

City of Bowie
304 Lindsey St.
Bowie, TX 76230
(940) 872-6414

**WATER CONSERVATION AND
DROUGHT CONTINGENCY PLAN**

2014



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Overview

DEFINITIONS

Water Conservation Plan - A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water.

Drought Contingency Plan - A strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies. A drought contingency plan may be a separate document identified as such or may be contained within another water management document(s).

OBJECTIVE

The City of Bowie recognizes that the amount of water available to the City and its water utility customers may be limited and subject to depletion during periods of extended drought. Representing the best interests of the citizens of Bowie, Texas, the City Council deems it expedient and necessary to establish certain rules and policies for the ongoing conservation of water and the orderly and efficient management of limited water supplies during drought and other water supply emergencies.

STATUTORY AND RULE REQUIREMENTS

WATER CONSERVATION PLAN

Texas Water Code §13.146. WATER CONSERVATION PLAN. The commission shall require a retail public utility that provides potable water service to 3,300 or more connections to submit to the executive administrator of the board a water conservation plan based on specific targets and goals developed by the retail public utility and using appropriate best management practices, as defined by Section 11.002, or other water conservation strategies.

Title 30 Texas Administrative Code, Chapter 288.30(10)(A) Water conservation plans for retail public water suppliers. For retail public water suppliers providing water service to 3,300 or more connections, a water conservation plan meeting the minimum requirements of Subchapter A of this chapter and using appropriate best management practices must be developed, implemented, and submitted to the executive administrator of the Texas Water Development Board not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group.

DROUGHT CONTINGENCY PLAN

Texas Water Code §11.1272. ADDITIONAL REQUIREMENT: DROUGHT CONTINGENCY PLANS FOR CERTAIN APPLICANTS AND WATER RIGHT HOLDERS. (a) The commission shall by rule require wholesale and retail public water suppliers and irrigation districts to develop drought contingency plans consistent with the appropriate approved regional water plan to be implemented during periods of water shortages and drought.

WATER CONSERVATION & DROUGHT CONTINGENCY PLAN - 2014

Title 30 Texas Administrative Code, Chapter 288.30(5)(A) For retail public water suppliers providing water service to 3,300 or more connections, the drought contingency plan must be submitted to the executive director not later than May 1, 2005. Thereafter, the retail public water suppliers providing water service to 3,300 or more connections shall submit the next revision of the plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group.

ADDITIONAL REPORTING REQUIREMENTS

TWDB

- Annual Water Conservation Report, May 1 annually
- Water Use Survey, March 1 annually
- Water Audit, May 1 every 5 years

TCEQ

- Implementation Report, May 1 every 5 years
- Water Use Report, May 1 annually

Introduction

The City of Bowie is located along Highway 287 in Montague County, Texas and is home to 5,200 residents. Established in 1881, the City is named after the 19th century adventurer and hero of the Alamo, James Bowie. The City occupies 5.52 square miles of land and is located in both the Trinity and Red River basins.

The City receives an average rainfall of 31.8 inches per year with an average of 66 days with rainfall. The climate fluctuates from an average high temperature of 95.8 degrees in August to an average low temperature of 31.3 degrees in January. The city is located within the boundaries of the Region B Water Planning Group as well as the Upper Trinity Groundwater Conservation District.

The source of water for the City of Bowie is 100% surface water from Lake Amon G Carter and Bowie Lake. The City maintains Certificates of Adjudication (COA), 08-3320 and 02-4876, for water rights from Amon G. Carter Lake and Bowie Lake totaling 4,786 acre-feet per year for municipal purposes, 1,300 acre-feet per year for industrial purposes, and 200 acre-feet per year for mining purposes. The priority dates are July 12, 1954; August 19, 1954, and January 28, 1980 for COA 08-3320 and September 31, 1935 for COA 02-4876.

The primary water use sector for the City is single-family residential. Commercial, wholesale, multi-family residential, and industrial uses comprise the remainder of water uses. Institutional uses are combined with commercial uses at this time. The City provides wholesale service to one retail public water supplier, Amon G. Carter WSC.

WATER CONSERVATION PLAN



Utility Profile

A completed TWDB Utility Profile is attached in Appendix A.

CCN#: 11039

PWS#: 1690001

RWPG: Region B Planning Group

COUNTY: Montague

SERVICE AREA: 5.52 square miles

WATER SOURCE: Lake Amon G. Carter and Bowie Lake

PRODUCTION CAPACITY: 3 MGD

STORAGE CAPACITY: 1 MGD ground, 0.65 MGD elevated

WASTEWATER CAPACITY: 1.25 MGD



WATER CONSERVATION & DROUGHT CONTINGENCY PLAN - 2014

The Population of the City of Bowie projected by the Region B Water Planning Group and the TWDB to grow modestly over the 50 year planning horizon. The projections are shown below.



Water Conservation Goals

Per capita water use is generally expressed in gallons per customer per day (GPCD) and is the average amount of water used by each person in the population served by a water utility. Variable factors that can influence GPCD include the relative amount of non-residential water uses, the rate and type of growth, economics, climatic conditions, and demographics. Residential GPCD is a superior metric for understanding how much water each customer is actually using and does not include commercial, industrial, and institutional uses.

For the previous 5 years, the average number of gallons per person per day for the City of Bowie was 174 Total GPCD and 75 Residential GPCD. Single family use accounts for 99% of residential use in the City. The previous 5 years of per capita water use is shown below.



WATER CONSERVATION & DROUGHT CONTINGENCY PLAN - 2014

The City of Bowie's 5 and 10-year Water Conservation Goals are based upon the Texas Water Conservation Implementation Task Force's recommendation of a reduction in per capita water use by 1% per year. Per capita usage and water loss goals are shown below.



Public Education (Conservation)

The City of Bowie conducts a program of ongoing public water conservation education that includes:

Periodic distribution of water conservation brochures

Availability of water conservation brochures and materials at the Public Library and other public places

Informational presentations by City staff to local organizations, schools, and civic groups

