,386
2070	2,442	0	2,408

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

The Bandera Public Works department provides active water service to 784 residential connections. Based on an average household size of 2.5 people the City currently provides service to 1,960 people. Area projections are based on the 2021 regional water plan population projections. Wastewater population was estimated to match the current wastewater population to water service population ratio.

Texas Water Development Board

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

B. System Input

System input data for the previous five years.

Total System Input = Self-supplied + Imported – Exported

Year	Water Produced in Gallons	Purchased/Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2023	79,537,016	0	0	79,537,016	71
2022	75,613,733	0	0	75,613,733	68
2021	74,159,256	0	0	74,159,256	64
2020	79,157,692	0	0	79,157,692	68
2019	77,339,653	0	0	77,339,653	92
Historic Average	77,161,470	0	0	77,161,470	72

C. Water Supply System

1. Designed daily capacity of system in gallons: 248,760

2. Storage Capacity

   2a. Elevated storage in gallons: 200,000

   2b. Ground storage in gallons: 725,300

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

D. Projected Demands

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

Year	Population	Water Demand (gallons)
2025	2,018	77,871,300
2026	2,047	78,277,800
2027	2,076	78,684,300
2028	2,105	79,090,800
2029	2,134	79,497,300
2030	2,160	79,903,800
2031	2,176	80,310,300
2032	2,192	80,716,800
2033	2,208	81,123,300
2034	2,224	81,529,800

2. Description of source data and how projected water demands were determined.

Population projections come from interpolation of data from the 2021 Regional Water Plan Population Projections. Water consumption likewise was originally calculated to increase at a similar 1.0% growth rate, but then the 10 year result was reduced by 5.0% to account for the water conservation measures we will be implementing. The years between 2025 and 2034 was simply an interpolation between the beginning and end points.

E. High Volume Customers

1. The annual water use for the five highest volume **RETAIL customers.**

Customer	Water Use Category	Annual Water Use	Treated or Raw
Warrior's Heart	Commercial	3,050,490	Treated
Touchstone Communities	Commercial	2,599,300	Treated
Bandera Pioneer River Resort	Commercial	1,504,700	Treated
Bandera Wash House	Commercial	1,162,300	Treated
Mac's Laserwash	Commercial	1,089,000	Treated

2. The annual water use for the five highest volume **WHOLESALE customers.**

Customer	Water Use Category	Annual Water Use	Treated or Raw

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

F. Utility Data Comment Section

Additional comments about utility data.

Section II: System Data

A. Retail Water Supplier Connections

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

Water Use Category Type	Total Retail Connections (Active + Inactive)	Percent of Total Connections
Residential - Single Family	784	75.17 %
Residential - Multi-Family	0	0.00 %
Industrial	0	0.00 %
Commercial	259	24.83 %
Institutional	0	0.00 %
Agricultural	0	0.00 %
Total	1,043	100.00 %

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

	Net Number of New Retail Connections						
Year	**Residential - Single Family**	**Residential - Multi-Family**	**Industrial**	**Commercial**	**Institutional**	**Agricultural**	**Total**
2023	39			12			51
2022							
2021	16						16
2020	12			3			15
2019				40			40

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

B. Accounting Data

The previous five years' gallons of RETAIL water provided in each major water use category.

Year	Residential - Single Family	Residential - Multi-Family	Industrial	Commercial	Institutional	Agricultural	Total
2023	28,952,944	0	0	41,959,764	0	0	70,912,708
2022	30,013,010	0	0	33,905,310	0	0	63,918,320
2021	23,635,500	6,169,150	0	33,195,490	0	0	63,000,140
2020	30,412,120	0	0	32,126,150	0	0	62,538,270
2019	27,808,620	0	0	37,071,070	0	0	64,879,690

C. Residential Water Use

The previous five years residential GPCD for single family and multi-family units.

Year	Total Residential GPCD
2023	39
2022	27
2021	26
2020	32
2019	29
Historic Average	31

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

D. Annual and Seasonal Water Use

1. The previous five years' gallons of treated water provided to RETAIL customers.

Month	Total Gallons of Treated Water				
	2023	2022	2021	2020	2019
January	5,589,864	4,944,529	5,265,335	4,374,683	5,351,898
February	4,878,634	4,942,784	6,956,083	4,135,191	4,547,125
March	5,805,830	5,684,594	4,912,456	4,561,560	5,240,986
April	5,887,483	5,730,417	3,966,886	4,825,202	5,475,636
May	5,618,493	5,483,147	5,069,205	5,121,790	5,197,630
June	6,151,593	6,198,686	5,201,879	5,336,333	5,598,777
July	7,264,926	6,197,900	5,561,809	6,364,753	3,942,198
August	7,044,543	4,581,872	5,899,383	6,443,918	7,225,340
September	6,453,263	4,052,768	5,825,179	4,882,216	6,194,553
October	5,599,898	5,308,583	5,124,149	6,091,356	6,146,836
November	5,205,987	4,887,011	4,916,497	5,349,048	5,020,103
December	5,412,194	5,906,029	4,301,279	5,052,220	4,938,608
Total	70,912,708	63,918,320	63,000,140	62,538,270	64,879,690

