



**Farmersville**  
DISCOVER A TEXAS TREASURE®

## **Water Management Plan**

City of Farmersville  
205 South Main Street  
Farmersville, Texas 75442

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# Water Management Plan

## 1 INTRODUCTION AND OBJECTIVES

Water supply has always been a key issue in the development of Texas. In recent years, the growing population and economic development of North Central Texas has led to increasing demands for water supplies. At the same time, local and less expensive sources of water supply are largely developed. Additional supplies to meet higher demands will be expensive and difficult to develop. It is therefore important to make the most efficient use of existing supplies. 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), the Texas Water Development Board (TWDB), and the North Texas Municipal Water District (NTMWD) have developed guidelines and requirements governing the development of water conservation and drought contingency plans for public water suppliers.<sup>1</sup> TCEQ guidelines and requirements are included in Appendix B. The best management practices established by the Water Conservation Implementation Task Force<sup>2</sup>, established pursuant to SB1094 by the 78<sup>th</sup> Legislature, were also considered in the development of the water conservation measures.

The water conservation sections of this plan include measures that are intended to result in ongoing, long-term water savings. The drought contingency and water emergency response sections of this plan address strategies designed to temporarily reduce water use in response to specific conditions.

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<sup>1</sup> Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Rules 288.1, 288.2, 288.5, 288.20, 288.22, and 288.30 downloaded from [http://texreg.sos.state.tx.us/public/readtac\\$ext.ViewTAC?tac\\_view=5&ti=30&pt=1&ch=288&sch=A&rl=Y](http://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=5&ti=30&pt=1&ch=288&sch=A&rl=Y), November 2015.

<sup>2</sup> Water Conservation Implementation Task Force: "Texas Water Development Board Report 362, Water Conservation Best Management Practices Guide," prepared for the Texas Water Development Board, Austin, November 2004.

## 2 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES

### 2.1 Conservation Plan Requirements

The elements in the Texas Administrative Code (TAC) TCEQ water conservation rules covered in this plan are listed below.

TCEQ Requirement Section	TCEQ Requirement Description	WMP Section
<b>Minimum Water Conservation Requirements Covered by this Plan</b>		
288.2(a)(1)(A)	Utility Profile	Section 5 and Appendix C
288.2(a)(1)(B)	Record Management System	Section 7.3.3
288.2(a)(1)(C)	Specific, Quantified Goals	Section 7.2
288.2(a)(1)(D)	Accurate Metering	Sections 7.3.1
288.2(a)(1)(E)	Universal Metering	Section 7.3.2
288.2(a)(1)(F)	Determination and Control of Unaccounted Water	Section 7.3.4
288.2(a)(1)(G)	Public Education and Information Program	Section 7.5
288.2(a)(1)(H)	Water Rate Structure	Section 7.6
288.2(a)(1)(I)	Reservoir System Operation Plan	Section 7.7.1
288.2(a)(1)(J)	Means of Implementation and Enforcement	Section 4
288.2(a)(1)(K)	Coordination with Regional Water Planning Group	Section 7.8 and Appendix F
288.2(a)(2)(B)	Requirement for Water Conservation Plans by Wholesale Suppliers	Section 7.7.5
288.2(a)(3)(F)	Considerations for Landscape Water Management Regulations	Section 7.7.4
288.2(c)	Review and Update of Plan	Section 5
<b>Optional Water Conservation Requirements Covered by this Plan</b>		
288.2(a)(2)(A)	Leak Detection, Repair, and Water Loss Accounting	Section 7.3.5
288.2(a)(3)(A)	Conservation Oriented Water Rates	Section 7.6
288.2(a)(3)(B)	Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures	Section 7.7.3
288.2(a)(3)(C)	Replacement or Retrofit of Water-Conserving Plumbing Fixtures	Section 7.7.3
288.2(a)(3)(D)	Reuse and Recycling of Wastewater	Section 7.7.2
288.2(a)(3)(G)	Monitoring Method	Section 7.4
288.2(a)(3)(H)	Additional Conservation Ordinance Provisions	Section 7.7
<b>Wholesale Water Conservation Requirements Covered by this Plan</b>		
288.5(1)(A)	Description of Service Area	Section 6 and Appendix C
288.5(1)(B)	Five-Year and Ten-Year Water Saving Targets	Section 7.2
288.5(1)(C)	Diversion Measurement Methods	Section 7.3.1

TCEQ Requirement Section	TCEQ Requirement Description	WMP Section
288.5(1)(D)	Monitoring and Record Management Program	Section 7.3.3
288.5(1)(E)	Metering, Leak Detection, and Repair	Section 7.3.5
288.5(1)(F)	Water Supply Contract	Section 7.7.5
288.5(1)(H)	Implementation and Enforcement	Section 4
288.5(1)(I)	Coordination with Regional Water Planning Groups	Section 7.8 and Appendix F

This plan does not cover requirements for the following TCEQ Texas Administrative Code rules since they are not applicable to City of Farmersville uses:

- Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rule 288.3, Water Conservation Plans for Industrial or Mining Use
- Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rule 288.4, Water Conservation Plans for Agricultural Use
- Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rule 288.6, Water Conservation Plans for Any Other Purpose or Use
- Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rule 288.7, Plans Submitted with a Water Right Application for New or Additional State Water
- Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rule 288.21, Drought Contingency Plans for Irrigation Use

## 2.2 Drought Contingency Plan Requirements

The elements in the TAC TCEQ drought contingency rules covered in this plan are listed below.

TCEQ Requirement Section	TCEQ Requirement Description	WMP Section
288.20(a)(1)(A)	Public Information and Feedback Program	Section 8.2
288.20(a)(1)(B)	Continuing Public Education	Section 8.3
288.20(a)(1)(C)	Coordination with Regional Water Planning Group	Section 8.8
288.20(a)(1)(D)	Information to be Monitored for Drought Response Stages	Section 8.5
288.20(a)(1)(E)	Implementation of Drought Response Stages	Section 8.5
288.20(a)(1)(F)	Water Supply and Demand Targets	Section 8.5
288.20(a)(1)(G)	Water Supply and Demand Management Measures	Section 8.5
288.20(a)(1)(H)	Initiation or Termination of Each Drought Response Stage	Section 8.5
288.20(a)(1)(I)	Variances	Section 8.6
288.20(a)(1)(J)	Enforcement	Section 8.7

TCEQ Requirement Section	TCEQ Requirement Description	WMP Section
288.20(b)	Notification of Implementation of any Mandatory Provisions	Section 8.4
288.20(c)	Updates	Section 8.9
288.22(a)(1)	Public Information and Feedback Program	Section 8.2
288.22(a)(2)	Coordination with Regional Water Planning Group	Section 8.8
288.22(a)(3)	Initiation or Termination of Each Drought Response Stage	Section 8.5
288.22(a)(4)	Drought Response Stages	Section 8.5
288.22(a)(5)	Notification of Drought Response Stages	Section 8.5
288.22(a)(6)	Quantified Targets for Reduction	Section 8.5
288.22(a)(7)(A)	Curtailment of Water Delivery	Section 8.4
288.22(a)(7)(B)	Utilization of Alternative Water Sources	Section 8.5
288.22(a)(8)	Wholesale Contract Curtailment of Water Delivery	Section 7.7.5
288.22(a)(9)	Variances	Section 8.6
288.22(a)(10)	Enforcement	Section 4
288.22(b)	Executive Director Notification	Section 8.4
288.22(c)	Plan Review and Update	Section 5

This plan does not cover requirements for the following Texas Administrative Code rules since they are not applicable to City of Farmersville uses:

- Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rule 288.21, Drought Contingency Plans for Irrigation Use

### 3 REQUIRED SUBMITTALS

The North Texas Municipal Water District (NTMWD), TCEQ, and the TWDB submittal requirements relating to water conservation and drought contingency plans are listed below.

Requirement Section	Requirement Description	Due Dates
<b>NTMWD Requirements</b>		
N/A	Water Management Plan	Parallel effort with TCEQ submission. The WMP will be reviewed and comments corrected before submission to TCEQ.
N/A	Water Conservation Annual Report for the NTMWD (see Appendix E for example)	Due by 31 March each year

Requirement Section	Requirement Description	Due Dates
<b>TCEQ Requirements</b>		
TAC 288.30(1)	TCEQ Water Conservation Plan Original Implementation and Update Requirements	Only required if over 3,300 connections Original: 1 May 2005 Subsequent Revisions: Every 5 Years Revised Plans: Within 90 Days
TAC 288.30(5)	TCEQ Drought Contingency Plan Original Implementation and Update Requirements	Available for inspection only Original: 1 May 2005 Subsequent Revisions: Every 5 Years Revised Plans: Within 90 Days
TAC 288.30(2)	TCEQ Water Conservation Implementation Report (TCEQ-20646)	Submitted with Water Management Plan Update Original: 1 May 2005 Subsequent Revisions: Every 5 Years Revised Plans: Within 90 Days
<b>Texas Water Development Board Requirements</b>		
TAC 288.30(10)(B)	TWDB Water Conservation Plan Submission	Parallel effort with TCEQ submission Original: 1 May 2005 Subsequent Revisions: Every 5 Years Revised Plans: Within 90 Days
TAC 288.30(10)(C)	TWDB Water Conservation Annual Report Submission (Form TWDB 1966, Formerly Form WRD-265)	Only required if Over 3,300 connections TWDB assistance over \$500,000 Water right established Original: 1 May 2011 Subsequent: Annually, 1 May
Texas Water Code Section 16.012(m)	TWDB, Water Loss Audit Data	Original: 1 May 2016 Subsequent: Annually, 1 May
Texas Water Code Section 16.012(m)	TWDB, Municipal Water Use Survey (Long Form)	Original: 1 March 2016 Subsequent: Annually, 1 March

#### **4 IMPLEMENTATION AND ENFORCEMENT OF THE WATER MANAGEMENT PLAN**

This plan shall be implemented and enforced by ordinance. Items related to penalties for violations will be included in the ordinance.

#### **5 REVIEW AND UPDATE OF WATER CONSERVATION PLAN**

This water conservation plan shall be updated at least every five (5) years. The plan will be updated as required and as appropriate based on new or updated information.



## **6 WATER UTILITY PROFILE**

The Water Utility Profile for the City of Farmersville is contained in Appendix C.

## **7 WATER CONSERVATION PLAN**

### **7.1 Introduction**

The objectives of this water conservation plan are as follows:

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

### **7.2 Specification of Water Conservation Goals**

The goals for this water conservation plan include the following:

- Maintain the per capita municipal water use below the specified amount for a dry year as shown in Table 1.
- Maintain the level of unaccounted water in the system as discussed in Section 8.4 and as shown in Table 1.
- Implement and maintain a program of universal metering and meter replacement and repair, as discussed in Section 7.3.2.
- Increase efficient water usage through a water conservation ordinance, order or resolution as discussed in Section 4.
- Decrease waste in lawn irrigation by implementation and enforcement of landscape water management regulations, as discussed in Section 7.7.4.
- Raise public awareness of water conservation and encourage responsible public behavior by a public education and information program, as discussed in Section 7.5.
- Develop a system specific strategy to conserve water during peak demands, thereby reducing the peak use.

Table 1. Water Conservation Goals

Description	Current	5-Year Goal	10-Year Goal
Total Per Capita Use with Credit for Reuse	91	145	142
Total Residential Capita Use	68	114	111
Water Loss (GPCD) <sup>1</sup>	8	27	24
Water Loss Percentage Maximum (%) <sup>2</sup>	12.00	10.00	8.5

1. Water Loss GPCD = (Total Water Loss ÷ Permanent Population) ÷ 365
2. Water Loss Percentage = (Total Water Loss ÷ Total Gallons in System) x 100; or  
(Water Loss GPCD ÷ Total GPCD) x 100

### 7.3 Metering, Water Use Records, Control of Unaccounted Water, and Leak Detection

One of the key elements of water conservation is tracking water use and controlling losses through illegal diversions and leaks. It is important to carefully meter water use, detect and repair leaks in the distribution system and provide regular monitoring of unaccounted water.

#### 7.3.1 Accurate Metering of Treated Water Deliveries

The water distribution meters shown in Table 2 shall meet the following minimum accuracy requirements. Wholesale water distribution points shall be metered with a resolution equal to or better than 1000 gallons.

Table 2. Meter Accuracies

Meter Type	Required Accuracy
Residential Single Family	±2%
Residential Multi-Family	±2%
Commercial	±5%
Institutional	±5%
Industrial	±5%
Agricultural	±5%
Wholesale	±5%

#### 7.3.2 Metering of Customer and Public Uses and Meter Testing, Repair, and Replacement

Water distribution meters shall be calibrated and replaced as shown in Table 3 to meet the system accuracy requirements.

Table 3. Meter Calibration and Replacement

Meter Type	Calibration Period	Replacement Period
Residential Single Family	Yearly, 5% of meter population or 1 whichever is greater	Manufacturer Rating
Residential Multi-Family		
Commercial		
Institutional		
Industrial		
Agricultural		
Wholesale	Yearly	

All uses of water shall be metered including residential single family, residential multi-family, commercial, institutional, industrial, agricultural, and wholesale uses.

Meters shall be replaced if they cannot maintain their stated system accuracy or if they are beyond their stated lifetime rating as determined by the manufacturer. If a meter is beyond its rated lifetime and still operates within the required accuracy, the Public Works Director may extend the life of the meter.

In cases where meters are installed as part of a service contract then the service contract terms shall apply.

### **7.3.3 Record Management System**

The record management system shall allow for the separation of water deliveries, sales, and losses into the following categories: residential single family, residential multi-family, commercial, institutional, industrial, agricultural, and wholesale categories.

### **7.3.4 Determination and Control of Water**

Unaccounted water or water loss is the difference between water delivered to the City of Farmersville from NTMWD and metered water sales to customers plus authorized for use but not sold. (Authorized but unmetered uses would include use for fire fighting, releases for flushing of lines, uses associated with new construction, etc.) Water loss can include several categories:

- Inaccuracies in customer meters. (Customer meters tend to run more slowly as they age and under-report actual use.)
- Accounts which are being used but have not yet been added to the billing system.
- Losses due to water main breaks and leaks in the water distribution system.
- Losses due to illegal connections and theft.
- Other.

Total water loss includes three categories:

- Apparent Losses – including inaccuracies in customer meters. (Non-electronic customer meters tend to run more slowly as they age and under-report actual use.) Losses due to illegal connections and theft. Accounts which are being used but have not yet been added to the billing system.
- Real Losses – includes physical losses from the system or mains, reported breaks and leaks, storage overflow.
- Unidentified Water Losses – (System Input - Total Authorized - Apparent Losses - Real Losses)

Water loss shall be calculated and maintained below the goals set in this document. If unaccounted water exceeds this goal, a more intensive audit to determine the source(s) of and reduce the unaccounted water shall be conducted. The annual conservation report shall be the primary tool to report and monitor unaccounted water.

### **7.3.5 Leak Detection and Repair**

City crews and personnel shall look for and report evidence of leaks in the water distribution system. Areas of the water distribution system exhibiting repeated leaks and line breaks should be targeted for replacement as funds are available.

Meter leak detection capability shall be utilized to reduce the cycle time repair leaks.

### **7.4 Monitoring of Effectiveness and Efficiency - Annual Water Conservation Report**

The Annual Water Conservation Report in Appendix E shall be used to monitor the effectiveness and efficiency of the water conservation program and to plan conservation-related activities for the next year. The annual water conservation report shall also be sent to NTMWD by March 31<sup>st</sup> of each year.

### **7.5 Continuing Public Education and Information Campaign**

The continuing public education and information campaign on water conservation includes the following elements:

- Utilize the “Water IQ: Know Your Water” and other public education materials produced by the NTMWD.
- Insert water conservation information with water bills. Inserts will include material developed by Member Cities’ and Customers’ staff and material obtained from the TWDB, the TCEQ, and other sources.
- Encourage local media coverage of water conservation issues and the importance of water conservation.
- Notify local organizations, schools, and civic groups that Member City or Customer staff and staff of the NTMWD are available to make presentations on the importance of water conservation and ways to save water.

- Promote the *Texas Smartscape* web site ([www.txsmartscape.com](http://www.txsmartscape.com)) and provide water conservation brochures and other water conservation materials available to the public at City Hall and other public places.
- Make information on water conservation available on the City of Farmersville website and include links to the “Water IQ: Know Your Water” website, *Texas Smartscape* website and to information on water conservation on the TWDB and TCEQ websites and other resources.
- Participate in the EPA Water Sense sponsored “Fix a Leak Week.” Become an EPA Water Sense Partner.
- Utilize the Water My Yard website and encourage customers to sign-up to receive weekly watering advice.

## **7.6 Water Rate Structure**

The water rate structure shall be set based on a water rate study performed by a firm with at least 5 years of experience producing like studies for NTMWD member cities. The firm’s qualifications to perform a water rate study shall be approved by City Council prior to conducting the study.

### **7.6.1 Residential Rate Features**

- Monthly minimum charge. Up to two thousand (2,000) gallons water use with no additional charge.
- Base charge per thousand (1,000) gallons up to the approximate average residential use.
- 2<sup>nd</sup> tier (from the average to two (2) times the approximate average) at 1.25 to 2.0 times the base charge.
- 3<sup>rd</sup> tier (above two (2) times the approximate average) at 1.25 to 2.0 times the 2<sup>nd</sup> tier.

### **7.6.2 Commercial/Industrial Rates**

Commercial/industrial rates should include at least two (2) tiers, with rates for the 2<sup>nd</sup> tier at 1.25 to 2.0 times the first tier. Higher water rates for commercial irrigation use are encouraged, but not required.

## **7.7 Other Water Conservation Measures**

No additional water conservation measures are being presented in this plan. All national, state, and local requirements are being met by the other paragraphs presented in this document.

### **7.7.1 Reservoir System Operation Plan**

The City of Farmersville purchases all its treated water from NTMWD and does not have surface water supplies to implement a system operation plan. A Reservoir System Operation Plan is not required.

### **7.7.2 Reuse and Recycling of Wastewater**

The City of Farmersville owns its own wastewater treatment facility which is managed by NTMWD. All the treated effluent from this plant is recycled back to Lake Lavon via Elm Creek. The effluent is eventually reused by NTMWD to make-up the treated water supplies for the surrounding cities including Farmersville.