Information provided to local newspaper, television, and radio outlets

Water conservation information provided to applicants for new service

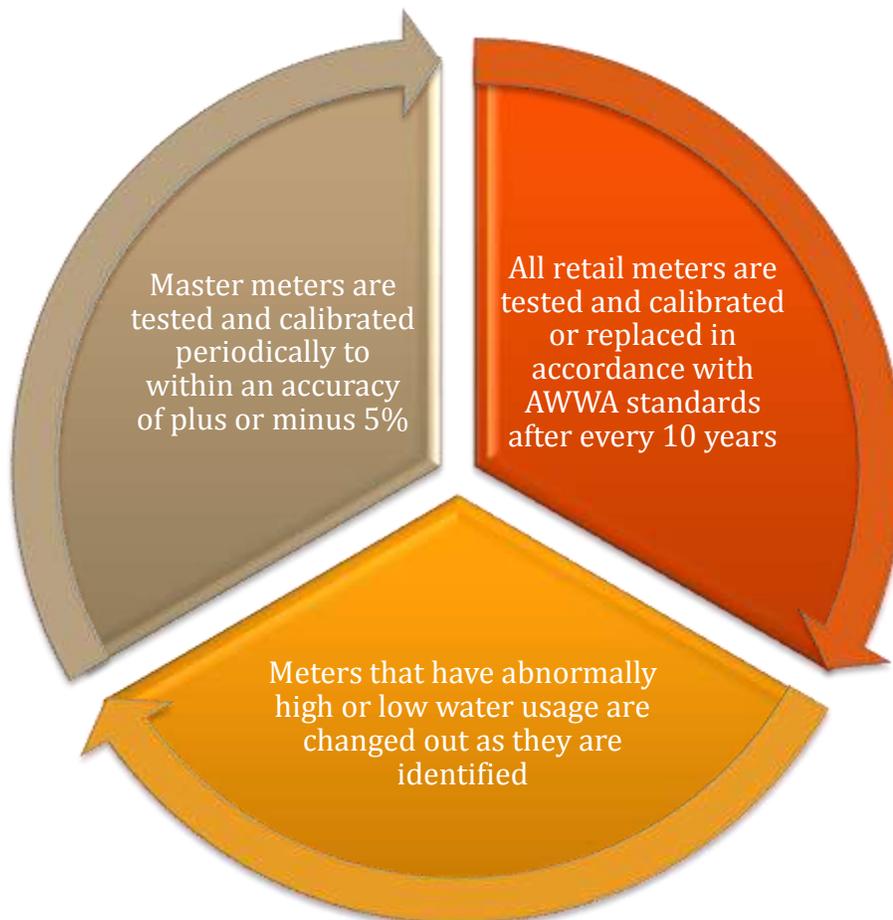
Water Conservation Plan and information posted on the City website: www.cityofbowietx.com



Meters

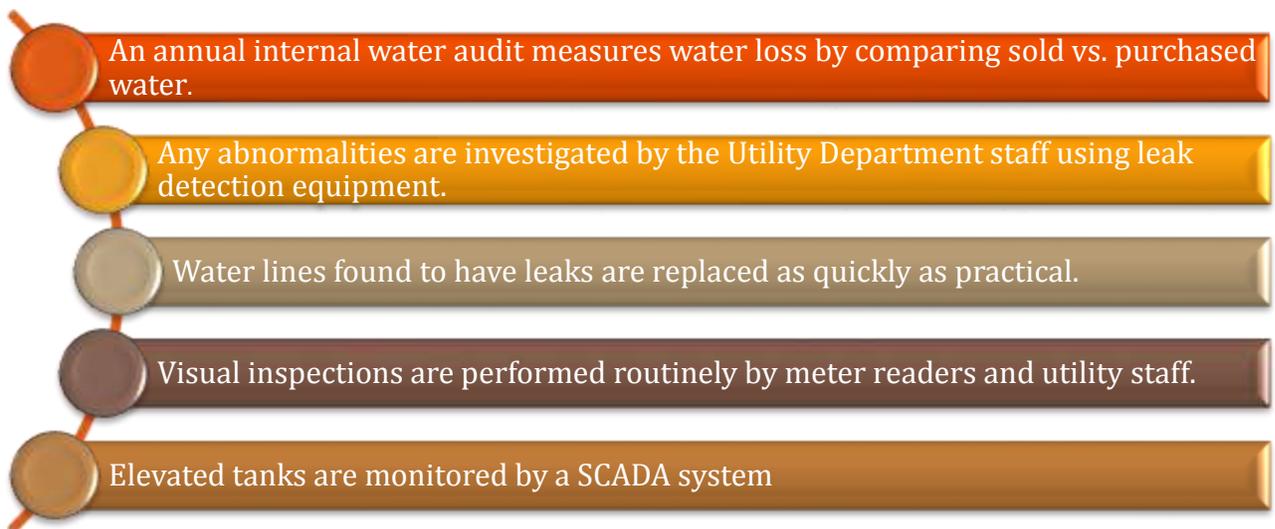


The City of Bowie meters 100% of water use in residential, industrial, and commercial accounts. Meters are tested upon customer request. Per the City's meter testing, repair, and replacement program:

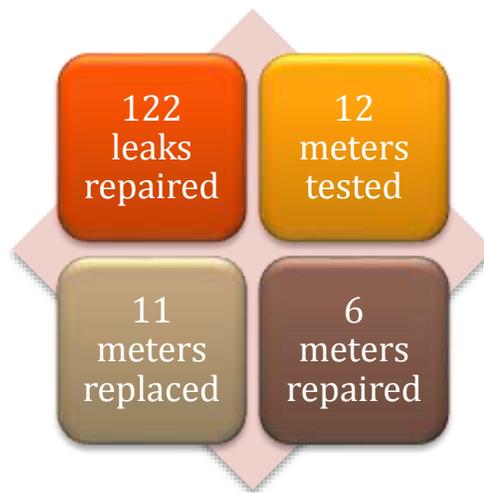


Water Loss

The City of Bowie maintains an ongoing program of leak detection and repair. In 2013, water loss for the City was calculated to be 25%. Much of the water loss in recent years can be attributed to leaks caused by ground shifting and fire suppression, both associated with severe drought conditions. The long term goal is to maintain less than 15% water loss.



During 2012, the following leak detection/repair and water loss activities were performed:



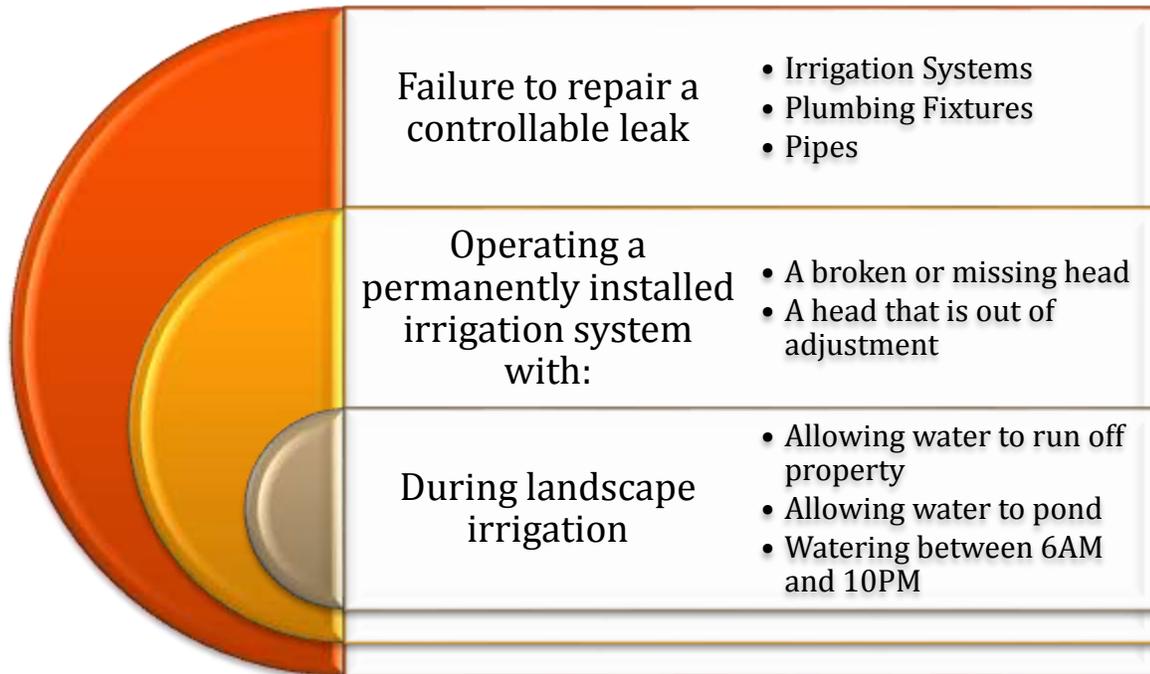
Water Rates

The City's water and sewer rate structure is a uniform rate that is cost based and does not encourage the excessive use of water. The water rates per thousand gallons are shown below.

Sector	Water	Sewer
Residential Inside City	\$4.59	\$2.57
Residential Outside City	\$5.28	\$2.95
Commercial Inside City	\$4.59	\$3.13
Commercial Outside City	\$5.28	\$3.24
Industrial Inside City	\$4.59	\$3.13
Industrial Outside City	\$5.28	\$3.24
Bulk Water	\$10.00	
Amon Carter Lake WSC	\$1.89	

Water Waste

Water waste is prohibited at all times. Water waste is defined as:



Each instance of a violation is a separate offense and a Class C misdemeanor that may be punishable by fines.

Wholesale Contractual Water Conservation Requirement

The City of Bowie will include a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of this chapter. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of Title 30 Texas Administrative Code, Chapter 288.



DROUGHT CONTINGENCY PLAN



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 for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the City of Bowie hereby adopts the following regulations and restrictions on the delivery and consumption of water by City Ordinance.

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

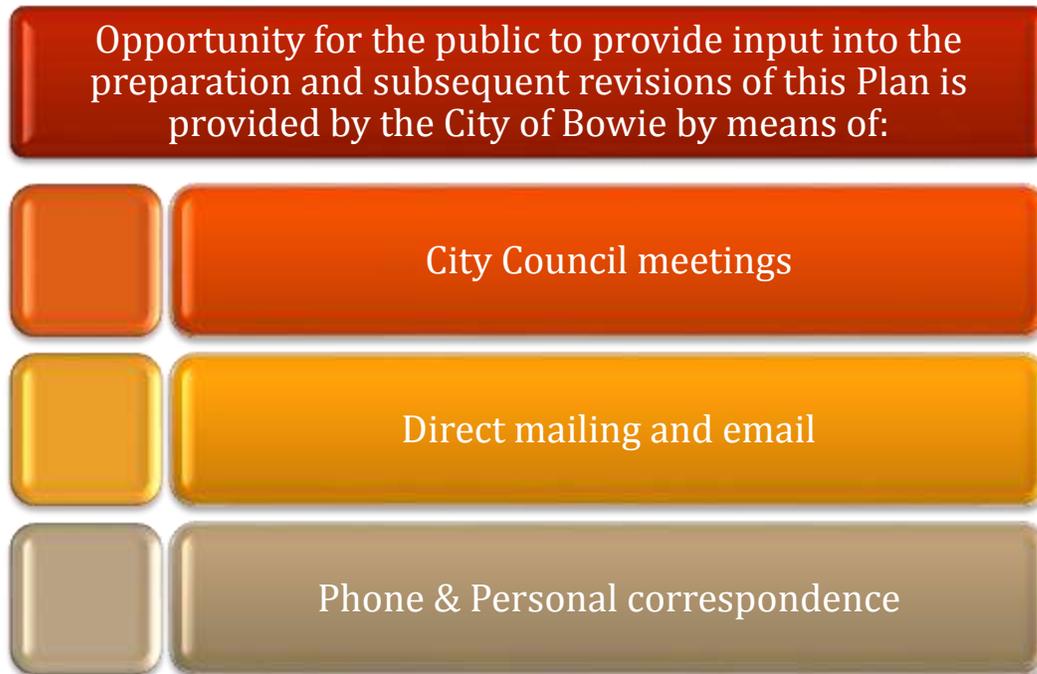
Authorization

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.