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

2. The previous five years' gallons of raw water provided to RETAIL customers.

Month	Total Gallons of Raw Water				
	2023	2022	2021	2020	2019
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
Total					

3. Summary of seasonal and annual water use.

	Summer RETAIL (Treated + Raw)	Total RETAIL (Treated + Raw)
2023	20,461,062	70,912,708
2022	16,978,458	63,918,320
2021	16,663,071	63,000,140
2020	18,145,004	62,538,270
2019	16,766,315	64,879,690
Average in Gallons	17,802,782.00	65,049,825.60

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

E. Water Loss

Water Loss data for the previous five years.

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss as a Percentage
2023	8,440,252	8	11.00 %
2022	5,963,025	5	8.00 %
2021	6,028,596	5	8.00 %
2020	10,573,061	9	14.00 %
2019	3,802,377	5	5.00 %
Average	6,961,462	6	9.20 %

F. Peak Day Use

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

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2023	194,281	222402	1.1447
2022	175,118	184548	1.0538
2021	172,603	181120	1.0493
2020	171,337	197228	1.1511
2019	177,752	182242	1.0253

G. Summary of Historic Water Use

Water Use Category	Historic Average	Percent of Connections	Percent of Water Use
Residential - Single Family	28,164,438	75.17 %	43.30 %
Residential - Multi-Family	1,233,830	0.00 %	1.90 %
Industrial	0	0.00 %	0.00 %
Commercial	35,651,556	24.83 %	54.81 %
Institutional	0	0.00 %	0.00 %
Agricultural	0	0.00 %	0.00 %

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

H. System Data Comment Section

Section III: Wastewater System Data

A. Wastewater System Data

1. Design capacity of wastewater treatment plant(s) in gallons per day: 277,000

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

Water Use Category	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal	773		773	75.34 %
Industrial			0	0.00 %
Commercial	253		253	24.66 %
Institutional			0	0.00 %
Agricultural			0	0.00 %
Total	1,026		1,026	100.00 %

3. Percentage of water serviced by the wastewater system: 98.57 %

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

4. Number of gallons of wastewater that was treated by the utility for the previous five years.

Month	Total Gallons of Treated Water				
	2023	2022	2021	2020	2019
January	3,820,993	3,569,878	3,492,743	3,953,600	3,403,397
February	3,557,973	3,436,023	3,746,754	3,500,300	2,938,711
March	3,736,096	3,648,236	3,610,906	3,451,400	3,237,669
April	3,920,732	3,578,278	3,573,265	3,056,100	3,256,877
May	4,245,330	3,393,561	3,862,972	3,581,219	3,740,791
June	3,455,310	3,164,300	3,521,045	3,014,200	3,416,684
July	3,340,032	3,206,672	3,836,614	2,827,572	3,159,138
August	3,650,737	3,738,228	4,160,870	2,941,320	3,040,615
September	3,474,918	3,518,862	3,351,820	3,144,822	4,166,858
October	3,956,133	3,548,637	3,859,050	3,439,339	3,287,707
November	3,640,291	4,041,764	3,677,799	3,361,357	3,291,000
December	3,998,631	4,270,345	3,364,374	3,425,123	3,247,610
Total	44,797,176	43,114,784	44,058,212	39,696,352	40,187,057

5. Could treated wastewater be substituted for potable water?

○ Yes ◉ No

B. Reuse Data

1. Data by type of recycling and reuse activities implemented during the current reporting period.

Type of Reuse	Total Annual Volume (in gallons)
On-site Irrigation	
Plant wash down	
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (park,golf courses)	
Agricultural	
Discharge to surface water	
Evaporation Pond	
Other	
Total	

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

C. Wastewater System Data Comment

Additional comments and files to support or explain wastewater system data listed below.

§ 13.09.069. Drought response state responses and water use restrictions.

The mayor, or his/her designee, shall monitor water supply and/or demand condition on a weekly basis and, in accordance with the triggering criteria set forth in section 13.09.068, shall determine that a mild, moderate, severe, critical, or emergency condition exists and shall implement the following action upon publication of notice in a newspaper of general circulation:

(1) Stage 1: Mild water shortage conditions.

(A) Goal. Raise public awareness of the supply situation and initiate voluntary conservation measures.

(B) Supply management measures. The city will manage limited water supplies and/or reduce water demand. Examples of water reduction include: reduced or discontinued flushing of water mains, immediate repairs of any water leak, and use of reclaimed water for non-potable purposes.

(C) Voluntary water use restrictions.