### **7.7.3 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures**

The City of Farmersville has adopted the International Plumbing Code and the International Existing Building Code by ordinance which sets standards for water-conserving fixtures.

The International Plumbing Code sets maximum flow rates and consumption for plumbing fixtures and fixture fittings for items such as shower heads, sink faucets, urinals, and water closets. All new plumbing fixtures installed within the City and the City's extra-territorial jurisdiction shall meet these new water-conserving requirements.

The International Existing Building Code sets maximum flow rates and consumption for replaced water closets installed in existing buildings.

### **7.7.4 Landscape Water Management Measures**

The following landscape water management measures shall be implemented and enforced.

- Time of day restrictions prohibiting lawn irrigation watering from 10 AM to 6 PM beginning April 1 and ending October 31 of each year.
- Prohibition of watering of impervious surfaces. (Wind driven water drift will be taken into consideration.)
- Prohibition of use of poorly maintained irrigation systems that waste water.
- Prohibition of outdoor watering during precipitation or freeze events.
- Lawn and landscape irrigation limited to twice per week.
- Requirement that all new irrigation systems be in compliance with state design and installation regulations (TAC Title 30, Part 1, Chapter 344).
- Native, drought-tolerant, or adaptive plants should be encouraged.
- Drip irrigation systems should be promoted.
- Evapotranspiration (ET)/Smart controllers that only allow sprinkler systems to irrigate when necessary should be promoted.
- Prohibiting the use of treated water to fill or refill residential, amenity, and any other natural or manmade ponds during drought conditions. A pond is considered to be a still body of water with a surface area of five hundred (500) square feet or more.
- Rain and freeze sensors and/or ET or smart controllers required on all new irrigation systems. Rain and freeze sensors and/or ET or Smart controllers must be maintained to function properly.
- Rain and freeze sensors and/or ET or smart controllers required on all existing irrigation systems by end of the year 2015.

- “At home” car washing can be done only when using a water hose with a shut-off nozzle.
- Prohibition of watering areas that have been over-seeded with cool season grasses (such as rye grass or other similar grasses), except for golf courses and public athletic fields.

### **7.7.5 Water Supply Contract**

Every contract for the wholesale sale of water that is entered into, renewed, or extended shall include a requirement that the wholesale customer and any wholesale customers of that wholesale customer develop and implement a water conservation plan meeting the requirements of Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code.

Each wholesale contract shall include as 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, §11.039.

### **7.8 Coordination with Regional Water Planning Group and NTMWD**

Appendix F includes an example letter sent to the Chair of the Region C water planning group. A copy of draft ordinance(s) or regulation(s) implementing the plan and the water utility profile shall be sent to NTMWD for review and comment. The adopted ordinance(s) or regulation(s) and the adopted water utility profile will be copied to the Chair of the Region C Water Planning Group and to NTMWD.

## **8 DROUGHT CONTINGENCY AND WATER EMERGENCY RESPONSE PLAN**

### **8.1 Introduction**

The purpose of this drought contingency and water emergency response plan is as follows:

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

A drought is defined as an extended period of time when an area receives insufficient amounts of rainfall to replenish the water supply, causing water supply sources, in this case reservoirs, to be depleted. In the absence of drought response measures, water demands tend to increase during a drought due to the need for additional outdoor irrigation. The severity of a drought depends on the degree of depletion of supplies and on the relationship of demand to available supplies. The NTMWD considers a drought to end when all of its supply reservoirs refill to the conservation storage pool.

## **8.2 Provisions to Inform the Public and Opportunity for Public Input**

The City of Farmersville shall provide opportunity for public input in the development or update of this drought contingency and water emergency response plan by the following means:

- Providing written notice of the proposed plan and the opportunity to comment on the plan.
- Providing written notice of the proposed plan and the opportunity to comment on the plan to all wholesale consumers.
- Making the draft plan available on the City's website.
- Providing the draft plan to anyone requesting a copy.
- Holding a public meeting.

## **8.3 Provisions for Continuing Public Education and Information**

The City of Farmersville shall inform and educate the public about the drought contingency and water emergency response plan by the following means:

- Preparing a bulletin describing the plan and making it available at city hall and other appropriate locations.
- Making the plan available to the public through the City's website.
- Notifying local organizations, schools, and civic groups that staff are available to make presentations on the drought contingency and water emergency response plan (usually in conjunction with presentations on water conservation programs).

At any time that the drought contingency and water emergency response plan is activated or the drought stage or water emergency response stage changes, the City of Farmersville shall notify local media of the issues, the drought/water emergency response stage (if applicable), and the specific actions required of the public. This information shall also be publicized on the City's web site. Additionally, billing inserts may also be used as appropriate.

## **8.4 Initiation and Termination of Drought or Water Emergency Response Stages**

Initiation, termination, and notification of a drought contingency and water emergency response stage shall be forwarded in writing to each wholesale customer.

In the event of an identified water shortage declaration, the City of Farmersville shall distribute water to wholesale customers according to the Texas Water Code §11.039.

### **8.4.1 Initiation of a Drought or Water Emergency Response Stage**

The City Manager or official designee may order the implementation of a drought or water emergency response stage when one or more of the trigger conditions for that stage is met. The following actions will be taken when a drought or water emergency response stage is initiated:

- The public will be notified through local media and the City's web site.



- Wholesale customers and the NTMWD will be notified by e-mail with a follow-up letter or fax that provides details of the reasons for initiation of the drought/water emergency response stage.
- If any mandatory provisions of the drought contingency and water emergency response plan are activated, the City of Farmersville will notify the Executive Director of the TCEQ and the Executive Director of the NTMWD within five (5) business days. Alternatively the Executive Director of the TCEQ notification may take place through NTMWD.

The City Manager or official designee may decide not to order the implementation of a drought response stage or water emergency even though one or more of the trigger criteria for the stage are met. Factors which could influence such a decision include, but are not limited to, the time of the year, weather conditions, the anticipation of replenished water supplies, or the anticipation that additional facilities will become available to meet needs.

#### **8.4.2 Termination of a Drought/Water Emergency Response Stage**

The City Manager or official designee may order the termination of a drought or water emergency response stage when the conditions for termination are met or at their discretion. The following actions will be taken when a drought or emergency response stage is terminated:

- The public will be notified through local media and the City's web site.
- Wholesale customers and the NTMWD will be notified by e-mail with a follow-up letter or fax.
- If any mandatory provisions of the drought contingency and water emergency response plan that have been activated are terminated, the City of Farmersville will notify the Executive Director of the TCEQ and the Executive Director of the NTMWD within five (5) business days.

The City Manager or official designee may decide not to order the termination of a drought or water emergency response stage even though the conditions for termination of the stage are met. Factors which could influence such a decision include, but are not limited to, the time of the year, weather conditions, or the anticipation of potential changed conditions that warrant the continuation of the drought stage.

#### **8.5 Drought Contingency and Water Emergency Response Stages and Measures**

There are three (3) active levels indicating different stages of drought contingency and water emergency preparedness. The City of Farmersville, at the direction of the Public Works Director, shall install signs near city limit entrances that indicate the drought contingency and water emergency stages as follows:

Stage Number	Sign Background Color	Sign Text	Text Color
Not Applicable	Green	No Water Use Restrictions	White
1	Yellow	Stage 1	Black
2	Orange	Stage 2	White
3	Red	Stage 3	White

### 8.5.1 Stage 1

#### 8.5.1.1 Initiation and Termination Conditions for Stage 1

- The NTMWD has initiated Stage 1.
- City's water demand exceeds ninety (95) percent of the amount that can be delivered to customers for three consecutive days.
- City's water demand for all or part of the delivery system approaches delivery capacity because delivery capacity is inadequate.
- Supply source becomes contaminated.
- City's water supply system is unable to deliver water due to the failure or damage of major water system components.

Stage 1 may terminate when NTMWD terminates its Stage 1 condition or when the circumstances that caused the initiation of Stage 1 no longer prevail.

#### 8.5.1.2 Goal for Use Reduction and Actions Available under Stage 1

The goal for water use reduction under Stage 1 is a five (5) percent reduction.

The City Manager or official designee may order the implementation of any of the actions listed below, as deemed necessary to meet the five (5) percent reduction. Measures described as "requires notification to TCEQ" impose mandatory requirements on customers. The City shall notify TCEQ and NTMWD within five business days if these measures are implemented:

- Continue actions in the water conservation plan.
- Notify wholesale customers of actions being taken and request implementation of similar procedures to achieve the stage 1 percent reduction goal.
- Initiate engineering studies to evaluate alternatives should conditions worsen.
- Further accelerate public education efforts on ways to reduce water use.
- Halt non-essential city government water use.
  - Street cleaning that requires water.
  - Vehicle washing.
  - Ornamental fountains.
  - Reduce Splash Pad operational time by at least thirty (30) percent.

- Intensify efforts on leak detection and repair.
- Notify major water users and work with them to achieve voluntary water use reductions.
- Encourage the public to wait until the current drought or emergency situation has passed before establishing new landscaping.
- All users are encouraged to reduce the frequency of draining and refilling swimming pools.
- \*\* Limit landscape watering with sprinklers or irrigation systems at each service address to no more than two days per week on designated days between April 1 and October 31. Limit landscape watering with sprinklers or irrigation systems at each service address to once every week on designated days between November 1 and March 31. Automatic irrigation systems may only be utilized during City-wide solid waste disposal (trash) days which are typically Monday and Thursday. The following exceptions apply:
  - Landscape associated with new construction may be watered as necessary for thirty (30) days from the date of the certificate of occupancy.
  - Additional watering of landscape may be provided by hand held hose with shutoff nozzle, use of dedicated irrigation drip zones, and/or soaker hose provided no runoff occurs.
  - Foundations, new landscaping, new plantings (first year) of shrubs, and trees (within a ten foot radius of its trunk) may be watered by a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system provided no runoff occurs.
  - Landscape watering of parks, golf courses and athletic fields using potable water are required to meet the same reduction goals and measures outlined in this stage. Exception for golf course greens and tee boxes which may be hand watered as needed.
  - Locations using other sources of water supply for irrigation may irrigate without restrictions.
  - Registered and properly functioning ET/Smart irrigation systems and drip irrigation systems may irrigate without restrictions.

**(Items identified by \*\* mandates the City to notify TCEQ of restrictions)**

## **8.5.2 Stage 2**

### **8.5.2.1 Initiation and Termination Conditions for Stage 2**

- The NTMWD has initiated Stage 2.
- City's water demand exceeds ninety-eight (98) percent of the amount that can be delivered to customers for three consecutive days.
- City's water demand for all or part of the delivery system exceeds delivery capacity because delivery capacity is inadequate.
- Supply source becomes contaminated.
- City's water supply system is unable to deliver water due to the failure or damage of major water system components.

Stage 2 may terminate when NTMWD terminates its Stage 2 condition or when the circumstances that caused the initiation of Stage 2 no longer prevail.

### 8.5.2.2 Goals for Use Reduction and Actions Available under Stage 2

The goal for water use reduction under Stage 2 is ten (10) percent.

The City Manager or official designee may order the implementation of any of the actions listed below, as deemed necessary to meet the ten (10) percent reduction. Measures described as “requires notification to TCEQ” impose mandatory requirements on customers. The City shall notify TCEQ and NTMWD within five business days if these measures are implemented:

- Continue actions in the water conservation plan.
- Notify wholesale customers of actions being taken and request implementation of similar procedures to achieve the stage 2 percent reduction goal.
- Implement viable alternative water supply strategies.
- Initiate engineering studies to evaluate alternatives should conditions worsen.
- Further accelerate public education efforts on ways to reduce water use.
- Halt non-essential city government water use.
  - Street cleaning that requires water.
  - Vehicle washing.
  - Ornamental fountains.
  - Reduce Splash Pad operational time by at least thirty (30) percent.
- Intensify efforts on leak detection and repair.
- Notify major water users and work with them to achieve voluntary water use reductions.
- Encourage the public to wait until the current drought or emergency situation has passed before establishing new landscaping.
- All users are encouraged to reduce the frequency of draining and refilling swimming pools.
- \*\* Limit landscape watering with sprinklers or irrigation systems at each service address to once days per week on designated days between April 1 and October 31. Limit landscape watering with sprinklers or irrigation systems at each service address to once every other week on designated days between November 1 and March 31. Automatic irrigation systems may only be utilized during City-wide recycle refuse days which are typically every other Wednesday. The following exceptions apply:
  - Landscape associated with new construction may be watered as necessary for thirty (30) days from the date of the certificate of occupancy.
  - Hand watering with shutoff nozzle, drip lines, and soaker hoses is allowed before 10 am and after 6 pm provided no runoff occurs.
  - Foundations, new landscaping, new plantings (first year) of shrubs, and trees (within a ten foot radius of its trunk) may be watered by a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system provided no runoff occurs.
  - Landscape watering of parks, golf courses and athletic fields using potable water are required to meet the same reduction goals and measures outlined in this stage. Exception for golf course greens and tee boxes which may be hand watered as needed.
  - Locations using other sources of water supply for irrigation may irrigate without restrictions.

- Registered and properly functioning ET/Smart irrigation systems and drip irrigation systems may irrigate without restrictions.
- \*\* Prohibit hydro seeding, hydro mulching, and sprigging.
- \*\* Initiate a rate surcharge as deemed necessary to meet reduction targets.

**(Items identified by \*\* mandates the City to notify TCEQ of restrictions)**

### **8.5.3 Stage 3**

#### **8.5.3.1 Initiation and Termination Conditions for Stage 3**

- The NTMWD has initiated Stage 3.
- City's water demand exceeds the amount that can be delivered to customers.
- City's water demand for all or part of the delivery system seriously exceeds delivery capacity because the delivery capacity is inadequate.
- Supply source becomes contaminated.
- City's water supply system is unable to deliver water due to the failure or damage of major water system components.

Stage 3 may terminate when NTMWD terminates its Stage 3 condition or when the circumstances that caused the initiation of Stage 3 no longer prevail.

#### **8.5.3.2 Goals for Use Reduction and Actions Available under Stage 3**

The goal for water use reduction under Stage 3 is a reduction of whatever amount is necessary as established by NTMWD.

The City Manager or official designee must implement any action(s) required to meet NTMWD reduction goals. Measures described as "requires notification to TCEQ" impose mandatory requirements on member cities and customers. The City shall notify TCEQ and NTMWD within five (5) business days if these measures are implemented.

- Continue actions in the water conservation plan.
- Notify wholesale customers of actions being taken and request implementation of similar procedures to achieve the stage 3 percent reduction goal.
- Implement viable alternative water supply strategies.
- Initiate engineering studies to evaluate alternatives should conditions worsen.
- Further accelerate public education efforts on ways to reduce water use.
- Halt non-essential city government water use.
  - Street cleaning that requires water.
  - Vehicle washing.
  - Ornamental fountains.
- Intensify efforts on leak detection and repair.

- Notify major water users and work with them to achieve mandatory water use reductions.
- \*\* Prohibit the filling, draining and refilling of existing swimming pools, wading pools, Jacuzzi and hot tubs except to maintain structural integrity, proper operation and maintenance or to alleviate a public safety risk. Existing pools may add water to replace losses from normal use and evaporation. Permitting of new swimming pools, wading pools, Jacuzzi and hot tubs is prohibited.
- \*\* Prohibit all commercial and residential landscape watering, except that foundations and trees (within a ten foot radius of its trunk) may be watered for two hours one day per week with a hand-held hose, a dedicated zone using a drip irrigation system, and/or soaker hose provided no runoff occurs. ET/Smart irrigation systems and drip irrigation systems are not exempt from this requirement.
- \*\* Prohibit new sod, hydro seeding, hydro mulching, and sprigging.
- \*\* Initiate a rate surcharge as deemed necessary to meet reduction targets.
- \*\* Hosing and washing of paved areas, buildings, structures, windows or other surfaces is prohibited except by variance and performed by a professional service using high efficiency equipment.
- \*\* Prohibit operation of ornamental fountains or ponds that use potable water except where supporting aquatic life or water quality.
- \*\* Prohibit washing of vehicles except at commercial vehicle wash facilities.
- \*\* Landscape watering of parks, golf courses, and athletic fields with potable water is prohibited. Exception for golf course greens and tee boxes which may be hand watered as needed. Variances may be granted by the water provider under special circumstances.
- \*\* Prohibit the operation of interactive water features such as water sprays, dancing water jets, waterfalls, dumping buckets, shooting water cannons, or splash pads that are maintained for public recreation.
- \*\* Require all commercial water users to reduce water use by a percentage established by the City Manager or official designee.

**(Items identified by \*\* mandates the City to notify TCEQ of restrictions)**

## **8.6 Procedures for Granting Variances to the Plan**

The City Manager may grant temporary variances for existing water uses otherwise prohibited under this drought contingency and water emergency response plan if one or more of the following conditions are met:

- Failure to grant such a variance would cause an emergency condition adversely affecting health, sanitation, or fire safety for the public or the person or entity requesting the variance.
- Compliance with this plan cannot be accomplished due to technical or other limitations.
- Alternative methods that achieve the same level of reduction in water use can be implemented.

Variances shall be granted or denied at the discretion of the City Manager. All petitions for variances should be in writing and should include the following information:

- Name and address of the petitioners.
- Purpose of water use.
- Specific provisions from which relief is requested.
- Detailed statement of the adverse effect of the provision from which relief is requested.
- Description of the relief requested.
- Period of time for which the variance is sought.
- Alternative measures that will be taken to reduce water use.
- Other pertinent information.

### **8.7 Procedures for Enforcing Mandatory Water Use Restrictions**

Mandatory water use restrictions may be imposed in all active drought contingency and water emergency response stages. The penalties associated with the mandatory water use restrictions shall be established by ordinance.

### **8.8 Coordination with the Regional Water Planning Groups**

Appendix F includes a copy of a letter sent to the Chair of the Region C water planning group with this model drought contingency and water emergency response plan.

The City shall send a draft of its ordinance(s) or other regulation(s) implementing this plan to NTMWD for their review and comment. The City shall also send the final ordinance(s) or other regulation(s) to NTMWD.