Application

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

Public Involvement

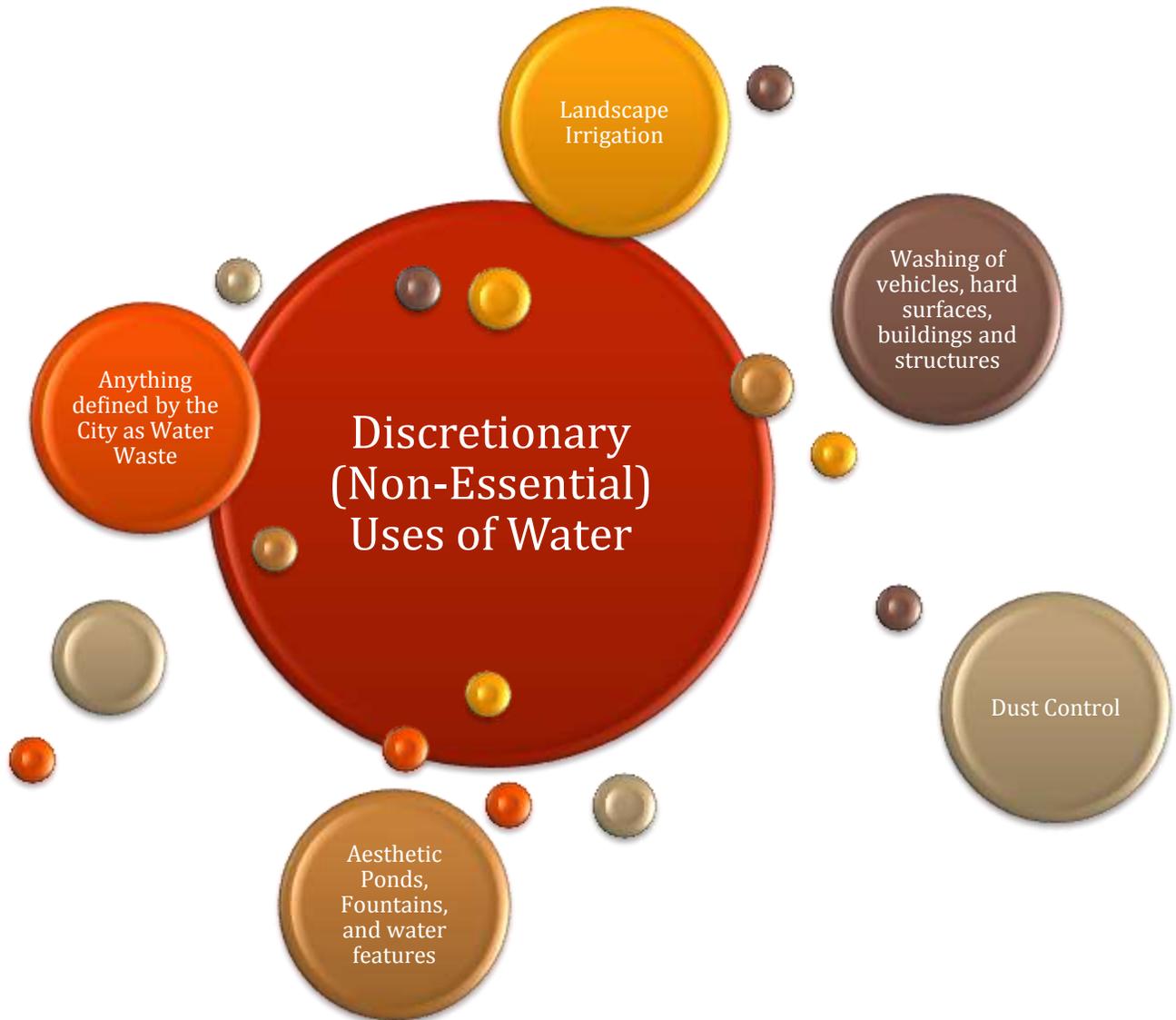


Public Education (Drought)

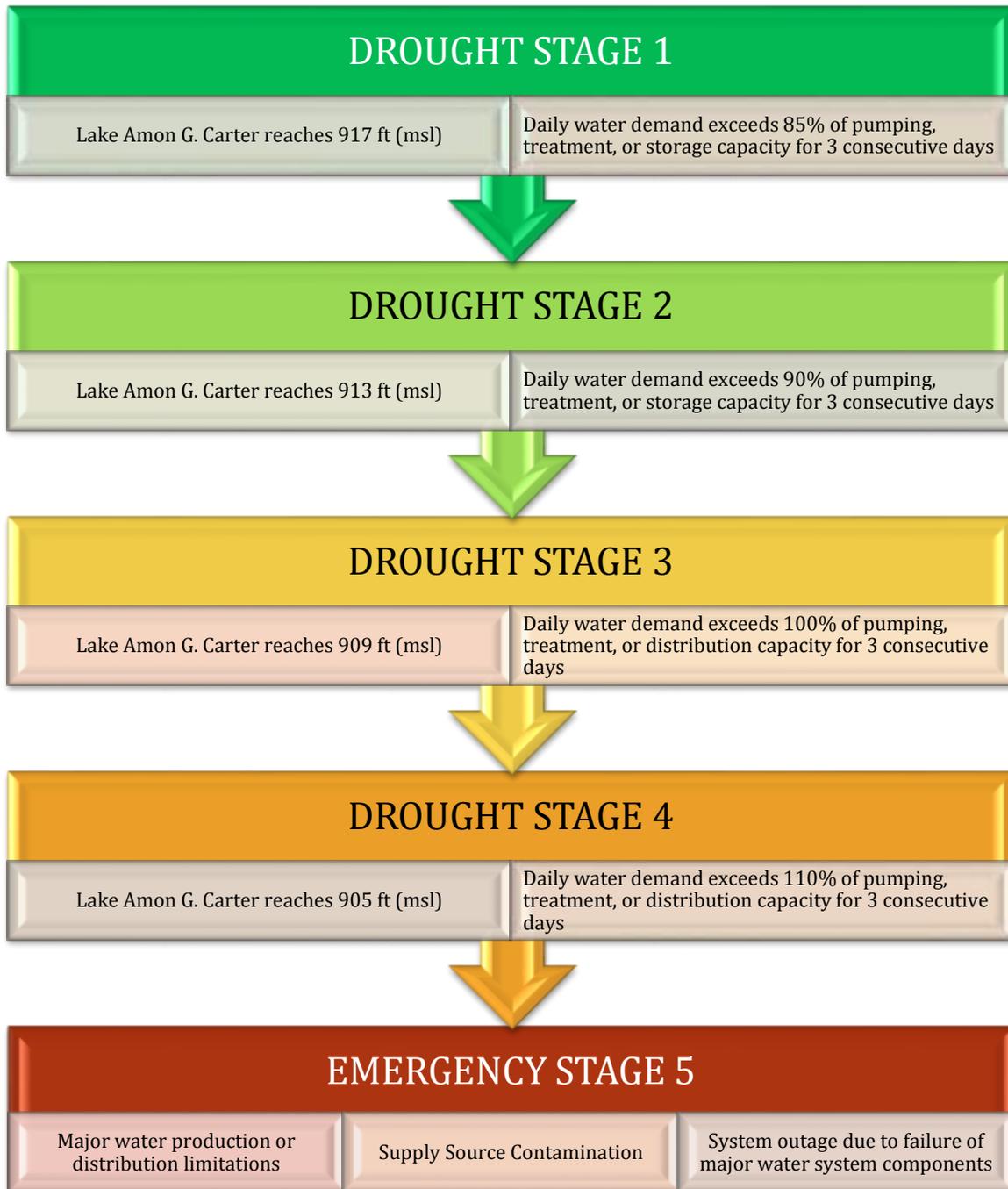
The City of Bowie will periodically provide the public with information about this Drought Contingency Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. Water conservation tips and information will also be provided. This information will be provided by means of:



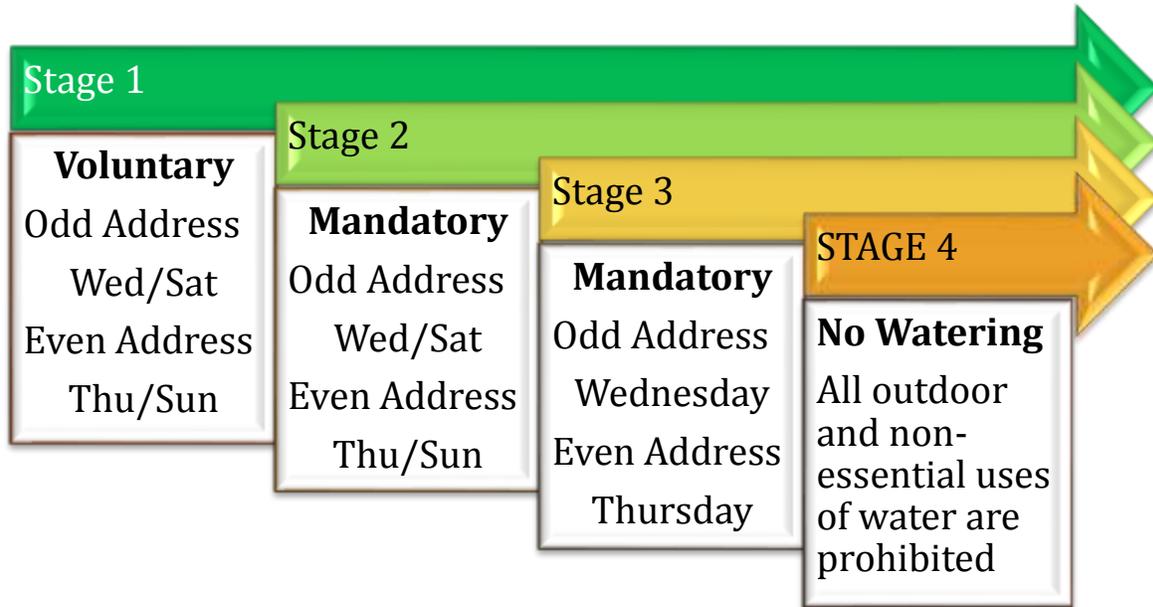
Discretionary Uses of Water



Drought and Emergency Triggers



Watering Schedule



Response Stages

DROUGHT STAGE 1 RESPONSE

Target: Achieve a 5% reduction in water use

Retail & Wholesale customers requested to follow Stage 1 Watering Schedule

Formal Public Notice of Drought Stage 1

Initiate increased Public Information campaign

Increase leak detection activities

Notify TCEQ

DROUGHT STAGE 2 RESPONSE

Target: Achieve a 15% reduction in water use

Retail & Wholesale customers required to follow Stage 2 Watering Schedule

Formal Public Notice of Drought Stage 2

Increase utility oversight of water-use restrictions and water waste

No bulk sales of water to tank trucks

15% reduction in water use for Golf Courses

Notify TCEQ

DROUGHT STAGE 3 RESPONSE

Target: Achieve a 25% reduction in water use

Retail & Wholesale customers required to follow Stage 3 Watering Schedule

Formal Public Notice of Drought Stage 3

Increase utility enforcement of water-use restrictions and water waste

\$3.00 per 1,000 gallon surcharge

5% increase on golf course monthly bill

Notify TCEQ

DROUGHT STAGE 4 RESPONSE

Target: Achieve a 35% reduction in water use

Retail & Wholesale customers required to follow Stage 4 Watering Schedule

Formal Public Notice of Drought Stage 4

No watering

\$5.00 per 1,000 gallon surcharge

7.5% increase on golf course monthly bill

Notify TCEQ

EMERGENCY STAGE 5 RESPONSE

Target: Achieve necessary water use reduction

Contact County and State
Emergency Management
Coordinators

Notify TCEQ

In the event of an identified water shortage declaration, the City will distribute water to wholesale customers according to Texas Water Code, §11.039* and initiate water allocation to municipal water customers.

In the event of a contamination event, appropriate emergency procedures will be implemented and appropriate emergency response officials will be notified immediately. In the event of a backflow incident, loss of pressure, or an Acute Maximum Contaminant Level coliform violation, a Boiled Water Notice will be implemented as prescribed in 30 TAC Chapter 290.

In the event of a catastrophic failure due to natural or man-made events, appropriate emergency procedures will be implemented and appropriate emergency response officials will be notified.

In the event of an emergency loss of water supply, the city will consider diversions from Bowie Lake or purchases of water by the truckload or in bottles for the health and public safety of the City's residents.

* **Texas Water Code, Sec. 11.039.**

DISTRIBUTION OF WATER DURING SHORTAGE.

(a) If a shortage of water in a water supply not covered by a water conservation plan prepared in compliance with Texas Natural Resource Conservation Commission or Texas Water Development Board rules results from drought, accident, or other cause, the water to be distributed shall be divided among all customers pro rata, according to the amount each may be entitled to, so that preference is given to no one and everyone suffers alike.

(b) If a shortage of water in a water supply covered by a water conservation plan prepared in compliance with Texas Natural Resource Conservation Commission or Texas Water Development Board rules results from drought, accident, or other cause, the person, association of persons, or corporation owning or controlling the water shall divide the water to be distributed among all customers pro rata, according to:

(1) The amount of water to which each customer may be entitled; or

(2) The amount of water to which each customer may be entitled, less the amount of water the customer would have saved if the customer had operated its water system in compliance with the water conservation plan.

(c) Nothing in Subsection (a) or (b) precludes the person, association of persons, or corporation owning or controlling the water from supplying water to a person who has a prior vested right to the water under the laws of this state.

Wholesale Contractual Drought Contingency Requirement

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



Variations

The City Manager or his/her designee may, in writing, grant temporary variance for existing water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance and if one or more of the following conditions are met:

1. Compliance with this Plan cannot be technically accomplished during the duration of the water supply shortage or other condition for which the Plan is in effect.
2. Alternative methods can be implemented which will achieve the same level of reduction in water use.

Persons requesting an exemption from the provisions of this Ordinance shall file a petition for variance with the City of Bowie within 5 days after the Plan or a particular drought response stage has been invoked. All petitions for variations shall be reviewed by City Manager or his/her designee, and shall include the following:

1. Name and address of the petitioner(s).
2. Purpose of water use.
3. Specific provision(s) of the Plan from which the petitioner is requesting relief.
4. Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
5. Description of the relief requested.
6. Period of time for which the variance is sought.
7. Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
8. Other pertinent information.

Enforcement

1. No person or entity shall knowingly or intentionally allow the use of water from the City of Bowie for residential, commercial, institutional, industrial, agricultural, governmental, recreational, wholesale, or any other purpose in a manner contrary to any provision of this Plan, 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 Manager or his/her designee, in accordance with provisions of this Plan;
2. A City of Bowie code enforcement officer, police officer, or other official designated by the City Manager or his/her designee, may issue a written Notice of Violation to a person or entity he/she reasonably believes to be in violation of this Plan. For subsequent violations following written notice:
 - a. The utility may issue a citation (Class C misdemeanor);
 - b. The utility may install a flow restricting device in the line to limit the amount of water which will pass through the meter in a 24-hour period. The utility may charge the customer for the actual cost of installing and removing the flow restricting device, not to exceed fifty dollars (\$50.00);
 - c. The utility may discontinue service at the meter for a period of seven (7) days, or until the end of the calendar month, whichever is LESS. The normal reconnect fee of the utility will apply for restoration of service;
3. Any water customer who violates this Plan is guilty of and may be charged with a misdemeanor and, upon conviction shall be punished by a fine of not less than one hundred dollars (\$100.00) and not more than five hundred dollars (\$500.00) or as amended in ordinance. Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person is convicted of three or more distinct violations of this Plan, the City Manager or his/her