(i) Water customers are requested to voluntarily limit the irrigation of landscaped areas to between the hours 8:00 p.m. to 8:00 a.m.

(ii) All operations of the city shall adhere to water use restrictions prescribed for Stage 2 of the plan.

(iii) Water customers are requested to practice water conservation and to minimize or discontinue water use for nonessential purposes.

(2) Stage 2: Moderate water shortage conditions

(A) Goal. Achieve a 20 percent reduction in total water use per day.

(B) Water use restrictions. Under threat of penalty for violation, the following water use restrictions shall apply to all persons:

(i) Irrigation of landscaped areas and turf shall be limited to the designated watering hours between 8:00 p.m. to 8:00 a.m. However, irrigation of landscaped areas is permitted at any time if it is by means of a hand-held hose, a faucet-filled bucket or watering can of five (5) gallons or less, or a drip irrigation system. Watering of Trees via a hand-held hose is allowed, watering of gardens for the use of private nourishment and watering in a foundation to avoid structural damage is permitted.

(ii) Use of water to wash any motor vehicle, motorbike, boat, trailer, other vehicle is allowed if done before 8:00 am or after 8:00 pm. Such washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive

shutoff nozzle for quick rinses. Vehicle washing may be done at any time on the immediate premises of a commercial carwash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.

(iii) Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or jacuzzi-type is allowed if done before 8:00 am or after 8:00 pm.

(iv) Use of water from hydrants shall be limited to firefighting, related activities, or other activities necessary to maintain public health, safety, and welfare, except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from the city.

(v) The following uses of water are defined as nonessential and are prohibited:

a. Washdown of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas.

b. Use of water to wash down buildings or structures for purposes other than immediate fire protection.

c. Use of water for dust control except for properties under current construction with valid permit;

d. Flushing street gutters or permitting water to run or accumulate in any gutter or street; and

e. Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

(3) Stage 3: Severe water shortage conditions.

(A) Goal. Achieve a 30 percent reduction in daily water use.

(B) Water use restrictions. All requirements of Stage 2 shall remain in effect during Stage 3 except:

(i) Irrigation of landscaped areas shall be limited to designated watering days (Tuesday and Sunday for residents with even number addresses and Wednesday and Saturday for residents with odd number addresses) between the hours of 8:00 am and after 8:00 pm and shall be by means of hand-held hoses, hand-held buckets, drip irrigation, or a permanently installed automatic sprinkler system only; watering of Trees via a hand-held hose is allowed, watering of gardens for the use of private nourishment and watering in a foundation to avoid structural damage is permitted The use of hose-end sprinklers is prohibited at all times.

(ii) The filling of newly constructed swimming pools from a City of Bandera water source is prohibited; however, pool levels may be maintained because of evaporation.

(4) Stage 4. Critical water shortage conditions.

(A) Goal. Achieve a 40 percent reduction in daily water use.

(B) Water use restrictions. All requirements of Stages 2 and 3 shall remain in effect during State 4 except:

(i) Irrigation of landscaped areas shall be limited to designated watering days (Tuesday and Sunday for residents with even number addresses and Wednesday and Saturday for residents with odd number addresses between the hours of 8:00 p.m. and 8:00 a.m. and shall be by means of hand-held hoses, hand-held buckets, or drip irrigation only. ; watering of Trees via a hand-held hose is allowed, and watering of gardens for the use of private nourishment and watering in a foundation to avoid structural damage is permitted. The use of hose-end sprinklers or permanently installed automatic sprinkler systems is prohibited at all times.

(ii) Use of water to wash any motor vehicle, motorbike, boat, trailer, or other vehicle not occurring on the premises of a commercial carwash and commercial service stations and not in the immediate interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial carwashes and commercial service stations shall occur only between the hours of 9:00 a.m. and 4:00 p.m. and between 10:00 p.m. and 4:00 a.m.

(iii) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

(5) Stage 5: Emergency water shortage conditions.

(A) Goal. Achieve a 50 percent reduction in daily water use.

(B) Water use restriction. All requirements of Stages 2, 3, and 4 shall remain in effect during Stage 5 except:

(i) Irrigation of landscaped areas is absolutely prohibited; However, watering of Trees via a hand-held hose is allowed, watering of gardens for the use of private nourishment and watering in a foundation to avoid structural damage is permitted during designated watering days (Tuesday and Sunday for residents with even number addresses and Wednesday and Saturday for residents with odd number

addresses) between the hours of 8:00 p.m. and 8:00 a.m.

(6) Stage 6: Complete water loss.

In the event that all water production has ceased due to massive pump failures, power outages or any other natural or man-made causes [resulting in] complete water loss due to contamination of all water sources, the mayor, or his/her designee, is hereby authorized to notify the public by a newspaper of general circulation, radio announcements and/or a black flag to be flown at 511 Main Street that no water from the system will be available for use.