### **8.9 Review and Update of Drought Contingency and Water Emergency Response Plan**

As required by TCEQ rules, the City of Farmersville shall review the drought contingency and water emergency response plan every five (5) years. The plan shall be updated as appropriate based on new or updated information.

## Appendix A. Definitions



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

Agricultural or Agriculture: Any of the following activities:

- (A) cultivating the soil to produce crops for human food, animal feed, or planting seed or for the production of fibers;
- (B) the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or non-soil media by a nursery grower;
- (C) raising, feeding, or keeping animals for breeding purposes or for the production of food or fiber, leather, pelts, or other tangible products having a commercial value;
- (D) raising or keeping equine animals;
- (E) wildlife management; and
- (F) planting cover crops, including cover crops cultivated for transplantation, or leaving land idle for the purpose of participating in any governmental program or normal crop or livestock rotation procedure.

Agricultural Use: The use of water for businesses involving agriculture, including irrigation.

Best Management Practices: Voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific time frame.

Commercial Use: The use of water for businesses involving goods or services that do not convert materials of a lower order of value into forms having greater usability and commercial value.

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

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).

Industrial Use: The use of water in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, commercial fish production, and the development of power by means other than hydroelectric, but does not include agricultural use.

Institutional Use: The use of water by an establishment dedicated to public service, such as a school, university, church, hospital, nursing home, prison or government facility. All facilities dedicated to public service are considered institutional regardless of ownership.

**Irrigation:** The agricultural use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water through a municipal distribution system.

**Irrigation Water Use Efficiency:** The percentage of that amount of irrigation water which is beneficially used by agriculture crops or other vegetation relative to the amount of water diverted from the source(s) of supply. Beneficial uses of water for irrigation purposes include, but are not limited to, evapotranspiration needs for vegetative maintenance and growth, salinity management, and leaching requirements associated with irrigation.

**Mining Use:** The use of water for mining processes including hydraulic use, drilling, washing sand and gravel, and oil field repressuring.

**Municipal Use:** The use of potable water provided by a public water supplier as well as the use of sewage effluent for residential, commercial, industrial, agricultural, institutional, and wholesale uses.

**Nursery Grower:** A person engaged in the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or nonsoil media, who grows more than 50% of the products that the person either sells or leases, regardless of the variety sold, leased, or grown. For the purpose of this definition, grow means the actual cultivation or propagation of the product beyond the mere holding or maintaining of the item prior to sale or lease, and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.

**Pollution:** The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

**Public Water Supplier:** An individual or entity that supplies water to the public for human consumption.

**Regional Water Planning Group:** A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, §16.053.

**Residential Use:** The use of water that is billed to single and multi-family residences, which applies to indoor and outdoor uses.

**Residential Gallons Per Capita Per Day:** The total gallons sold for residential use by a public water supplier divided by the residential population served and then divided by the number of days in the year.

Retail Public Water Supplier: An individual or entity that for compensation supplies water to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants when that water is not resold to or used by others.

Reuse: The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

Total Use: The volume of raw or potable water provided by a public water supplier to billed customer sectors or nonrevenue uses and the volume lost during conveyance, treatment, or transmission of that water.

Total Gallons Per Capita Per Day (GPCD): The total amount of water diverted and/or pumped for potable use divided by the total permanent population divided by the days of the year. Diversion volumes of reuse as defined in this chapter shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals.

Water Conservation Plan: A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).

Wholesale Public Water Supplier: An individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others, or an individual or entity that conveys water to another individual or entity, but does not own the right to the water which is conveyed, whether or not for a delivery fee.

Wholesale Use: Water sold from one entity or public water supplier to other retail water purveyors for resale to individual customers.

Appendix B. Texas Commission on Environmental Quality Rules for Municipal Water  
Conservation and Drought Contingency Plans

## Texas Administrative Code

<b>TITLE 30</b>	ENVIRONMENTAL QUALITY
<b>PART 1</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<b>CHAPTER 288</b>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
<b>SUBCHAPTER A</b>	WATER CONSERVATION PLANS
<b>RULE §288.2</b>	<b>Water Conservation Plans for Municipal Uses by Public Water Suppliers</b>

- 
- (a) A water conservation plan for municipal water use by public water suppliers must provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.
- (1) Minimum requirements. All water conservation plans for municipal uses by public drinking water suppliers must include the following elements:
- (A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;
  - (B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) - (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph:
    - (i) residential;
      - (I) single family;
      - (II) multi family;
    - (ii) commercial;
    - (iii) institutional;
    - (iv) industrial;
    - (iii) agricultural; and,
    - (iv) wholesale.
  - (C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. The goals established by a public water supplier under this subparagraph are not enforceable;
  - (D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply;
  - (E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;
  - (F) measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);

- (G) a program of continuing public education and information regarding water conservation;
  - (H) a water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water;
  - (I) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies; and
  - (J) a means of implementation and enforcement which shall be evidenced by:
    - (i) a copy of the ordinance, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and
    - (ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and
  - (K) documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.
- (2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:
- (A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;
  - (B) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, 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 the provisions of this chapter.
- (3) Additional conservation strategies. Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by the water supplier if the commission determines that the strategy is necessary to achieve the goals of the water conservation plan:
- (A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;
  - (B) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;
  - (C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;
  - (D) reuse and/or recycling of wastewater and/or graywater;

- (E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;
  - (F) a program and/or ordinance(s) for landscape water management;
  - (G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and
  - (H) any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.
- (b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.
- (c) A public water supplier for municipal use shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The public water supplier for municipal use shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

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

## Texas Administrative Code

<b>TITLE 30</b>	ENVIRONMENTAL QUALITY
<b>PART 1</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<b>CHAPTER 288</b>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
<b>SUBCHAPTER A</b>	WATER CONSERVATION PLANS
<b>RULE §288.5</b>	<b>Water Conservation Plans for Wholesale Water Suppliers</b>

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

- (1) Minimum requirements. All water conservation plans for wholesale water suppliers must include the following elements:
  - (A) a description of the wholesaler's service area, including population and customer data, water use data, water supply system data, and wastewater data;
  - (B) specific, quantified five-year and ten-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. The goals established by wholesale water suppliers under this subparagraph are not enforceable;
  - (C) a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply;
  - (D) a monitoring and record management program for determining water deliveries, sales, and losses;
  - (E) a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system;
  - (F) a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of this chapter. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this chapter;
  - (G) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin. The reservoir systems operations plans shall include optimization of water supplies as one of the significant goals of the plan;
  - (H) a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which



- the water supplier will implement and enforce the conservation plan; and
- (I) documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.
- (2) Additional conservation strategies. Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of paragraph (1) of this section, if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:
- (A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;
  - (B) a program to assist agricultural customers in the development of conservation pollution prevention and abatement plans;
  - (C) a program for reuse and/or recycling of wastewater and/or graywater; and
  - (D) any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.
- (3) Review and update requirements. The wholesale water supplier shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

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

## Texas Administrative Code

<b>TITLE 30</b>	ENVIRONMENTAL QUALITY
<b>PART 1</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<b>CHAPTER 288</b>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
<b>SUBCHAPTER B</b>	DROUGHT CONTINGENCY PLANS
<b>RULE §288.20</b>	<b>Drought Contingency Plans for Municipal Uses by Public Water Suppliers</b>

- 
- (a) A drought contingency plan for a retail public water supplier, where applicable, must include the following minimum elements.
- (1) Minimum requirements. Drought contingency plans must include the following minimum elements.
- (A) Preparation of the plan shall include provisions to actively inform the public and affirmatively provide opportunity for public input. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the public and providing written notice to the public concerning the proposed plan and meeting.
- (B) Provisions shall be made for a program of continuing public education and information regarding the drought contingency plan.
- (C) The drought contingency plan must document coordination with the regional water planning groups for the service area of the retail public water supplier to ensure consistency with the appropriate approved regional water plans.
- (D) The drought contingency plan must include a description of the information to be monitored by the water supplier, and specific criteria for the initiation and termination of drought response stages, accompanied by an explanation of the rationale or basis for such triggering criteria.
- (E) The drought contingency plan must include drought or emergency response stages providing for the implementation of measures in response to at least the following situations:
- (i) reduction in available water supply up to a repeat of the drought of record;
- (ii) water production or distribution system limitations;
- (iii) supply source contamination; or
- (iv) system outage due to the failure or damage of major water system components (e.g., pumps).
- (F) The drought contingency plan must include the specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought. The entity preparing the plan shall establish the targets. The goals established by the entity under this subparagraph are not enforceable.
- (G) The drought contingency plan must include the specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following:
- (i) curtailment of non-essential water uses; and
- (ii) utilization of alternative water sources and/or alternative delivery mechanisms

- with the prior approval of the executive director as appropriate (e.g., interconnection with another water system, temporary use of a non-municipal water supply, use of reclaimed water for non-potable purposes, etc.).
- (H) The drought contingency plan must include the procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public.
  - (I) The drought contingency plan must include procedures for granting variances to the plan.
  - (J) The drought contingency plan must include procedures for the enforcement of any mandatory water use restrictions, including specification of penalties (e.g., fines, water rate surcharges, discontinuation of service) for violations of such restrictions.
- (2) Privately-owned water utilities. Privately-owned water utilities shall prepare a drought contingency plan in accordance with this section and incorporate such plan into their tariff.
- (3) Wholesale water customers. Any water supplier that receives all or a portion of its water supply from another water supplier shall consult with that supplier and shall include in the drought contingency plan appropriate provisions for responding to reductions in that water supply.
- (b) A wholesale or retail water supplier shall notify the executive director within five business days of the implementation of any mandatory provisions of the drought contingency plan.
  - (c) The retail public water supplier shall review and update, as appropriate, the drought contingency plan, at least every five years, based on new or updated information, such as the adoption or revision of the regional water plan.

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**Source Note:** The provisions of this §288.20 adopted to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384.

## Texas Administrative Code

<b>TITLE 30</b>	ENVIRONMENTAL QUALITY
<b>PART 1</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<b>CHAPTER 288</b>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
<b>SUBCHAPTER B</b>	DROUGHT CONTINGENCY PLANS
<b>RULE §288.22</b>	<b>Drought Contingency Plans for Wholesale Supplier</b>

- 
- (a) A drought contingency plan for a wholesale water supplier must include the following minimum elements.
- (1) Preparation of the plan shall include provisions to actively inform the public and to affirmatively provide opportunity for user input in the preparation of the plan and for informing wholesale customers about the plan. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the public and providing written notice to the public concerning the proposed plan and meeting.
  - (2) The drought contingency plan must document coordination with the regional water planning groups for the service area of the wholesale public water supplier to ensure consistency with the appropriate approved regional water plans.
  - (3) The drought contingency plan must include a description of the information to be monitored by the water supplier and specific criteria for the initiation and termination of drought response stages, accompanied by an explanation of the rationale or basis for such triggering criteria.
  - (4) The drought contingency plan must include a minimum of three drought or emergency response stages providing for the implementation of measures in response to water supply conditions during a repeat of the drought-of-record.
  - (5) The drought contingency plan must include the procedures to be followed for the initiation or termination of drought response stages, including procedures for notification of wholesale customers regarding the initiation or termination of drought response stages.
  - (6) The drought contingency plan must include specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought. The entity preparing the plan shall establish the targets. The goals established by the entity under this paragraph are not enforceable.
  - (7) The drought contingency plan must include the specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following:
    - (A) pro rata curtailment of water deliveries to or diversions by wholesale water customers as provided in Texas Water Code, §11.039; and
    - (B) utilization of alternative water sources with the prior approval of the executive director as appropriate (e.g., interconnection with another water system, temporary use of a non-municipal water supply, use of reclaimed water for non-potable purposes, etc.).
  - (8) The drought contingency plan must 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.

- (9) The drought contingency plan must include procedures for granting variances to the plan.
- (10) The drought contingency plan must include procedures for the enforcement of any mandatory water use restrictions including specification of penalties (e.g., liquidated damages, water rate surcharges, discontinuation of service) for violations of such restrictions.
- (b) The wholesale public water supplier shall notify the executive director within five business days of the implementation of any mandatory provisions of the drought contingency plan.
- (c) The wholesale public water supplier shall review and update, as appropriate, the drought contingency plan, at least every five years, based on new or updated information, such as adoption or revision of the regional water plan.

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**Source Note:** The provisions of this §288.22 adopted to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384

## Texas Administrative Code

<b>TITLE 30</b>	ENVIRONMENTAL QUALITY
<b>PART 1</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<b>CHAPTER 288</b>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
<b>SUBCHAPTER C</b>	REQUIRED SUBMITTALS
<b>RULE §288.30</b>	<b>Required Submittals</b>

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In addition to the water conservation and drought contingency plans required to be submitted with an application under §295.9 of this title (relating to Water Conservation and Drought Contingency Plans), water conservation and drought contingency plans are required as follows.

- (1) Water conservation plans for municipal, industrial, and other non-irrigation uses. The holder of an existing permit, certified filing, or certificate of adjudication for the appropriation of surface water in the amount of 1,000 acre-feet a year or more for municipal, industrial, and other non-irrigation uses shall develop, submit, and implement a water conservation plan meeting the requirements of Subchapter A of this chapter (relating to Water Conservation Plans). The water conservation plan must be submitted to the executive director not later than May 1, 2005. Thereafter, the next revision of the water conservation plan for municipal, industrial, and other non-irrigation uses must be submitted not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any revised plans must be submitted to the executive director within 90 days of adoption. The revised plans must include implementation reports. The requirement for a water conservation plan under this section must not result in the need for an amendment to an existing permit, certified filing, or certificate of adjudication.
- (2) Implementation report for municipal, industrial, and other non-irrigation uses. The implementation report must include:
  - (A) the list of dates and descriptions of the conservation measures implemented;
  - (B) data about whether or not targets in the plans are being met;
  - (C) the actual amount of water saved; and
  - (D) if the targets are not being met, an explanation as to why any of the targets are not being met, including any progress on that particular target.
- (3) Water conservation plans for irrigation uses. The holder of an existing permit, certified filing, or certificate of adjudication for the appropriation of surface water in the amount of 10,000 acre-feet a year or more for irrigation uses shall develop, submit, and implement a water conservation plan meeting the requirements of Subchapter A of this chapter. The water conservation plan must be submitted to the executive director not later than May 1, 2005. Thereafter, the next revision of the water conservation plan for irrigation uses must be submitted not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any revised plans must be submitted to the executive director within 90 days of adoption. The revised plans must include implementation reports. The requirement for a water conservation plan under

this section must not result in the need for an amendment to an existing permit, certified filing, or certificate of adjudication.

- (4) Implementation report for irrigation uses. The implementation report must include:
  - (A) the list of dates and descriptions of the conservation measures implemented;
  - (B) data about whether or not targets in the plans are being met;
  - (C) the actual amount of water saved; and
  - (D) if the targets are not being met, an explanation as to why any of the targets are not being met, including any progress on that particular target.
- (5) Drought contingency plans for retail public water suppliers. Retail public water suppliers shall submit a drought contingency plan meeting the requirements of Subchapter B of this chapter (relating to Drought Contingency Plans) to the executive director after adoption by its governing body. The retail public water system shall provide a copy of the plan to the regional water planning group for each region within which the water system operates. These drought contingency plans must be submitted as follows.
  - (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. Any revised plans must be submitted to the executive director within 90 days of adoption by the community water system. Any new retail public water suppliers providing water service to 3,300 or more connections shall prepare and adopt a drought contingency plan within 180 days of commencement of operation, and submit the plan to the executive director within 90 days of adoption.
  - (B) For all the retail public water suppliers, the drought contingency plan must be prepared and adopted not later than May 1, 2005 and must be available for inspection by the executive director upon request. Thereafter, the retail public water suppliers shall prepare and adopt 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. Any new retail public water supplier providing water service to less than 3,300 connections shall prepare and adopt a drought contingency plan within 180 days of commencement of operation, and shall make the plan available for inspection by the executive director upon request.
- (6) Drought contingency plans for wholesale public water suppliers. Wholesale public water suppliers shall submit a drought contingency plan meeting the requirements of Subchapter B of this chapter to the executive director not later than May 1, 2005, after adoption of the drought contingency plan by the governing body of the water supplier. Thereafter, the wholesale public water suppliers 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. Any new or revised plans must be submitted to the executive director within 90 days of adoption by the governing body of the wholesale public water supplier. Wholesale public water suppliers shall also provide a copy of the drought contingency plan to the regional water planning group for each region within

- which the wholesale water supplier operates.
- (7) Drought contingency plans for irrigation districts. Irrigation districts shall submit a drought contingency plan meeting the requirements of Subchapter B of this chapter to the executive director not later than May 1, 2005, after adoption by the governing body of the irrigation district. Thereafter, the irrigation districts 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. Any new or revised plans must be submitted to the executive director within 90 days of adoption by the governing body of the irrigation district. Irrigation districts shall also provide a copy of the plan to the regional water planning group for each region within which the irrigation district operates.
  - (8) Additional submissions with a water right application for state water. A water conservation plan or drought contingency plan required to be submitted with an application in accordance with §295.9 of this title must also be subject to review and approval by the commission.
  - (9) Existing permits. The holder of an existing permit, certified filing, or certificate of adjudication shall not be subject to enforcement actions nor shall the permit, certified filing, or certificate of adjudication be subject to cancellation, either in part or in whole, based on the nonattainment of goals contained within a water conservation plan submitted with an application in accordance with §295.9 of this title or by the holder of an existing permit, certified filing, or certificate of adjudication in accordance with the requirements of this section.
  - (10) Submissions to the executive administrator of the Texas Water Development Board.
    - (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. Any revised plans must be submitted to the executive administrator within 90 days of adoption by the community water system. Any new retail public water suppliers providing water service to 3,300 or more connections shall prepare and adopt a water conservation plan within 180 days of commencement of operation, and submit the plan to the executive administrator of the Texas Water Development Board within 90 days of adoption.
    - (B) Water conservation plans. Each entity that is required to submit a water conservation plan to the commission shall submit a copy of the plan 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.
    - (C) Annual reports. Each entity that is required to submit a water conservation plan to the Texas Water Development Board or the commission, shall file a report not later than May 1, 2010, and annually thereafter to the executive administrator of the Texas Water Development Board on the entity's progress in implementing the plan.