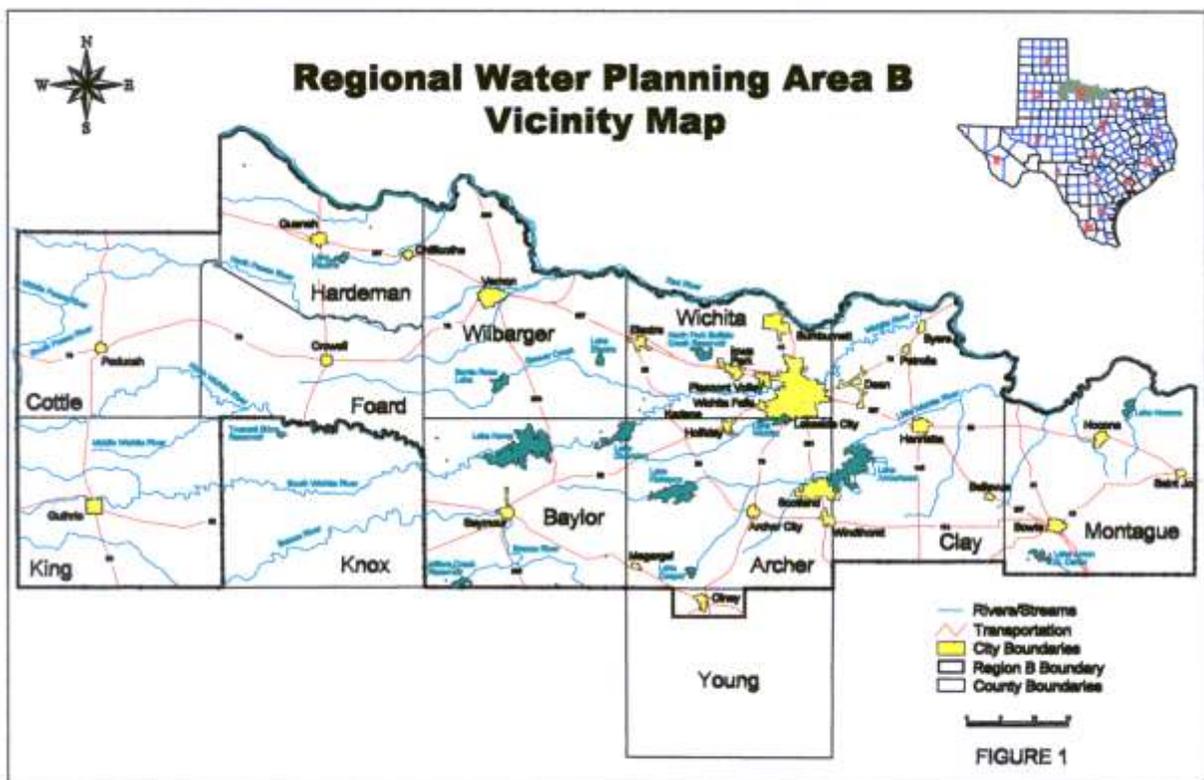
designee shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of a re-connection charge, hereby established at \$50.00, and any other costs incurred by the City of Bowie in discontinuing service. In addition, suitable assurance must be documented with the City Manager or his/her designee that the same action shall not be repeated while the Plan is in effect. Compliance with this Plan may also be sought through injunctive relief in the district court;

4. Any water customer of the City of Bowie, 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 and proof that a violation, committed by a child, occurred on property within the parents' control shall constitute a rebuttable presumption that the parent committed the violation, 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.

Coordination with Region B Planning Group

The service area of the City of Bowie is located within the Region B Water Planning Group and the City will provide a copy of this Plan to the Region B Planning Group at:

Red River Authority
3000 Hammond Road
Wichita Falls, TX 76310



Ordinance

WATER CONSERVATION & DROUGHT CONTINGENCY PLAN - 2014

Ordinance

ORDINANCE NO. 2014-03

AN ORDINANCE OF THE CITY OF BOWIE, TEXAS, ADOPTING A WATER CONSERVATION & DROUGHT CONTINGENCY PLAN; ESTABLISHING DATA, INFORMATION, AND POLICY FOR WATER CONSERVATION PROGRAMS; CRITERIA FOR THE INITIATION AND TERMINATION OF DROUGHT RESPONSE STAGES; ESTABLISHING RESTRICTIONS ON CERTAIN WATER USES; ESTABLISHING PENALTIES FOR THE VIOLATION OF AND PROVISIONS FOR ENFORCEMENT OF THESE RESTRICTIONS; ESTABLISHING PROCEDURES FOR GRANTING VARIANCES; AND PROVIDING SEVERABILITY AND AN EFFECTIVE DATE.

WHEREAS, the City of Bowie, Texas recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought;

WHEREAS, Section 13.146 of the Texas Water Code and applicable rules of the Texas Water Development Board require a retail public utility that provides potable water service to 3,300 or more connections to submit to the executive administrator of the board a water conservation plan based on specific targets and goals developed by the retail public utility and using appropriate best management practices as defined by Section 11.002, which defines "conservation" as those practices, techniques, and technologies that will reduce the consumption of water, reduce the loss or waste of

WATER CONSERVATION & DROUGHT CONTINGENCY PLAN - 2014

water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses;

WHEREAS, the City recognizes that natural limitations due to drought conditions and other acts of God cannot guarantee an uninterrupted water supply for all purposes;

WHEREAS, Section 11.1272 of the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require all public water supply systems in Texas to prepare a drought contingency plan; and

WHEREAS, as authorized under law, and in the best interests of the citizens of Bowie, Texas, the City Council deems it expedient and necessary to establish certain rules and policies for the ongoing conservation of water and the orderly and efficient management of limited water supplies during drought and other water supply emergencies.

NOW THEREFORE, BE IT ORDAINED BY THE CITY OF BOWIE, TEXAS:

SECTION 1.

That the City of Bowie, Texas Water Conservation & Drought Contingency Plan 2014 attached hereto and made part hereof for all purposes be, and the same is hereby, adopted as the official policy of the City.

SECTION 2.

That all ordinances that are in conflict with the provisions of this ordinance be, and the same are hereby, repealed and all other ordinances of the City not in conflict with the provisions of this ordinance shall remain in full force and effect.

WATER CONSERVATION & DROUGHT CONTINGENCY PLAN - 2014

SECTION 3.

Should any paragraph, sentence, subdivision, clause, phrase, or section of this ordinance be adjudged or held to be unconstitutional, illegal or invalid, the same shall not affect the validity of this ordinance as a whole or any part or provision thereof, other than the part so declared to be invalid, illegal or unconstitutional.

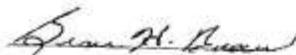
SECTION 4.

This ordinance shall take effect immediately from and after its passage and the publication of the caption, as the law in such cases provides.