- (D) Violations of the Texas Water Development Board's rules. The water conservation plans and annual reports shall comply with the minimum requirements established in the Texas Water Development Board's rules. The Texas Water Development Board shall notify the commission if the Texas Water Development Board determines that an entity has not complied with the Texas Water Development Board rules relating to the minimum requirements for water conservation plans or submission of plans or annual reports. The commission shall take appropriate enforcement action upon receipt of notice from the Texas Water Development Board.

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**Source Note:** The provisions of this §288.30 adopted to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384; amended to be effective January 10, 2008, 33 TexReg 193

Appendix C. Water Utility Profile  
(TCEQ Form 10218)

**Texas Commission on Environmental Quality**



**UTILITY PROFILE & WATER CONSERVATION PLAN  
REQUIREMENTS  
FOR MUNICIPAL WATER USE BY PUBLIC WATER  
SUPPLIERS**

This form is provided to assist entities in water conservation plan development for municipal water use by a retail public water supplier. Information from this form should be included within a water conservation plan for municipal use. If you need assistance in completing this form or in developing your plan, please contact the conservation staff of the Resource Protection Team in the Water Supply Division at (512) 239-4691.

**GENERAL DATA**

Name of Entity	City of Farmersville
Address & Zip	205 South Main Street, Farmersville, Texas, 75442
Telephone Number	972-782-6151
Facsimile Number	972-782-6604
Form Completed By	Benjamin (Ben) L. White
Title	City Manager/Public Works Director
Signature	
Date of Signature	
<b>RESPONSIBLE PARTY FOR WATER CONSERVATION PROGRAM IMPLEMENTATION</b>	
Name	Benjamin (Ben) L. White
Phone Number	972-782-6151

**UTILITY PROFILE**

**I. POPULATION AND CUSTOMER DATA**

**A. Population and Service Area Data**

Index	Question or Task Description	Answer
1	Attach a copy of your service-area map and, if applicable, a copy of your Certificate of Convenience and Necessity (CCN).	See service-area map and CCN later in this utility profile.
2	Service area size (square miles)	40
3	Current population of service area	3516
4a	Current water population served	3516

Index	Question or Task Description	Answer	
4b	Current wastewater population served	2,698	
5	Population served by water utility for the previous five years	Year	Population
		2007	3,365
		2008	3,375
		2009	3,417
		2010	3,392
		2011	3,393
6	Projected population for service area in the following decades	2010	3,392
		2020	4,072
		2030	4,940
		2040	5,775
		2050	7,040
7	List source/method for the calculation of current and projected population	US Census 2010 City of Farmersville	

#### B. Active Connections

1. Current number of active connections. Check whether multi-family service is counted as Residential \_\_\_\_ or Commercial X

Treated Water Users	Metered	Not-Metered	Total
Residential	1125	0	1125
Commercial	174	0	174
Industrial	30	0	30
Other (Public)	14	0	14

2. List the net number of new connections per year for most recent three years:

Year	2009	2010	2011
Residential	-5	-20	-4
Commercial	0	-1	-2
Industrial	0	3	3
Other (Public)	0	0	-4

#### C. High Volume Customers

List annual water use for the five highest volume customers (indicate if treated or raw water delivery)

Position	Customer	Use (1,000gal./yr.)	Treated/Raw Water
1	Farmersville High School Football Field	5,463	Treated
2	Texas Sterling	4,941	Treated
3	Farmersville High School	3,070	Treated

Position	Customer	Use (1,000gal./yr.)	Treated/Raw Water
	Baseball Field		
4	Texas Sterling	2,820	Treated
5	City of Farmersville, JW Spain Athletic Complex	2,792	Treated

## II. WATER USE DATA FOR SERVICE AREA

### A. Water Accounting Data

1. Amount of water use for previous five years (in 1,000 gal.):

Please indicate: Diverted Water   X   Treated Water       

Year	2007	2008	2009	2010	2011
January	12,850	16,549	15,973	12,386	16,943
February	13,667	11,421	10,073	11,116	10,132
March	14,132	14,594	14,194	11,885	16,083
April	13,652	13,756	16,752	12,669	16,264
May	13,877	18,002	13,348	17,086	13,615
June	15,663	20,767	28,272	30,285	28,333
July	13,896	36,580	40,766	24,574	41,804
August	22,412	34,130	23,653	41,810	49,938
September	17,833	19,761	18,861	18,767	30,130
October	15,001	19,609	13,706	17,880	24,609
November	14,333	14,819	11,534	13,325	16,749
December	13,339	14,358	13,252	14,347	15,024
Total	180,655	234,346	220,384	226,130	279,624

Indicate how the above figures were determined (e.g., from a master meter located at the point of a diversion from the source or located at a point where raw water enters the treatment plant, or from water sales).

From a master meter located at the point of a diversion.

2. Amount of water (in 1,000 gallons) delivered (sold) as recorded by the following account types for the past five years.

Year Sold	Residential	Commercial	Industrial	Wholesale	Other	Total
2007	87,541	35,509	2,791	45,147	1,574	172,562
2008	98,658	30,243	4,931	76,551	2,860	213,243
2009	83,398	28,039	3,099	67,344	3,425	185,305
2010	82,152	27,620	6,491	97,232	4,655	218,150
2011	96,501	30,714	18,564	106,518	5,802	258,099

3. List previous five years records for water loss (the difference between water diverted (or treated) and water delivered (or sold))

Year	Amount (Gallon)	Percent Loss (%)
2007	8,093	4.48
2008	21,103	9.01
2009	35,079	15.92
2010	7,980	3.53
2011	21,525	7.70

4. Municipal water use for previous five years:

Year Pumped	Population	Total Water Diverted or Pumped for Treatment (1,000 gal.)
2007	3,365	180,655
2008	3,375	234,346
2009	3,417	220,384
2010	3,392	226,130
2011	3,393	279,624

#### B. Projected Water Demands

If applicable, attach projected water supply demands for the next ten years using information such as population trends, historical water use, and economic growth in the service area over the next ten years and any additional water supply requirement from such growth.

Year	Population	Total Water Diverted or Pumped for Treatment (1,000 gal.)
2012	3,389	278,148
2013	3,429	278,733
2014	3,469	280,535
2015	3,509	281,039
2016	3,593	285,030
2017	3,677	288,970
2018	3,761	291,486
2019	3,845	294,804
2020	3,930	298,065
2021	4,008	301,008

### III. WATER SUPPLY SYSTEM DATA

#### A. Water Supply Sources

List all current water supply sources and the amounts authorized with each:

Type	Source	Amount Authorized
Surface Water	Not applicable	0 acre-feet
Groundwater	Not applicable	0 acre-feet
Contracts	North Texas Municipal Water District	860.72 acre-feet 280,467,000 gallons
Other	Not applicable	0 acre-feet

#### B. Treatment and Distribution System

Index	Question or Task Description	Answer
1	Design daily capacity of system	Not applicable, treated water by NTMWD
2a	Elevated Storage Capacity	1,000 MG
2b	Ground Storage Capacity	500 MG
3a	If surface water, do you recycle filter backwash to the head of the plant?	Not Applicable
3b	If yes, approximately how much?	Not Applicable
4	Please attach a description of the water system. Include the number of treatment plants, wells, and storage tanks. If possible, include a sketch of the system layout.	See attachment at the end of this section.

### IV. WASTEWATER SYSTEM DATA

#### A. Wastewater System Data

Index	Question or Task Description	Answer
1	Design capacity of wastewater treatment plant(s)	Plant No. 1 – 0.225 MGD Plant No. 2 – 0.530 MGD
2a	Is treated effluent used for irrigation on-site, off-site, plant wash-down, or chlorination/dechlorination?	There is no off-site irrigation. The amount of water used for wash down, dewatering and chlorination is negligible and all non-pot water used is recycled back through the plant
2b	If yes, approximately how many gallons per month?	Not applicable

3a	Briefly describe the wastewater system(s) of the area serviced by the water utility.	Farmersville's wastewater collection system transmits flow to the Farmersville WWTP site. The plant consists of two permitted plants on a single site. Plant No. 1 is a trickling filter plant with a permitted capacity of 0.225 MGD. Plant No. 2 is an activated sludge plant with a treatment capacity of 0.530 MGD.
3b	Describe how treated wastewater is disposed of. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and, if wastewater is discharged, the receiving stream.	The wastewater is treated and discharged into Elm Creek, a tributary of Lake Lavon. The City of Farmersville WWTP consists of two permitted plants; Plant No. 1 (WQ0010442001) and Plant No. 2 (WQ0010442002). The owner, and permit holder, of the wastewater plant is the City of Farmersville. The plant is operated by NTMWD.
3c	If possible, attach a sketch or map which locates the plant(s) and discharge points or disposal sites.	See attachment at the end of this section.

#### B. Wastewater Data for Service Area

Index	Question or Task Description	Answer
1	Percent of water service area served by wastewater system	95 %

#### 2. Monthly volume treated for previous three years (in 1,000 gallons):

Year	2009	2010	2011
January	6,892	*17,706	11,170
February	6,115	**21,572	12,901
March	10,991	20,331	9,274
April	10,657	10,229	9,763
May	19,479	8,665	15,363
June	6,943	7,759	8,381



July	6,947	8,984	7,769
August	6,426	7,215	7,522
September	7,864	8,677	7,386
October	***21,926	7,517	7,960
November	13,805	10,059	8,450
December	16,903	7,600	11,593
Total	134,948	136,314	117,532

\*January 2010, includes 1,021 from Plant No. 1

\*\*February 2010, includes 1,797 from Plant No. 1

\*\*\*October 2009, includes 1,234 from Plant No. 1

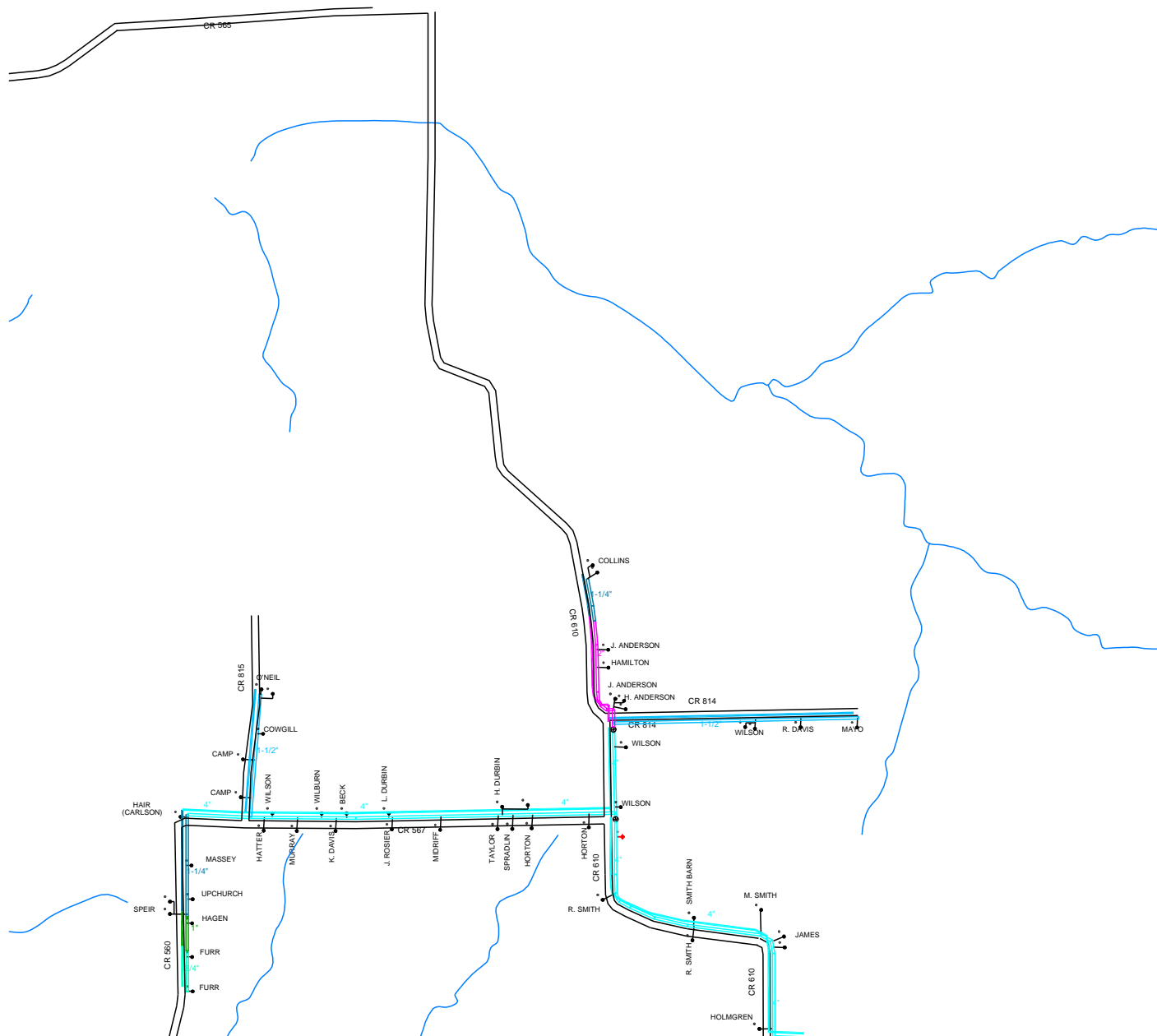


Figure 1. Water System Diagram, Sheet 1



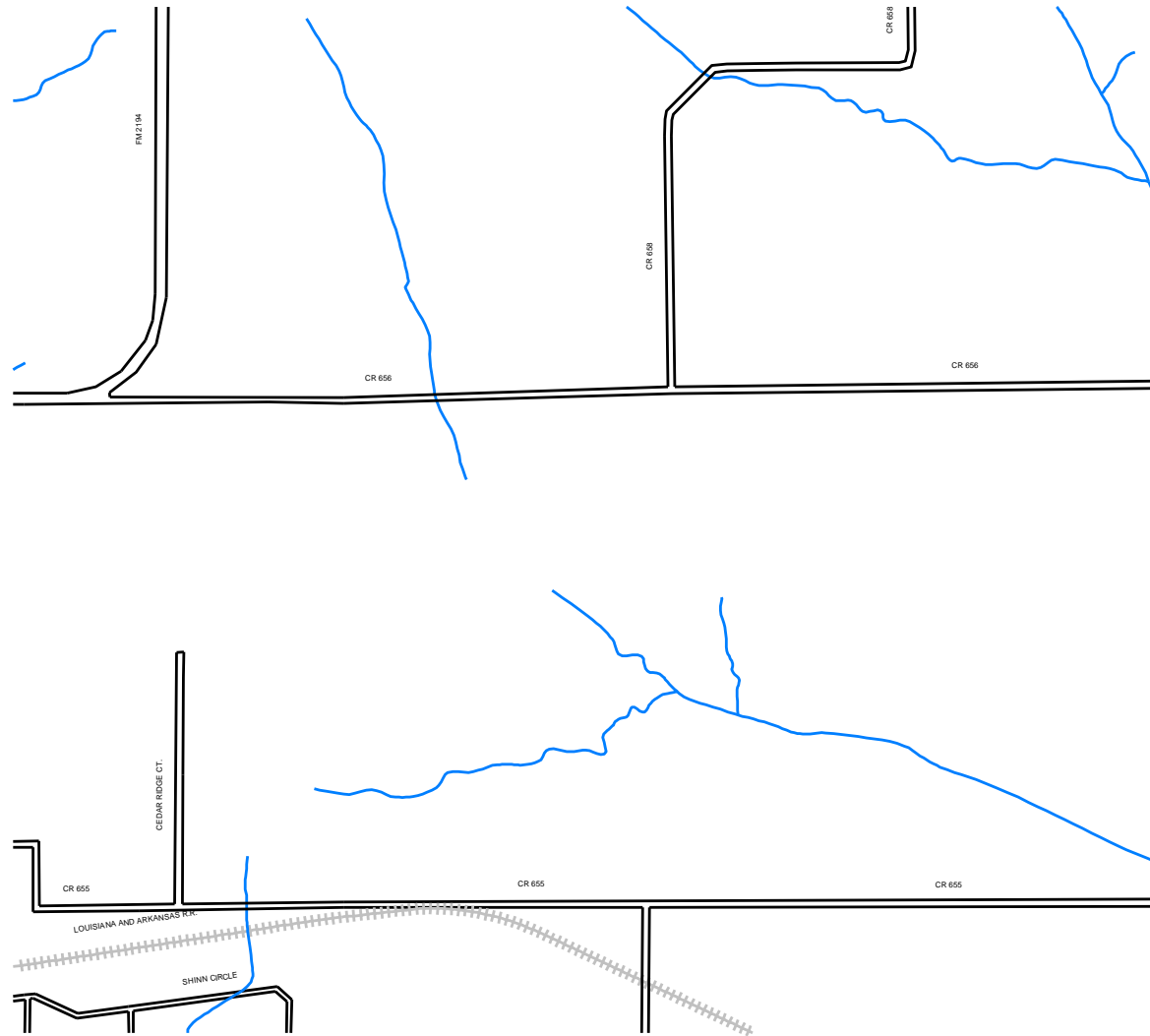
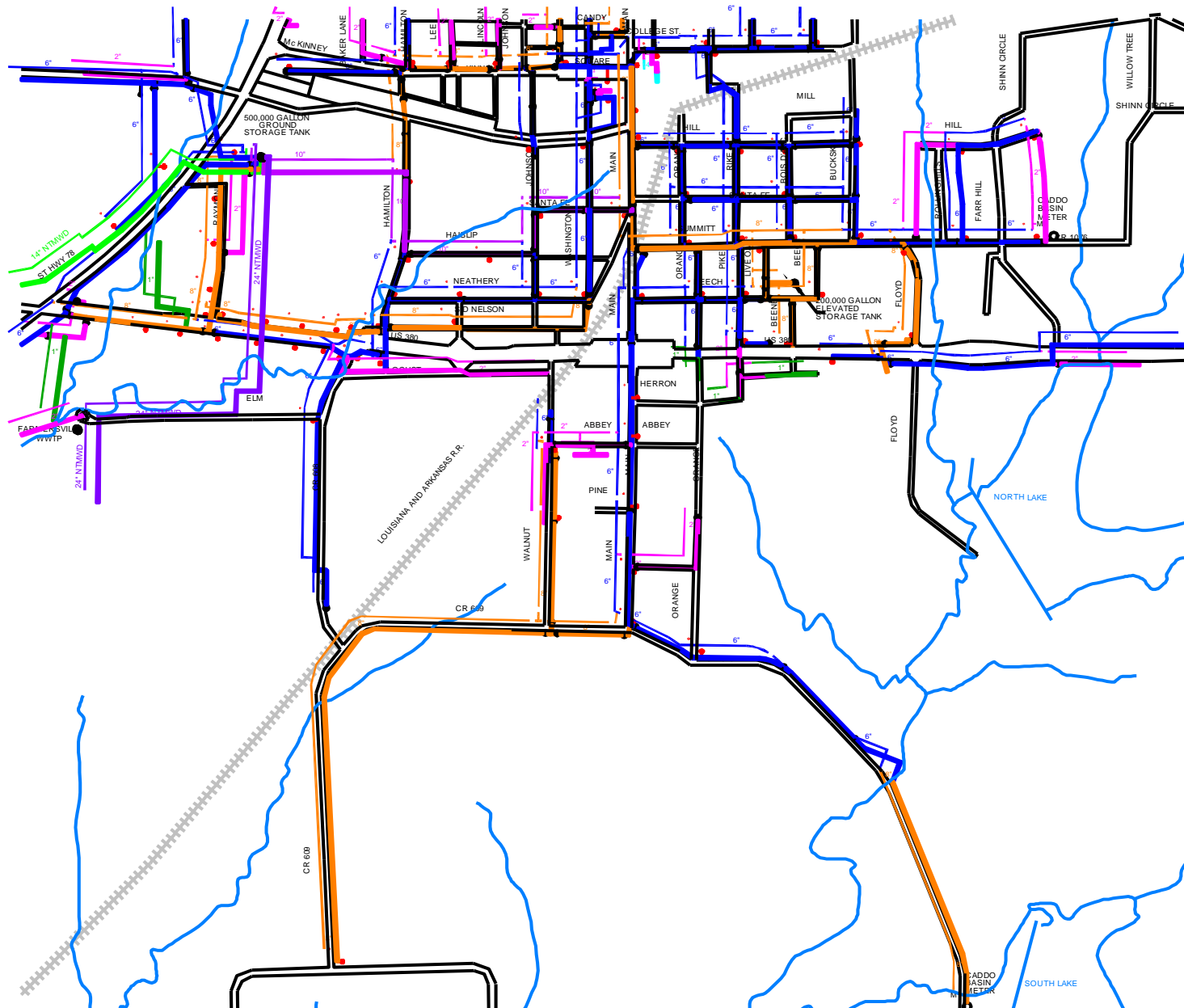


Figure 3. Water System Diagram, Sheet 3



Figure 4. Water System Diagram, Sheet 4



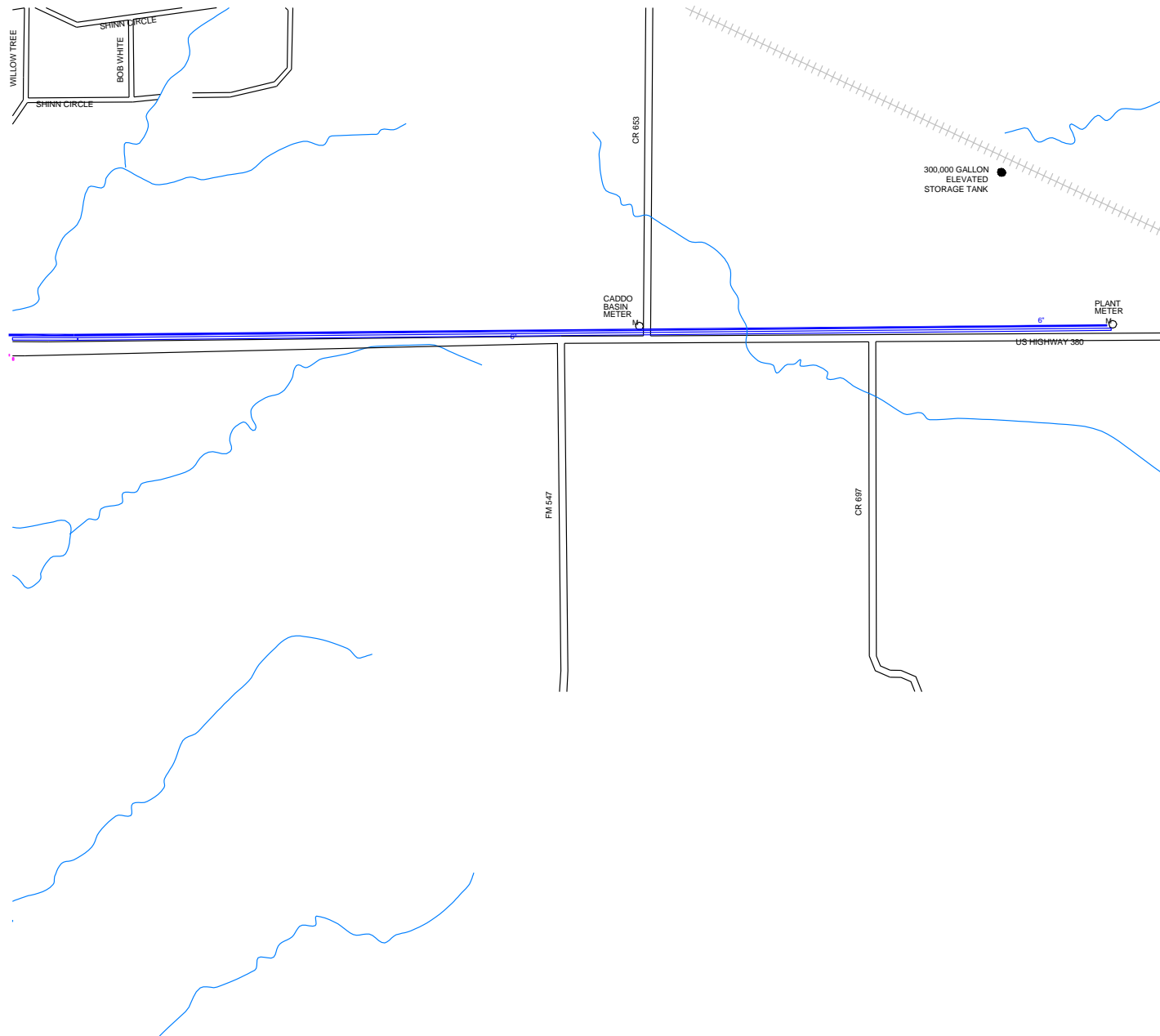


Figure 6. Water System Diagram, Sheet 6

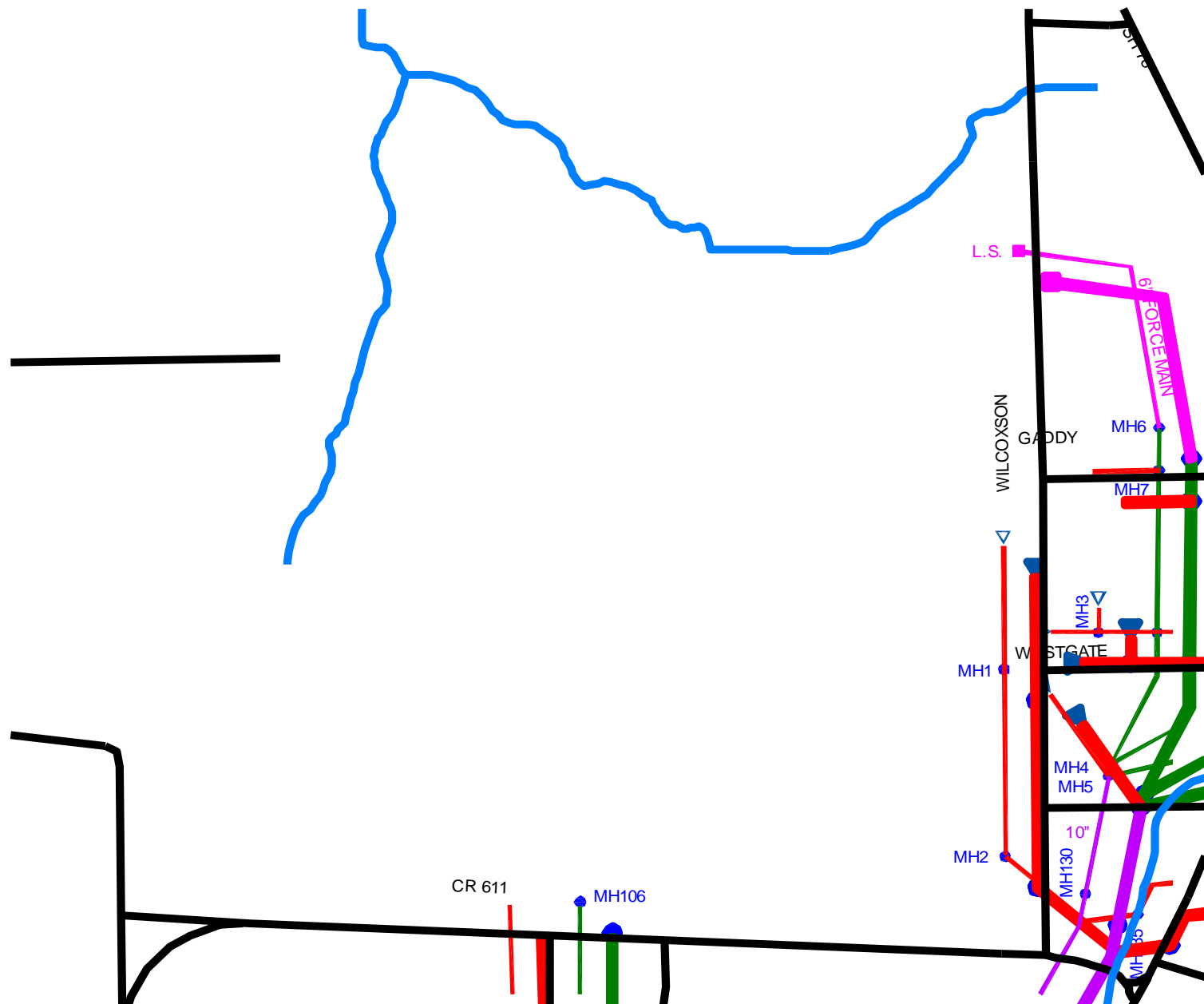


Figure 7. Waste Water System Diagram, Sheet 1



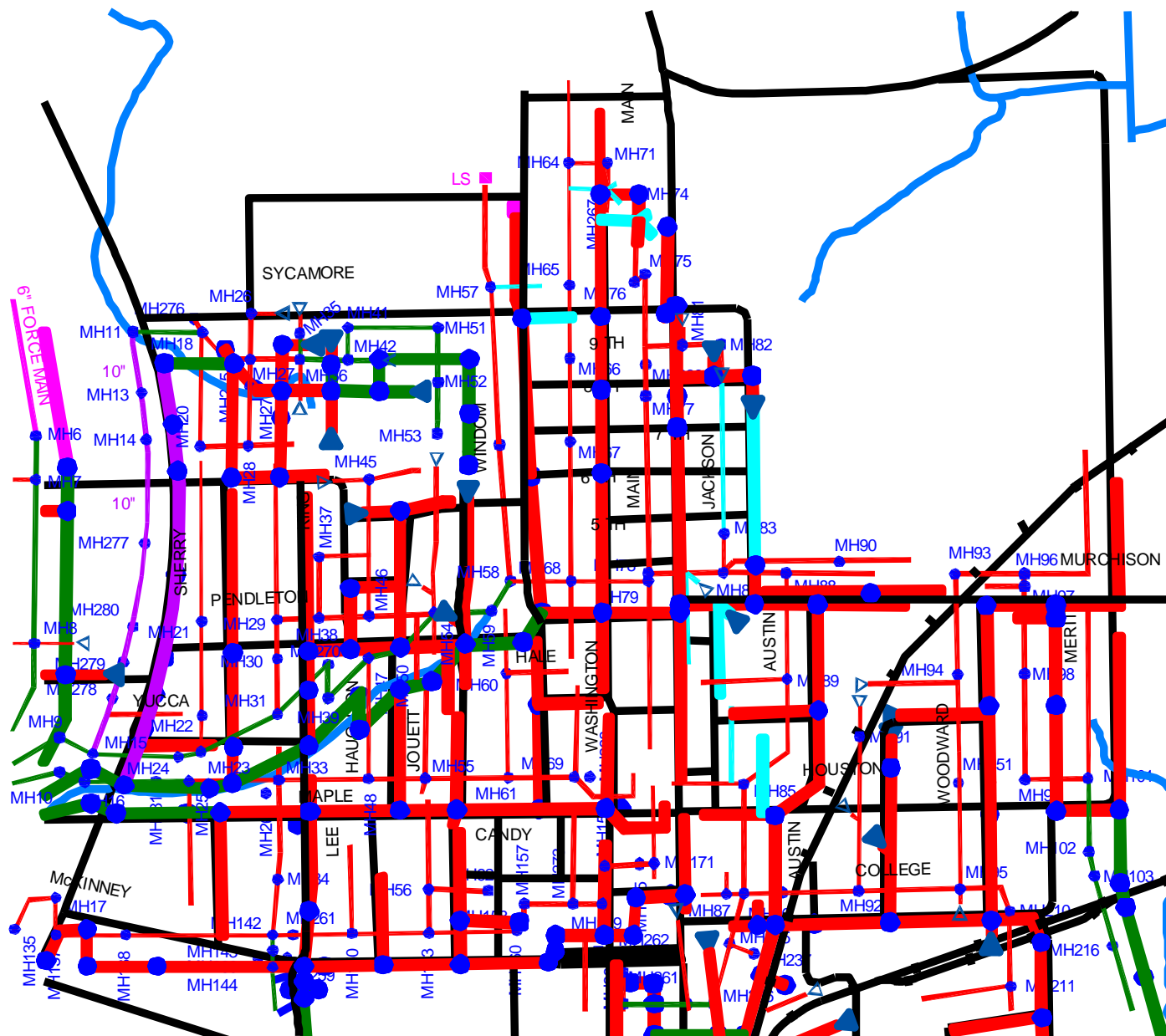


Figure 8. Waste Water System Diagram, Sheet 2

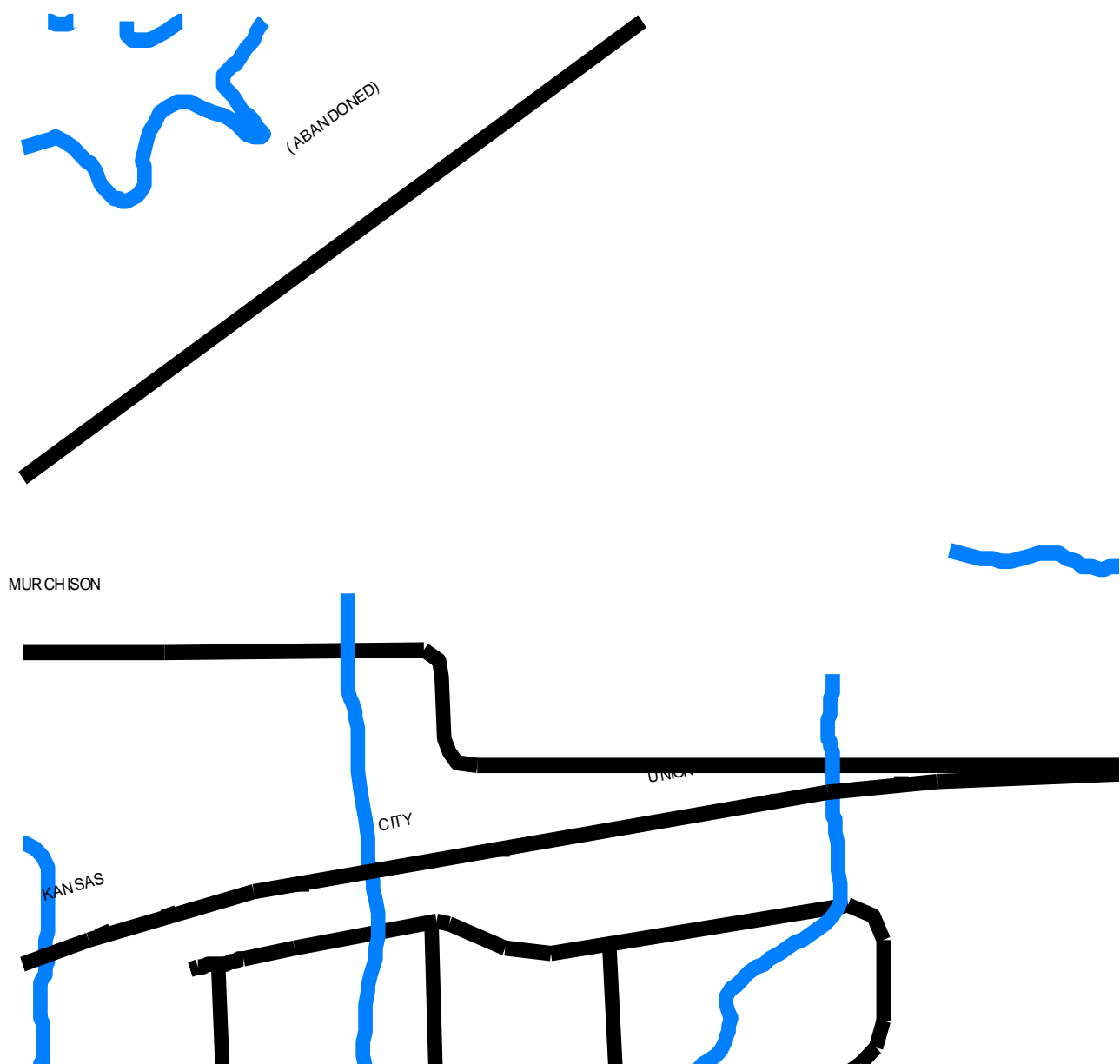


Figure 9. Waste Water System Diagram, Sheet 3

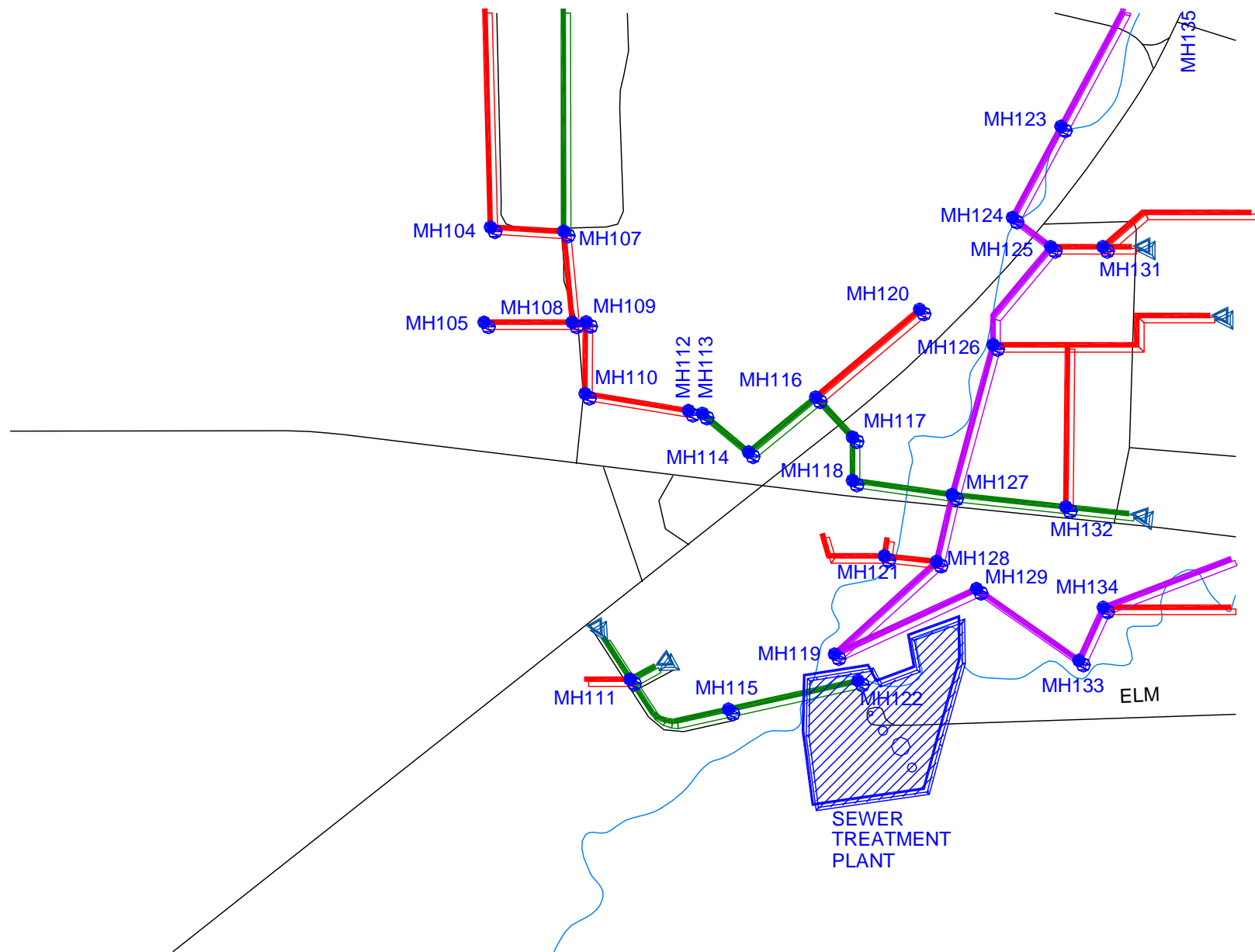


Figure 10. Waste Water System Diagram, Sheet 4

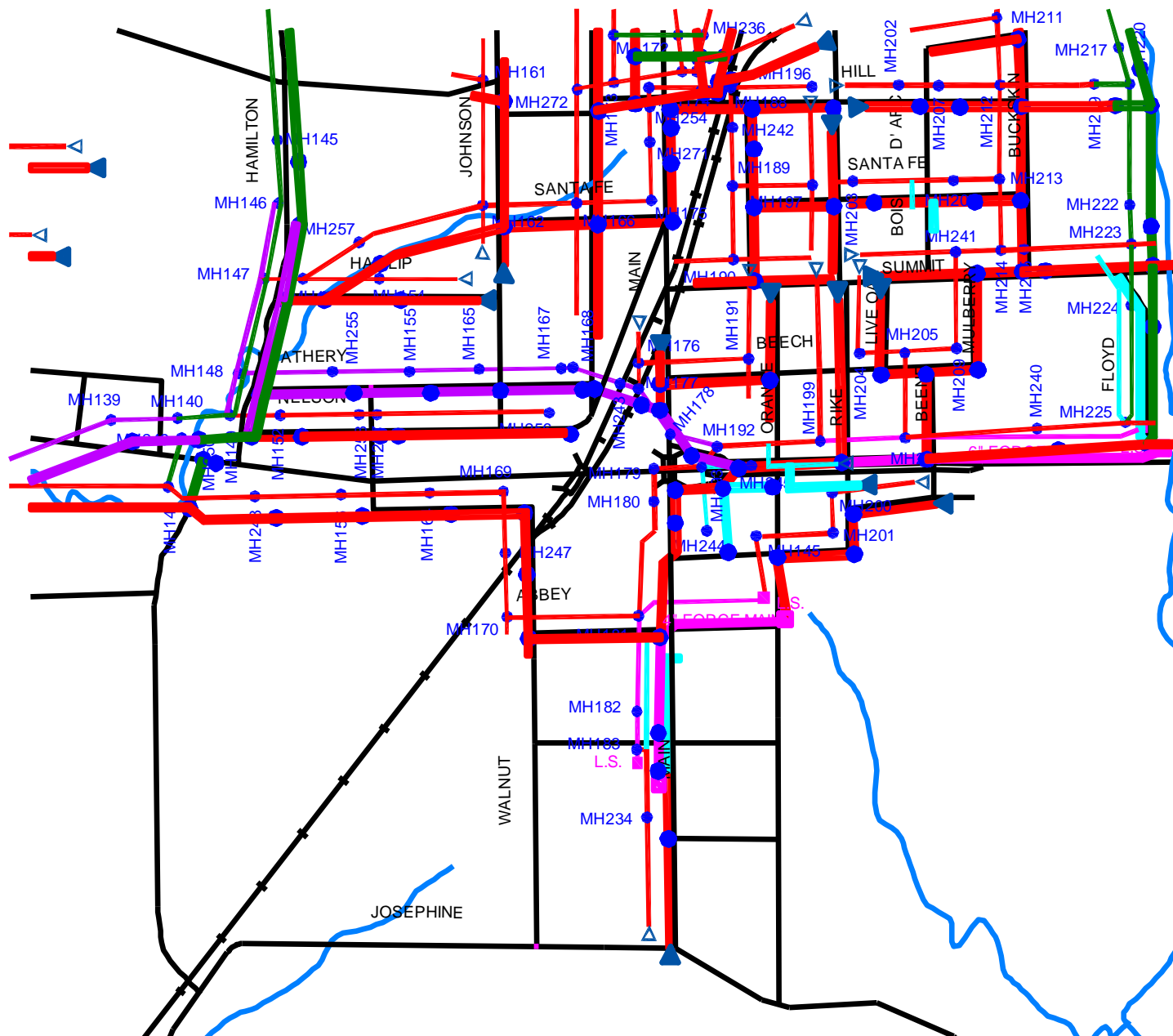
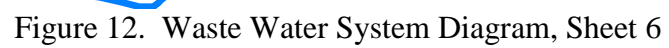
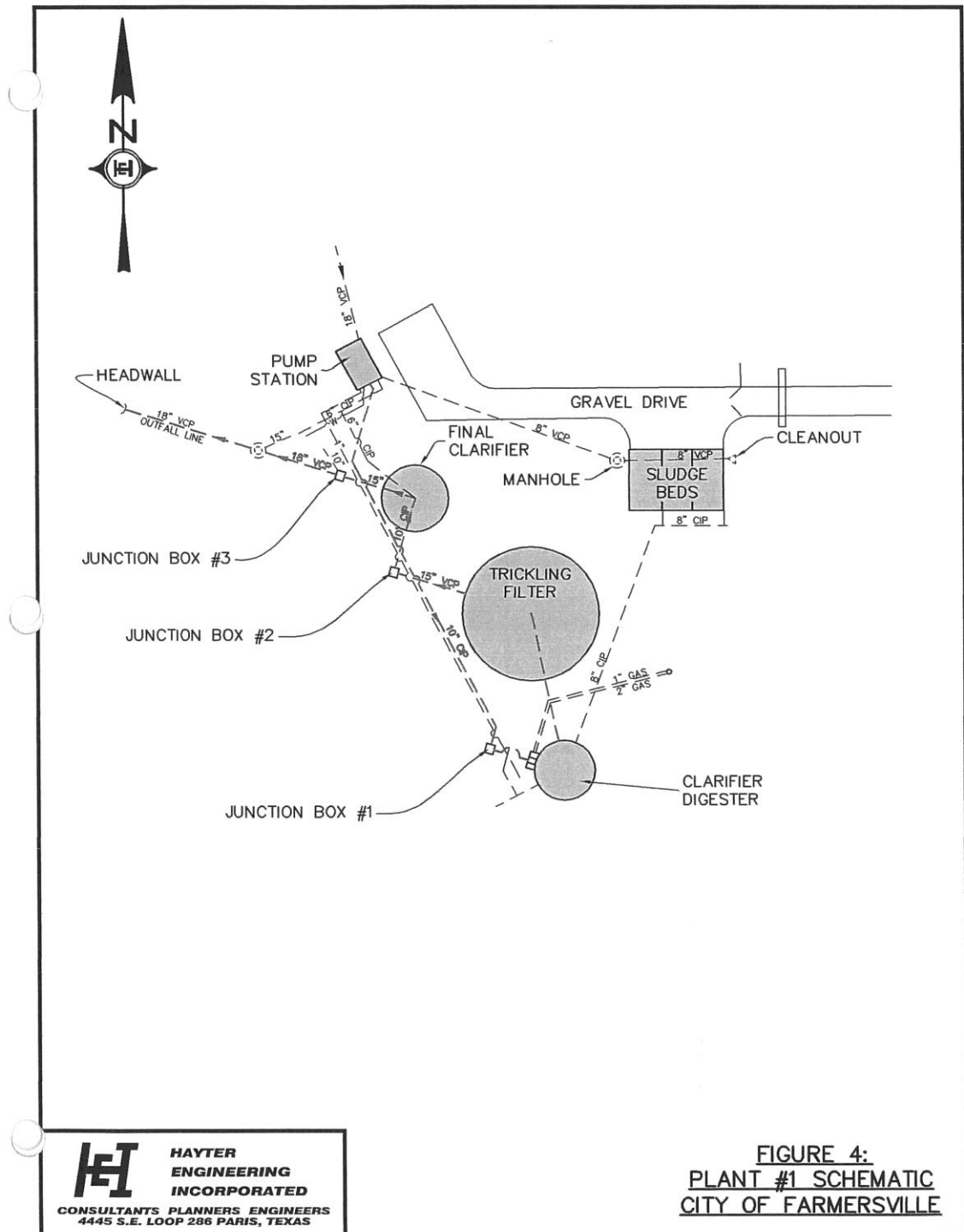


Figure 11. Waste Water System Diagram, Sheet 5





**HEI** HAYTER  
ENGINEERING  
INCORPORATED  
CONSULTANTS PLANNERS ENGINEERS  
4445 S.E. LOOP 286 PARIS, TEXAS

FIGURE 4:  
PLANT #1 SCHEMATIC  
CITY OF FARMERSVILLE



**HI**  
**HAYTER**  
**ENGINEERING**  
**INCORPORATED**  
CONSULTANTS PLANNERS ENGINEERS  
4445 S.E. LOOP 286 PARIS, TEXAS

Appendix D. Water Utility Profile for Wholesale Public Water Suppliers  
(TCEQ Form 20162)



**Texas Commission on Environmental Quality**



**UTILITY PROFILE & WATER CONSERVATION PLAN  
REQUIREMENTS  
FOR WHOLESALE PUBLIC WATER SUPPLIERS**

This form is provided to assist entities in water conservation plan development for municipal water use by a retail public water supplier. Information from this form should be included within a water conservation plan for municipal use. If you need assistance in completing this form or in developing your plan, please contact the conservation staff of the Resource Protection Team in the Water Supply Division at (512) 239-4691.

**GENERAL DATA**

Name of Entity	City of Farmersville
Address & Zip	205 South Main Street, Farmersville, Texas, 75442
Telephone Number	972-782-6151
Facsimile Number	972-782-6604
Form Completed By	Benjamin (Ben) L. White
Title	City Manager/Public Works Director
Signature	
Date of Signature	

**RESPONSIBLE PARTY FOR WATER CONSERVATION PROGRAM  
IMPLEMENTATION**

Name	Benjamin (Ben) L. White
Phone Number	972-782-6151

**PROFILE**

**I. WHOLESALE SERVICE AREA POPULATION AND CUSTOMER DATA**

**A. Population and Service Area Data**

Index	Question or Task Description	Answer
1	Service area size (square miles)	40
2	Current population of service area	3,516
3a	Current water population served	3,516
3b	Current wastewater population served	2,698

Index	Question or Task Description	Answer	
5	Population served previous five years	Year	Population
		2007	3,365
		2008	3,375
		2009	3,417
		2010	3,392
		2011	3,393
6	Projected population for service area in the following decades	2010	3,392
		2020	4,072
		2030	4,940
		2040	5,775
		2050	7,040
7	List source/method for the calculation of current and projected population	US Census 2010 City of Farmersville	

#### B. Customer Data

List (or attach) the names of all wholesale customers, amount of annual contract, and amount of the annual use for each for the previous year

Wholesale Customer	Contracted Amount (Acre-Feet)	Previous Year Amount of Water Delivered (Acre-Feet)

## II. WATER USE DATA FOR SERVICE AREA

#### A. Water Delivery

Indicated if the water provided under wholesale contracts is treated or raw water and the annual amount for each for previous year:

Year	Amount Treated Water (Acre-Feet)	Amount Raw Water (Acre-Feet)
2011		
2012		
2013		
2014		
2015		