DULY PASSED BY THE CITY OF BOWIE, TEXAS, on the 18th day of

March, 20 14

APPROVED:


MAYOR

ATTESTED TO:


CITY SECRETARY

APPROVED AS TO FORM:


CITY ATTORNEY

Appendix A – TWDB Utility Profile

Utility Profile
TWDB Form No. 1965 - R
Revised on: 9/1/13

Texas Water
Development Board

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

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

CONTACT INFORMATION

Name of Utility: City of Bowie

Public Water Supply Identification Number (PWS ID): 1690001

Certificate of Convenience and Necessity (CCN) Number: 11039

Surface Water Right ID Number: 3320 and 4876

Wastewater ID Number: WQ0070071003

Completed By: Jerry Sutton Title: Chief Plant Operator

Address: 304 Lindsey St City: Bowie Zip Code: 76230

Email: cityofbowie@yahoo.com Telephone Number: 940-872-6414

Date: 1/21/2014

Regional Water Planning Group: B Map

Groundwater Conservation District: 93 Map

Check all that apply:

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

Have 3,300 or more retail connections

Have a surface water right with TCEQ

Page 1 of 11

Utility Profile
 TWDB Form No. 1965 - II
 Revised on: 9/1/13



Section I: Utility Data

A. Population and Service Area Data

1. Current service area size in square miles: 76
 (Attach or email a copy of the service area map.)

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

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Service
2009	5,496	744	5,496
2010	5,218	744	5,218
2011	5,226	744	5,226
2012	5,177	735	5,177
2013	5,279	735	5,279

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

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Service
2020	5,389	750	5,389
2030	5,423	750	5,423
2040	5,436	750	5,436
2050	5,440	750	5,440
2060	5,449	750	5,449

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

Historic population were obtained from the United States Census Bureau. Future projections were obtained from the 2011 Region B Water Plan.

WATER CONSERVATION & DROUGHT CONTINGENCY PLAN - 2014

Utility Profile
 TWDB Form No. 1965 - R
 Revised on: 9/1/13



B. System Input

Provide system input data for the previous five years.

Total System Input = Self-supplied + Imported – Exported

Year	Self-supplied Water in Gallons	Purchased/Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2009	326,205,000	0	13,375,000	312,830,000	156
2010	365,629,000	0	12,468,000	353,161,000	185
2011	353,188,000	0	17,935,800	335,252,200	176
2012	380,598,000	0	15,750,000	364,848,000	193
2013	321,448,000	0	14,583,000	306,865,000	159
Historic 5-year Average	349,413,600	0	14,822,360	334,591,240	174

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

1. Designed daily capacity of system _____ 1,650,000 gallons per day.
2. Storage Capacity:
 Elevated _____ 650,000 gallons
 Ground _____ 1,000,000 gallons
3. List all current water supply sources in gallons.

Water Supply Source	Source Type*	Total Gallons
Amon G. Carter Lake	Surface	1,629,255,000
Bowie Lake	Surface	419,044,386
	Choose One	

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

4. If surface water is a source type, do you recycle backwash to the head of the plant?
 Yes _____ estimated gallons per day
 No

WATER CONSERVATION & DROUGHT CONTINGENCY PLAN - 2014

Utility Profile
 TWDB Form No. 1965 - B
 Revised on: 9/1/13



D. Projected Demands

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

Year	Population	Water Demands (gallons)
2014	5,310	339,204,355
2015	5,323	340,006,625
2016	5,336	340,837,000
2017	5,349	341,667,375
2018	5,363	342,561,625
2019	5,376	343,392,000
2020	5,389	344,222,375
2021	5,402	345,052,750
2022	5,415	345,883,125
2023	5,428	346,713,500

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

Projected population was extrapolated using the slope of the projections from 2010 to 2020 of the Region B Water Planning Group, $y=13.167x+5296.8$. Water demands were based upon a total GPCD of 175.

WATER CONSERVATION & DROUGHT CONTINGENCY PLAN - 2014

Utility Profile
 TWDB Form No. 1965 - R
 Revised on: 9/1/13



E. High Volume Customers

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

Retail Customer	Water Use Category*	Annual Water Use	Treated or Raw
L&R Tank Trucks	Commercial	10,249,200	Treated
Key Energy Services	Commercial	5,071,900	Treated
Bowie ISD	Institutional	3,454,300	Treated
Bowie Memorial Hospital	Institutional	2,294,900	Treated
Advanced Rehab & Healthcare	Commercial	1,965,500	Treated

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

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

Wholesale Customer	Water Use Category*	Annual Water Use	Treated or Raw
Amon Carter WSC	Municipal	14,583,000	Treated
	Choose One		Choose One
	Choose One		Choose One
	Choose One		Choose One
	Choose One		Choose One

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

F. Utility Data Comment Section

Provide additional comments about utility data below.

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Section II: System Data

A. Retail Connections

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

Water Use Category*	Active Retail Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Residential – Single Family	3,060		3,060	86%
Residential – Multi-family (units)	4		4	0%
Industrial	1		1	0%
Commercial	489		489	14%
Institutional			0	0%
Agricultural			0	0%
TOTAL	3,554	0	3,554	

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

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

Water Use Category*	Net Number of New Retail Connections				
	2009	2010	2011	2012	2013
Residential – Single Family	0	0	165	0	3
Residential – Multi-family (units)	0	0	0	0	2
Industrial	0	0	0	0	0
Commercial	0	0	28	0	8
Institutional	0	0	0	0	0
Agricultural	0	0	0	0	0
TOTAL	0	0	193	0	13

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

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B. Accounting Data

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

Water Use Category*	Total Gallons of Retail Water				
	2009	2010	2011	2012	2013
Residential - Single Family	140,291,713	142,476,500	164,234,350	142,016,697	129,076,897
Residential - Multi-family	2,090,600	1,191,800	63,100	70,000	154,900
Industrial	267,800	313,000	314,900	304,700	211,000
Commercial	81,992,250	85,219,100	98,120,298	82,200,749	74,800,591
Institutional					
Agricultural					
TOTAL	224,642,363	229,200,400	262,732,648	224,592,146	204,243,388

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

C. Residential Water Use

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

Water Use Category*	Residential GPCD				
	2009	2010	2011	2012	2013
Residential - Single Family	71	75	86	75	67
Residential - Multi-family					
TOTAL	71	75	86	75	67

D. Annual and Seasonal Water Use

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

Month	Total Gallons of Treated Retail Water				
	2009	2010	2011	2012	2013
January	22,551,000	22,902,000	22,421,000	21,063,000	22,705,000
February	20,512,000	22,999,000	21,577,000	19,569,000	19,142,000
March	22,688,000	20,533,000	24,337,000	20,109,000	22,081,000
April	23,742,000	21,799,000	26,857,000	23,832,000	22,235,000
May	25,675,000	25,722,000	26,569,000	31,126,000	25,735,000
June	31,170,000	35,203,000	34,447,000	30,897,000	24,615,000
July	33,871,000	36,600,000	48,136,000	43,719,000	31,508,000
August	34,814,000	40,991,000	44,580,000	45,768,000	31,079,000
September	26,275,000	28,503,000	37,238,000	30,050,000	28,393,000
October	27,670,000	29,489,000	27,082,000	26,042,000	23,576,000
November	25,114,000	25,024,000	21,400,000	23,998,000	20,179,000
December	27,116,000	22,779,000	21,178,000	23,734,000	22,022,000
TOTAL	321,198,000	332,544,000	355,822,000	339,907,000	293,270,000

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

Month	Total Gallons of Raw Retail Water				
	2009	2010	2011	2012	2013
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	0	0	0	0	0
June	0	0	0	0	0
July	0	0	0	0	0
August	0	0	0	0	0
September	0	0	0	0	0
October	0	0	0	0	0
November	0	0	0	0	0
December	0	0	0	0	0
TOTAL	0	0	0	0	0

3. Summary of seasonal and annual water use.

Water Use	Seasonal and Annual Water Use					Average in Gallons
	2009	2010	2011	2012	2013	
Summer Retail (Treated + Raw)	99,855,000	112,794,000	127,163,000	120,384,000	87,202,000	109,479,600 <small>5yr Average</small>
TOTAL Retail (Treated + Raw)	321,198,000	332,544,000	355,822,000	339,907,000	293,270,000	328,548,200 <small>5yr Average</small>

E. Water Loss

Provide Water Loss data for the previous five years.