#### B. Water Accounting Data

1. Total amount of water diverted at point of diversion for previous five years (in acre-feet) for all water uses:

Year	2007	2008	2009	2010	2011
January	12,850	16,549	15,973	12,386	16,943
February	13,667	11,421	10,073	11,116	10,132
March	14,132	14,594	14,194	11,885	16,083
April	13,652	13,756	16,752	12,669	16,264
May	13,877	18,002	13,348	17,086	13,615
June	15,663	20,767	28,272	30,285	28,333
July	13,896	36,580	40,766	24,574	41,804
August	22,412	34,130	23,653	41,810	49,938
September	17,833	19,761	18,861	18,767	30,130
October	15,001	19,609	13,706	17,880	24,609
November	14,333	14,819	11,534	13,325	16,749
December	13,339	14,358	13,252	14,347	15,024
Total	180,655	234,346	220,384	226,130	279,624

2. Wholesale population served and total amount of water diverted for municipal use for previous five years:

Year	Total Population Served	Total Annual Water Diverted for Municipal Use (acre-feet)

#### B. Projected Water Demands

If applicable, attach projected water supply demands for the next ten years using information such as population trends, historical water use, and economic growth in the service area over the next ten years and any additional water supply requirement from such growth.

Year	Population	Projected Water Supply Demands (acre-feet)
2012	3,389	
2013	3,429	
2014	3,469	
2015	3,509	
2016	3,593	
2017	3,677	
2018	3,761	

2019	3,845	
2020	3,930	
2021	4,008	

### III. WATER SUPPLY SYSTEM DATA

#### A. Water Supply Sources

List all current water supply sources and the amounts authorized with each:

Type	Source	Amount Authorized
Surface Water	Not applicable	0 acre-feet
Groundwater	Not applicable	0 acre-feet
Contracts	North Texas Municipal Water District	860.72 acre-feet 280,467,000 gallons
Other	Not applicable	0 acre-feet

#### B. Treatment and Distribution System

Index	Question or Task Description	Answer
1	Design daily capacity of system	Not applicable, treated water by NTMWD
2a	Elevated Storage Capacity	1,000 MG
2b	Ground Storage Capacity	500 MG
3	Please describe the water system and attach. Include the number of treatment plants, wells, and storage tanks. If possible, attach a sketch of the system layout.	See attachment at the end of this section.

### IV. WASTEWATER SYSTEM DATA

#### A. Wastewater System Data

Index	Question or Task Description	Answer
1	Design capacity of wastewater treatment plant(s)	Plant No. 1 – 0.225 MGD Plant No. 2 – 0.530 MGD

2a	Briefly describe the wastewater system(s) of the area serviced by the water utility.	Farmersville's wastewater collection system transmits flow to the Farmersville WWTP site. The plant consists of two permitted plants on a single site. Plant No. 1 is a trickling filter plant with a permitted capacity of 0.225 MGD. Plant No. 2 is an activated sludge plant with a treatment capacity of 0.530 MGD.
2b	Describe how treated wastewater is disposed of. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and, if wastewater is discharged, the receiving stream.	The wastewater is treated and discharged into Elm Creek, a tributary of Lake Lavon. The City of Farmersville WWTP consists of two permitted plants; Plant No. 1 (WQ0010442001) and Plant No. 2 (WQ0010442002). The owner, and permit holder, of the wastewater plant is the City of Farmersville. The plant is operated by NTMWD.
2c	If possible, attach a sketch or map which locates the plant(s) and discharge points or disposal sites.	See attachment at the end of this section.

#### B. Wastewater Data for Service Area

Index	Question or Task Description	Answer
1	Percent of water service area served by wastewater system	95 %

#### 2. Monthly volume treated for previous three years (in 1,000 gallons):

Year	2009	2010	2011
January	6,892	*17,706	11,170
February	6,115	**21,572	12,901
March	10,991	20,331	9,274
April	10,657	10,229	9,763
May	19,479	8,665	15,363
June	6,943	7,759	8,381

July	6,947	8,984	7,769
August	6,426	7,215	7,522
September	7,864	8,677	7,386
October	***21,926	7,517	7,960
November	13,805	10,059	8,450
December	16,903	7,600	11,593
Total	134,948	136,314	117,532

\*January 2010, includes 1,021 from Plant No. 1

\*\*February 2010, includes 1,797 from Plant No. 1

\*\*\*October 2009, includes 1,234 from Plant No. 1

Appendix E. Water Conservation Annual Report for the North Texas Municipal Water District

**Due: March 31 of every year**

<b>Entity Reporting:</b>	<b>City of Farmersville</b>						
<b>Filled Out By:</b>	<b>Benjamin L. White and Paula R. Jackson</b>						
<b>Date Completed:</b>	<b>04/02/2014</b>						
<b>Year Covered:</b>	<b>2014</b>						
<b># of Connections</b>	<b>1397</b>						

**Recorded Deliveries and Sales by Month (in Million Gallons):**

Month	Deliveries from NTMWD	Other Supplies	Sales by Category						Total
			Residential	Commercial	Public/ Institutional	Industrial	Wholesale	Other	
January	12.013		5.966	1.780	0.031	0.314	2.795		10.886
February	10.322		5.057	1.675	0.019	0.261	2.366		9.37797
March	10.712		5.155	1.875	0.085	0.279	3.884		11.2782
April	11.080		5.359	1.643	0.041	0.247	3.635		10.9251
May	12.770		5.828	1.720	0.029	0.233	2.984		10.7943
June	11.590		6.226	1.543	0.023	0.303	3.008		11.1027
July	15.250		6.943	1.966	0.126	0.343	5.073		14.4515
August	16.370		6.099	2.046	0.075	0.375	3.895		12.4896
September	18.610		6.996	2.242	0.607	0.699	6.088		16.6321
October	12.600		6.933	2.621	0.232	0.773	3.200		13.7587
November	11.690		5.295	1.965	0.284	0.345	3.049		10.9378
December	9.360		4.686	1.290	0.027	0.154	2.936		9.09296
<b>TOTAL</b>	<b>152.367</b>	<b>0</b>	<b>70.543</b>	<b>22.366</b>	<b>1.579</b>	<b>4.326</b>	<b>42.91261</b>	<b>0</b>	<b>141.727</b>

<b>Peak Day Usage</b>									
Peak Day (MG)	1.117	Total peak day use (Peak day delivery from NTMWD + other supplies)							
Average Day (MG)	0.417	Average day use (Annual deliveries from NTMWD + other supplies / 365 days)							
Peak/Average Day Ratio	2.676	Total peak day use/average day use							



<b>Unaccounted Water (Million Gallons):</b>									
NTMWD Deliveries		152.367	from Table above						
Other Supplies		0	from Table above						
Total Supplies		152.367	from Table above						
Total Sales		141.72661	from Table above						
Estimated Fire Use		0.025	estimated from best available data						
Estimated Line Flushing Use		1.881	estimated from best available data						
Unaccounted Water		8.73439							
% Unaccounted		6.00%							
Goal for % Unaccounted		12.00%							
<b>Per Capita Use (Gallons per person per day)</b>									
Total Use (MG)		109.454	from Table above (NTMWD deliveries+ other supplies - wholesale)						
Municipal Use (MG)		105.128	from Table above (NTMWD deliveries+ other supplies - industrial sales - municipal sales - wholesale - other sales)						
Residential Use (MG)		81.183	from Table above (NTMWD deliveries+ other supplies - commercial sales - public/institutional sales - industrial sales - municipal sales - wholesale - other sales)						
Estimated Population		3,301	Source: NTCOG						
Total Per Capita Use (gpcd)		90.84							
Municipal Per Capita Use (gpcd)		87.25							
Residential Per Capita Use (gpcd)		67.38							
5-year Per Capita Goal (___)		144							
10-year Per Capita Goal (___)		142							

Recorded Wholesale Sales by Month (in Million Gallons):								
Month	Caddo Basin SUD	North Farmersville WSC	Copeville SUD	Sales to _____	Sales to _____	Sales to _____	Sales to _____	Total Wholesale Sales
January	0.01180	1.83600	0.94700					2.7948
February	0.00997	0.75600	1.60000					2.36597
March	0.00987	2.25630	1.61800					3.88417
April	0.01043	1.96170	1.66300					3.63513
May	0.01107	1.92320	1.05000					2.98427
June	0.01216	1.93650	1.05900					3.00766
July	0.01116	2.90530	2.15700					5.07346
August	0.00992	2.42670	1.45800					3.89462
September	0.01663	2.77550	3.29600					6.08813
October	0.01758	1.73610	1.44600					3.19968
November	0.01316	1.58260	1.45300					3.04876
December	0.01566	1.50130	1.41900					2.93596
<b>TOTAL</b>	<b>0.14941</b>	<b>23.5972</b>	<b>19.166</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42.91261</b>

**Information on Wholesale Customers:**

Customer	Estimated Population							
Caddo Basin SUD	9,780							
North Farmersville WSC	666							
Copeville SUD	3,807							

<b>Unusual Circumstances (use additional sheets if necessary):</b>									
--------------------------------------------------------------------	--	--	--	--	--	--	--	--	--

No unusual circumstances

<b>Progress in Implementation of Conservation Plan (use additional sheets if necessary):</b>									
----------------------------------------------------------------------------------------------	--	--	--	--	--	--	--	--	--

Implemented about 50% of our AMR system with leak detection capability. Maintained per capita municipal water use below goal. Maintained the level of unaccounted water in the system below the goal. Increased efficient water usage through a water conservation ordinance. Implemented a landscape water management regulations with enforcement.

<b>Conservation measures planned for next year (use additional sheets if necessary):</b>									
------------------------------------------------------------------------------------------	--	--	--	--	--	--	--	--	--

Continue with full deployment of the new meter system (AMR) to increase accuracy and incorporate a leak detection capability.

Assistance requested from North Texas Municipal Water District (use additional sheets if necessary):			
------------------------------------------------------------------------------------------------------	--	--	--

None.
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Other (use additional sheets if necessary):									
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## Historical Water Use Data for City of Farmersville

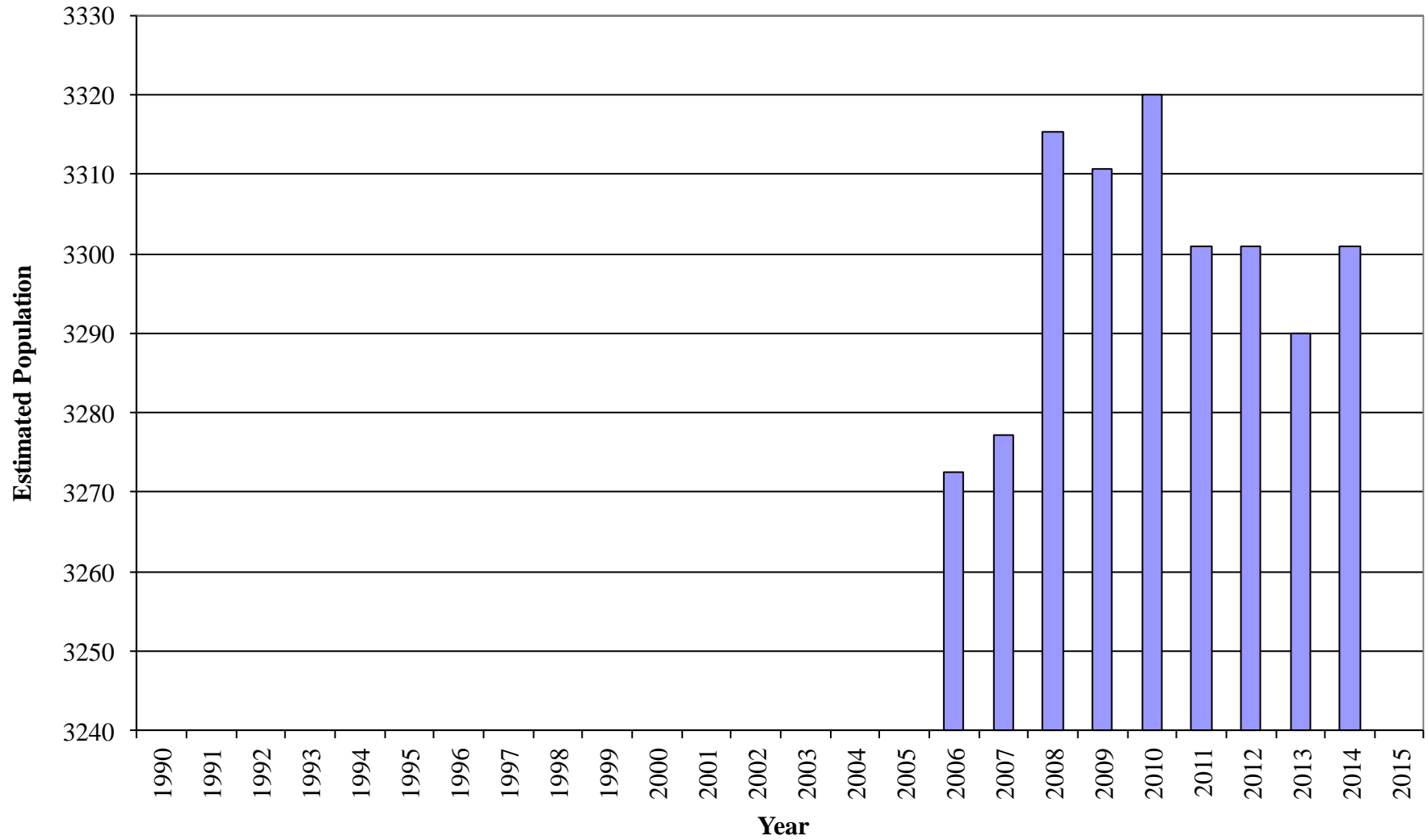
[illegible]

Year	Estimated Population	In-City Municipal Use (MG)	Per Capita Municipal Use (gpcd)	Deliveries from NTMWD (MG)	Other Supplies (MG)	Total Metered Sales (MG)	Estimated Fire Use (MG)	Estimated Line Flushing (MG)	Unaccounted Water (MG)	% Unaccounted
1995		0	#DIV/0!	0	0	0			0	#DIV/0!
1996		0	#DIV/0!	0	0	0			0	#DIV/0!
1997		0	#DIV/0!	0	0	0			0	#DIV/0!
1998		0	#DIV/0!	0	0	0			0	#DIV/0!
1999		0	#DIV/0!	0	0	0			0	#DIV/0!
2000		0	#DIV/0!	0	0	0			0	#DIV/0!
2001		0	#DIV/0!	0	0	0			0	#DIV/0!
2002		0	#DIV/0!	0	0	0			0	#DIV/0!
2003		0	#DIV/0!	0	0	0			0	#DIV/0!
2004		0	#DIV/0!	0	0	0			0	#DIV/0!
2005		0	#DIV/0!	0	0	0			0	#DIV/0!
2006	3273	155.505	130	263.011	0	238.247			24.764	9.00%
2007	3277	131.717	110	180.655	0	173.562			7.093	4.00%
2008	3315	152.864	126	234.346	0	213.243			21.103	9.00%
2009	3311	149.941	124	220.384	0	185.305			35.079	16.00%
2010	3320	127.425	105	226.13	0	213.132			12.998	6.00%
2011	3301	157.285	131	279.624	0	255.348			24.276	9.00%
2012	3301	139.411	115	220.498	0	197.56		0.25	22.688	10.00%
2013	3290	121.09071	101	178.108	0	156.52129	0.14	0.25	21.197	12.00%
2014	3301	105.12839	87	152.367	0	141.72661	0.025	1.881	8.734	6.00%
2015	0	0	#DIV/0!	0	0	0			0.000	#DIV/0!

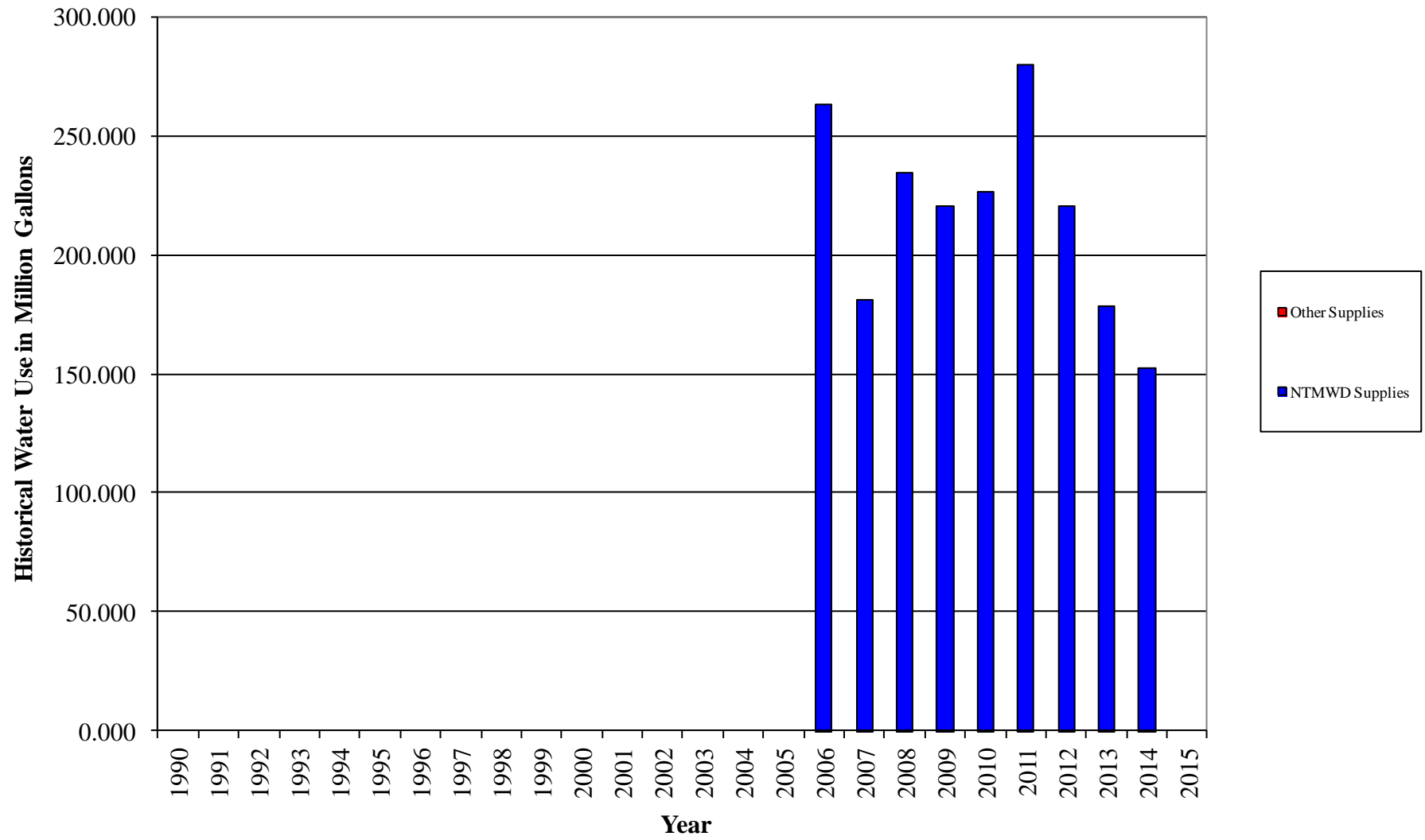
Note: In-city municipal use = total water supplied less sales to industry, wholesale sales and other sales.

Note: In-city municipal use = total water supplied less sales to industry, wholesale sales and other sales.