Water Loss GPCD = [Total Water Loss in Gallons ÷ Permanent Population Served] ÷ 365

Water Loss Percentage = [Total Water Loss ÷ Total System Input] x 100

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss as a Percentage
2009	54,731,092	27	17%
2010	88,626,885	36	19%
2011	61,608,845	32	18%
2012	29,110,100	15	8%
2013	43,957,060	23	14%
5-year average	51,606,796	27	16%

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F. Peak Water Use

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

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2009	880,000	1,506,000	1.71
2010	911,000	1,713,000	1.88
2011	975,000	1,806,000	1.85
2012	929,000	2,183,000	2.35
2013	747,000	1,380,000	1.85

G. Summary of Historic Water Use

Water Use Category	Historic 5-year Average	Percent of Connections	Percent of Water Use
Residential SF	143,619,231	86%	44%
Residential MF	714,080	0%	0%
Industrial	282,280	0%	0%
Commercial	84,466,598	14%	26%
Institutional	0	0%	0%
Agricultural	0	0%	0%

H. System Data Comment Section

Provide additional comments about system data below.

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Section III: Wastewater System Data

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

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

1. Design capacity of wastewater treatment plant(s): 1,250,000 gallons per day.
2. List the active wastewater connections by major water use category.

Water Use Category*	Active Wastewater Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal	3,054		3,054	97%
Industrial	1		1	0%
Commercial	86		86	3%
Institutional			0	0%
Agricultural			0	0%
TOTAL	3,141	0	3,141	

2. What percent of water is serviced by the wastewater system? 88 %
3. For the previous five years, enter the number of gallons of wastewater that was treated by the utility.

Month	Total Gallons of Treated Wastewater				
	2009	2010	2011	2012	2013
January	18,240,000	26,940,000	19,430,000	21,061,000	15,370,000
February	16,460,000	29,170,000	19,640,000	19,940,000	13,570,000
March	16,961,000	29,161,000	19,906,000	23,850,000	15,920,000
April	20,630,000	26,810,000	19,881,000	20,840,000	15,230,000
May	23,211,000	27,511,000	19,320,000	18,681,000	16,500,000
June	19,840,000	21,990,000	17,950,000	19,250,000	19,194,000
July	21,000,000	24,440,000	21,331,000	17,030,000	17,200,000
August	20,380,000	20,091,000	20,480,000	16,780,000	14,910,000
September	20,941,000	21,610,000	18,710,000	17,711,000	14,640,000
October	24,570,000	19,170,000	21,510,000	19,800,000	15,600,000
November	21,320,000	18,610,000	17,441,000	15,410,000	15,080,000
December	24,071,000	19,591,000	20,130,000	15,341,000	17,390,000
TOTAL	247,624,000	285,094,000	235,729,000	225,694,000	190,604,000

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4. Can treated wastewater be substituted for potable water?

Yes No

B. Reuse Data

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

Type of Reuse	Total Annual Volume (in gallons)
On-site irrigation	
Plant wash down	
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (parks, golf courses)	
Agricultural	
Discharge to surface water	
Evaporation pond	
Other Oil Field	110,000,000
TOTAL	110,000,000

C. Wastewater System Data Comment

Provide additional comments about wastewater system data below.

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

Appendix B – TWDB Indoor Water Conservation Tips

Bathroom:

- Replace your showerhead with a water-efficient model.
- Get in the shower as soon as the water becomes warm enough.
- Take short showers.
- Take a shower instead of a bath. A shower with a water-efficient showerhead often uses less water than a bath.
- Reduce the level of water used in a bathtub by 1 or 2 inches if a shower is not available.
- Turn off the water while you are shaving. Fill the sink with hot water instead of letting the water run continuously.
- Replace your old toilet with a high-efficiency toilet that uses 1.28 gallons per flush.
- Test toilets for leaks. Once in a while, take the top off of your toilet tank and watch it flush. Do you notice any leaks? Yes? Replace the flapper or rubber washer. Don't forget about those less obvious leaks. Add a few drops of food coloring or a dye tablet to the water in the tank, but do not flush the toilet. If the coloring appears in the bowl within a few minutes, the toilet has a leak that needs to be repaired.
- Never use the toilet to dispose of trash.
- Don't waste water when brushing your teeth or washing your hands. Shut off the water until it's time to rinse.

Kitchen:

- Run the dishwasher only when full. This practice will save water, energy, detergent, and money. If your dishes are not very dirty, use the

short wash cycle. You can spend less money on water and energy by installing a high-efficiency dishwasher.

- Install faucet aerators. You'll never notice the difference, and you'll cut your sink water consumption in half! Also, don't ignore leaky faucets.
- Keep a container of water in the refrigerator. It will be refreshingly cool and won't waste water.
- Dry scrape dishes instead of rinsing. Your dishwasher will take care of the rest.
- Use garbage disposals sparingly. They can waste water unnecessarily.
- Soak pans rather than scrubbing them while the water is running.
- Rinse vegetables in a pan of cold water.

Laundry room:

- Conventional washing machines use 32 to 59 gallons of water per load.
- Wash only full loads.
- Use the lowest water level setting on the washing machine for light or partial loads whenever possible.
- Use cold water as often as possible to save energy and conserve hot water for uses that cold water cannot serve.

Additional tips:

- Don't ignore leaky faucets; they are usually easy and inexpensive to repair. Turn off the valve under the sink until you get around to repairing the leak. A slow drip can waste as much as 170 gallons of water each day and will add to the water bill.

- Know where your master water shut-off valve is in case a pipe bursts. Insulate hot water pipes. You won't waste water waiting for it to get hot, and you will save energy too.
- Install water-softening systems only when necessary, and if you have one, save water and salt by running the minimum amount of regenerations necessary to maintain water softness.
- Replace water-to-air heat pumps and air conditioners with air-to-air if you are purchasing new units. They are just as efficient and do not waste water.
- Find other uses for water rather than letting it go down the drain, such as watering house plants with fish tank water.