## Estimated Historical Population

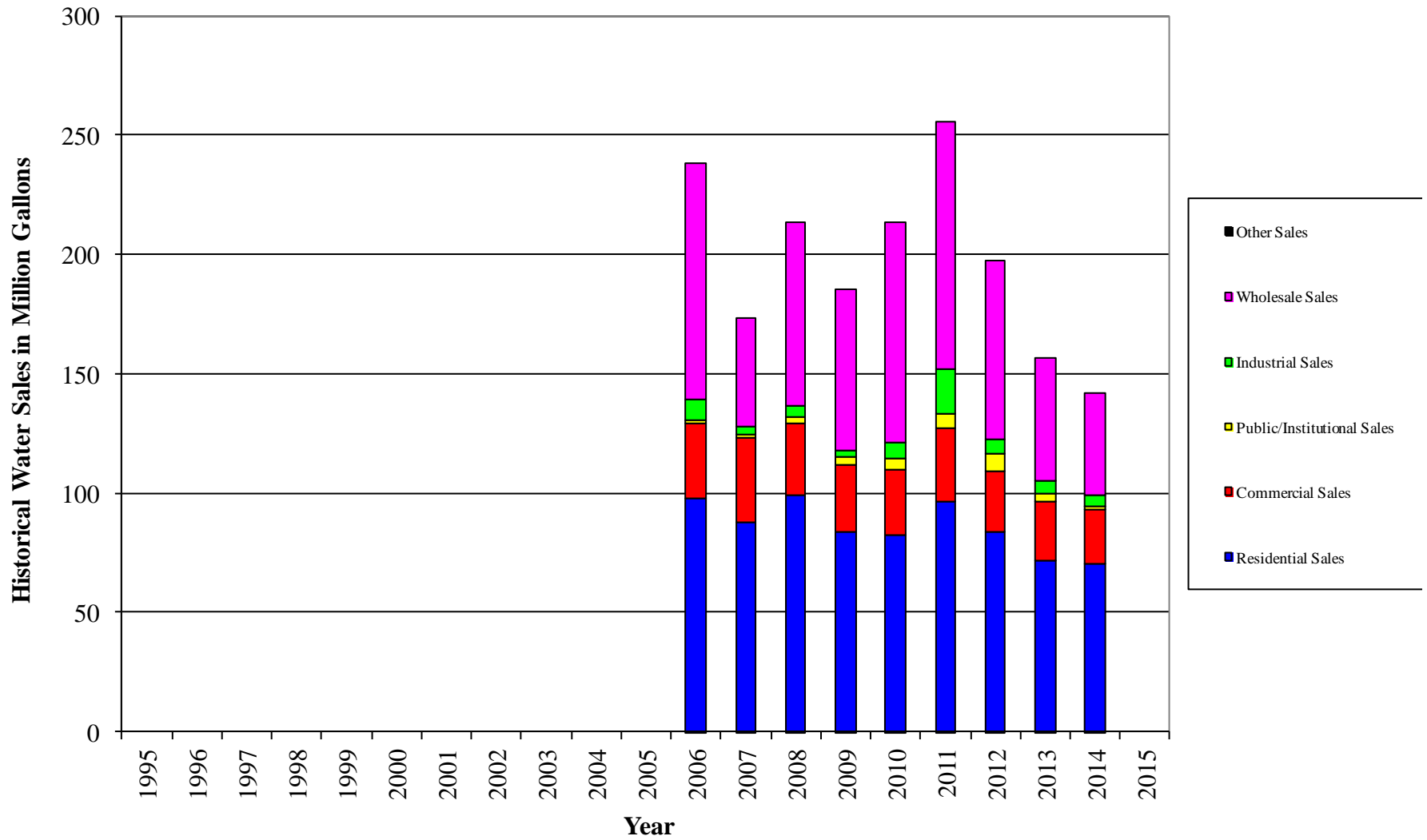


## Historical Water Use

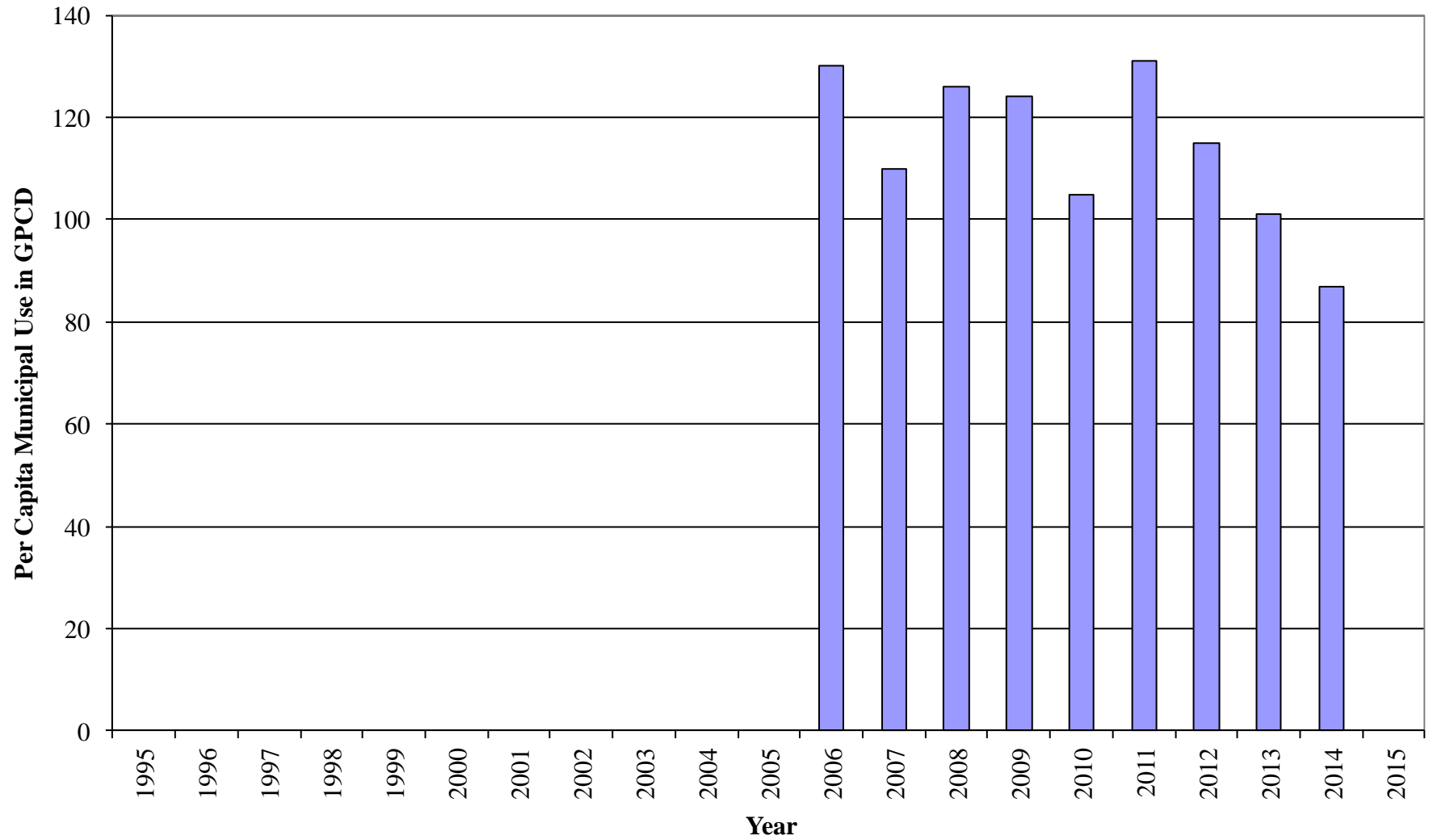




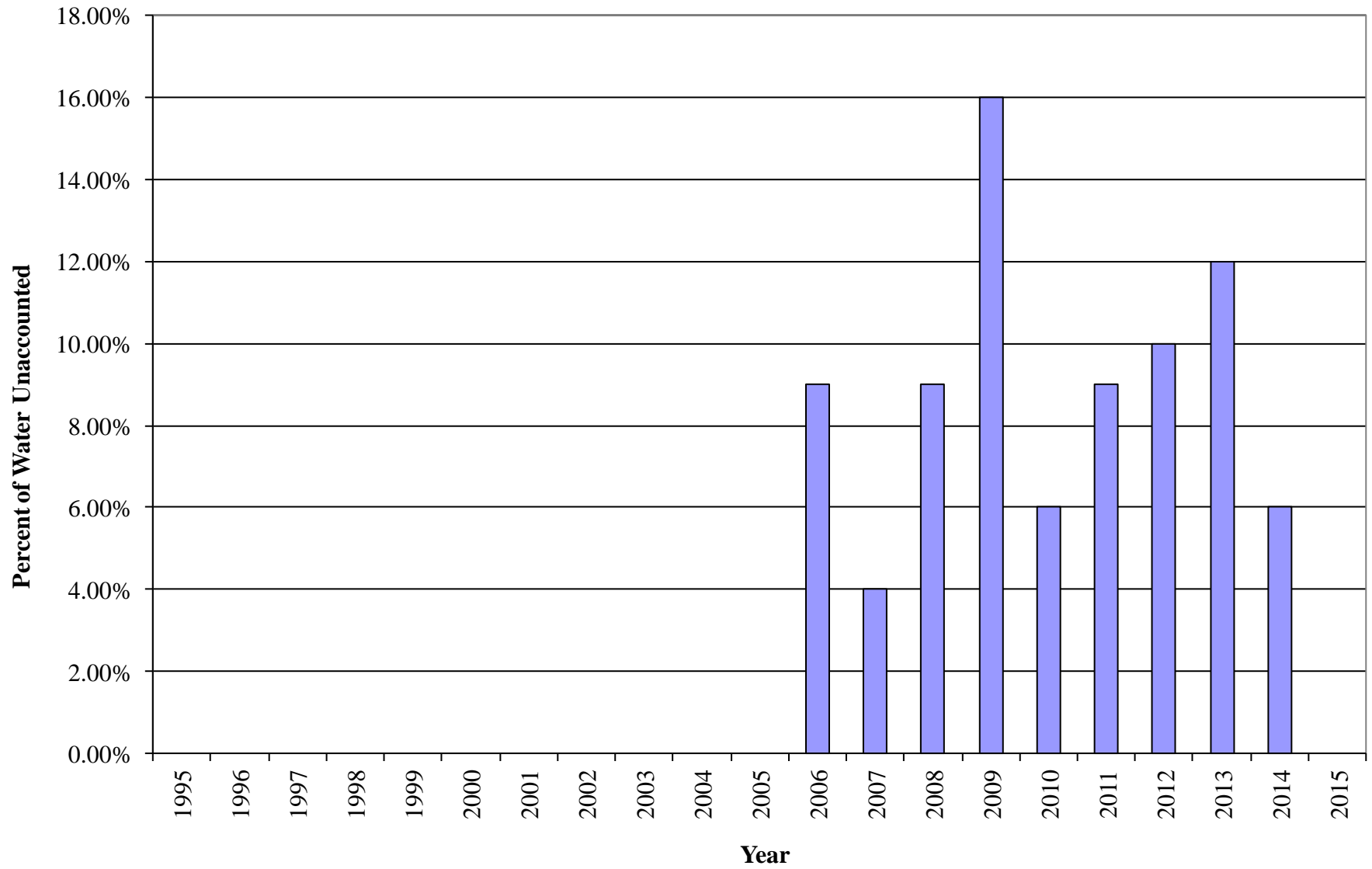
## Historical Water Sales by Classification



## Historical Per Capita Municipal Use



## Historical Percent Unaccounted Water



Appendix F. Example Letter to Region C Water Planning Group

14 February 2016

Ms. Jody Puckett  
Region C Water Planning Group Chair  
City of Dallas Water Utility  
1500 Marilla Street, Room 4AN  
Dallas, Texas 75201

Subject: City of Farmersville Water Management Plan

Dear Ms. Puckett:

Enclosed please find a copy of the recently updated Water Management Plan for the City of Farmersville a member city of the North Texas Municipal Water District. I am submitting a copy of this plan to the Region C Water Planning Group in accordance with the Texas Water Development Board and Texas Commission on Environmental Quality rules.

Sincerely,

Benjamin L. White, P.E.  
City Manager/Public Works Director  
City of Farmersville  
205 South Main Street  
Farmersville, Texas 75442  
Office Phone: 972-782-6151

Appendix G. Water Conservation Annual Report for the Texas Water Development Board  
(Form TWDB 1066)

UTILITY DATA		
Name of Utility: City of Farmersville		
Public Water Supply Identification Number (PWS ID), WR No.: 0430004		
Address: 205 South Main Street		City: Farmersville
State: Texas	Zip Code: 75442	Email: b.white@ci.farmersville.tx.us
Telephone Number: 972-782-6151		Fax: 972-782-6604
Regional Water Planning Group: C		
Form Completed By: Benjamin L. White		Date: 10/06/2011
Title: Director of Public Works		
Reporting Period (fiscal or calendar year): 01/01/2010 to 12/31/2010		

Total Gallons of Water Produced Treated or Raw (minus wholesale)	Population of Service Area	Total Gallons per Capita per Day (GPCD)*	Residential GPCD**	Total Number of Connections	Water Loss in	
					GPCD* **	Percent** **
140,790,288	3,301	117	64	1,351	23	20

- \* **Total GPCD:** form calculation is made by dividing the total water produced by the population served and then dividing by 365
- \*\* **Residential GPCD:** user calculation is made by dividing the total single family plus multi-family residential water sales by the population served and then dividing by 365
- \*\*\* **Water Loss GPCD:** form calculation is made by dividing the amount you provide in number 7G on page 4 by the population served and then dividing by 365
- \*\*\*\* **Water Loss Percentage:** form calculation is made by dividing the amount you provide in number 7G on page 4 by the total gallons of water produced

Please provide the **specific and quantified five and ten-year targets** as listed in your water conservation plan:

	Total GPCD Target	Water Loss Target in GPCD	Year to Achieve Target
<b>Five-year target</b>	170	34	2012
<b>Ten-year target</b>	165	33	2017

## LONG TERM WATER CONSERVATION PROGRAM

1. Approximately how much water in gallons did the utility save during the reporting period due to the overall conservation program?

Water Saved	Water Reused*	Total Water Saved	Dollar Value of Water Saved**
8,000,000	0	8,000,000	\$0

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\* Form inserts calculated Total from number 14 on page 6

\*\* Based on water savings and the cost of treatment or purchase of your water, and any deferred capital costs due to conservation



2. In your opinion, how you would rank the effectiveness of your utility's conservation program?

Effective	Somewhat Effective	Less Than Effective	Not Effective	Do Not Know
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please provide additional information about any successes or problems you may have experienced in implementing your plan.

--

### 3. Education and Information Program

Please check the appropriate boxes regarding any educational and information activities your utility has provided during the reporting period:

	Implemented	Total Number
<b>Brochures Distributed</b>	<input type="checkbox"/>	
<b>Messages Provided on Utility Bills</b>	<input checked="" type="checkbox"/>	
<b>Press Releases</b>	<input checked="" type="checkbox"/>	
<b>TV Public Service Announcements</b>	<input type="checkbox"/>	
<b>Radio Public Service Announcements</b>	<input type="checkbox"/>	
<b>School Program</b>	<input type="checkbox"/>	
<b>Displays and Presentations</b>	<input type="checkbox"/>	
<b>Plant Tours</b>	<input type="checkbox"/>	
<b>Other, please describe:</b>		

### 4. Water Conservation Retrofit and Plumbing Rebate Programs

Please check the appropriate boxes regarding any plumbing fixture programs your utility has provided during the reporting period:

	Give-away	Rebate	Retrofit
<b>Toilets</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Showerheads</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Faucet Aerators</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Other, please describe:</b>			

## 5. Rate Structure

Have your rates or rate structure changed since your last report? Yes ☒ No ☐

If yes, please describe the changes, or attach a copy of the new rate structure.

Please see attached.

## 6. Universal Metering and Meter Repair

During the reporting period what was the system-wide number of:

	Total Number	Total Tested	Total Repaired	Total Replaced
<b>Production Meters</b>	1,346	8	1	15
<b>Meters larger than 1 ½"</b>	37	3	1	0
<b>Meters 1 ½" or smaller</b>	1,309	5	0	15

Does your system have automated meter reading? Yes ☐ No ☒

## 7. Water Loss and Leak Detection

Please provide the following data regarding water loss in your utility during the reporting period:

	Total Gallons During the Reporting Period
<b>A. PRODUCTION - Water treated or raw (minus Wholesale)</b>	140,790,288
<b>B. Water sold</b>	112,873,255
<b>C. Water used for line flushing</b>	
<b>D. Water used for fire department use</b>	
<b>E. Water used for flushing and storage tank cleaning</b>	
<b>F. Water used for any un-metered use (facility use, etc.)</b>	
<b>G. WATER LOSS* = A minus B,C,D,E,F</b>	27,917,033

\* **WATER LOSS** includes un-accounted-for water, water lost from main line breaks and customer service line breaks, and storage over-flow.

How many leaks were repaired in the system or at service connections during the reporting

---

period? \_\_\_\_\_

Please check the appropriate boxes regarding the main cause of water loss in your utility during the reporting period:

<b>Leaks</b>	<input checked="" type="checkbox"/>
<b>Un-metered utility or city uses</b>	<input checked="" type="checkbox"/>
<b>Master meter problems</b>	<input type="checkbox"/>
<b>Customer meter problems</b>	<input checked="" type="checkbox"/>
<b>Record and data problems</b>	<input type="checkbox"/>
<b>Other, please describe:</b>	

Would you like to receive free technical assistance or equipment from the TWDB regarding leak detection and water loss? Yes ☒ No ☐

## 8. Water Conservation Programs

Please check the appropriate boxes regarding what conservation programs your utility provided during the reporting period:

<b>Landscape Program</b>	<input type="checkbox"/>
<b>Educational and Information Program</b>	<input type="checkbox"/>
<b>School Education Program</b>	<input type="checkbox"/>
<b>Rainwater Harvesting</b>	<input checked="" type="checkbox"/>
<b>Leak Detection</b>	<input type="checkbox"/>
<b>Water Loss</b>	<input checked="" type="checkbox"/>
<b>Reuse</b>	<input type="checkbox"/>
<b>Treated Effluent</b>	<input type="checkbox"/>
<b>Other, please describe:</b>	

9. How often does your utility staff review your water conservation program? Yearly

10. What year did your utility adopt, or revise, their water conservation plan? 2008

11. What might your utility do to improve the effectiveness of your water conservation program?

Implement a program to make all the water related data more accessible via computer. A great deal of our data is currently recorded manually and this makes it very difficult to quickly analyze for detail level trends and to implement a proactive approach to water conservation. Implement a program to track unmetered losses regarding line flushing, fire department uses, etc.
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

12. What might the TWDB do to assist you in improving the effectiveness of your water conservation program?

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**13.** If known, how much expense has your utility incurred in implementing your water conservation program during the reporting period (literature, materials, staff time, etc.)? \_\_\_\_\_ (dollars/year)

**14. Recycling and Reuse of Water or Wastewater Effluent**

Please provide the following data regarding what types of water recycling or reuse activities were practiced by your utility during the reporting period, and what volume:

Use	Total Annual Volume (in gallons)
On-site irrigation	0
Plant wash down	0
Chlorination/de-chlorination	0
Industrial	0
Landscape irrigation (parks, golf courses)	0
Agricultural	0
Other, please describe:	0
<b>Total</b>	0

Could treated effluent be substituted for certain potable water now being used? Yes ☐ No ☒

**15. Drought Contingency and Emergency Water Demand Management**

During the reporting period, did your utility activate its Drought Contingency Plan?

Yes ☐ Number of Days \_\_\_\_\_

No ☒

If yes, please check all the appropriate boxes for the reason why:

Reason	
Water Shortage	<input type="checkbox"/>
High Demand	<input type="checkbox"/>
Capacity Issues	<input type="checkbox"/>
Equipment Failure	<input type="checkbox"/>
Other, please describe:	