# Water Management Plan

City of Farmersville
205 South Main Street
Farmersville, Texas 75442

*Release Date: March 2012*

# *Document Revision A*

Table of Contents

Table of Tables



Table of Appendices

# 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) has developed guidelines and requirements governing the development of water conservation and drought contingency plans for public water suppliers.[1,2] TCEQ guidelines and requirements are included in Appendix B. The best management practices established by the Water Conservation Implementation Task Force[3], established pursuant to SB1094 by the 78th 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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1 Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rules 288.1 and 288.5, downloaded from http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=288, July 2007.

2 Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter B, Rule 288.20, downloaded from http://www.tnrcc.state.tx.us/oprd/rules/pdflib/288a.pdf, July 2007.

3 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 TCEQ water conservation rules covered in this plan are listed below.

| TCEQ Requirement Section | TCEQ Requirement Description | WMP Section |
|---|---|---|
| **Minimum Water Conservation Requirements Covered by this Plan** | | |
| 288.2(a)(1)(A) | Utility Profile | Section 3 and Appendix C |
| 288.2(a)(1)(C) | Specific, Quantified Goals | Section 4.2 |
| 288.2(a)(1)(D) | Accurate Metering | Sections 4.3.1 |
| 288.2(a)(1)(E) | Universal Metering | Section 4.3.2 |
| 288.2(a)(1)(F) | Determination and Control of Unaccounted Water | Section 4.3.4 |
| 288.2(a)(1)(G) | Public Education and Information Program | Section 4.6 |
| 288.2(a)(1)(H) | Non-Promotional Water Rate Structure | Section 4.7 |
| 288.2(a)(1)(I) | Reservoir System Operation Plan | Section 4.8.1 |
| 288.2(a)(1)(J) | Means of Implementation and Enforcement | Section 4.10 |
| 288.2(a)(1)(K) | Coordination with Regional Water Planning Group | Section 4.9 and Appendix E |
| 288.2(c) | Review and Update of Plan | Section 4.11 |
| 288.2(a)(3)(F) | Considerations for Landscape Water Management Regulations | Section 4.8.4 |
| **Optional Water Conservation Requirements Covered By this Plan** | | |
| 288.2(a)(2)(A) | Leak Detection, Repair, and Water Loss Accounting | Section 4.3.5 |
| 288.2(a)(2)(B) | Record Management System | Section 4.3.3 |
| 288.2(a)(2)(C) | Requirement for Water Conservation Plans by Wholesale Suppliers | Section 4.8.5 |
| 288.2(a)(3)(A) | Conservation Oriented Water Rates | Section 4.7 |
| 288.2(a)(3)(B) | Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures | Section 4.8.3 |
| 288.2(a)(3)(C) | Replacement or Retrofit of Water-Conserving Plumbing Fixtures | Section 4.8.3 |
| 288.2(a)(3)(D) | Reuse and Recycling of Wastewater | Section 4.8.2 |
| 288.2(a)(3)(G) | Monitoring Method | Section 4.4 |
| 288.2(a)(3)(H) | Additional Conservation Ordinance Provisions | Section 4.8.35.2 |

## 2.2 Drought Contingency Plan Requirements

The elements in the 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 5.2 |
| 288.20(a)(1)(B) | Continuing Public Education | Section 5.3 |
| 288.20(a)(1)(C) | Coordination with Regional Water Planning Group | Section 5.8 |
| 288.20(a)(1)(D) | Information to be Monitored for Drought Response Stages | Section 5.5 |
| 288.20(a)(1)(E) | Implementation of Drought Response Stages | Section 5.5 |
| 288.20(a)(1)(F) | Water Supply and Demand Targets | Section 5.5 |
| 288.20(a)(1)(G) | Water Supply and Demand Management Measures | Section 5.5 |
| 288.20(a)(1)(H) | Variances | Section 5.6 |
| 288.20(a)(1)(I) | Enforcement | Section 5.7 |
| 288.20(c) | Updates | Section 5.9 |

## 2.3 Required Submittals

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

| TCEQ Requirement Section | Requirement Description | Cut-Off Dates |
|---|---|---|
| N/A | Water Conservation Annual Report for the NTMWD (see Appendix D for example) | Due by 31 March each year |
| 288.30(1) | TCEQ Water Conservation Plan Original Implementation and Update Requirements | Original: 1 May 2005<br>1st Revision: 1 May 2009<br>Subsequent Revisions: Every 5 Years<br>Revised Plans: Within 90 Days |
| 288.30(2) | TCEQ Implementation Report (Form TCEQ-20159, see Appendix F for example) | Original: 1 May 2010<br>Subsequent: Annually, 1 May<br>After Revision: Within 90 Days |
| 288.30(5) | TCEQ Drought Contingency Plan Original Implementation and Update Requirements | Original: 1 May 2005<br>1st Revision: 1 May 2009<br>Subsequent Revisions: Every 5 Years<br>Revised Plans: Within 90 Days |

| TCEQ Requirement Section | Requirement Description | Cut-Off Dates |
|---|---|---|
| 288.30(10)(B) | Texas Water Development Board (TWDB) Water Conservation Plan Submission | Original: 1 May 2009<br>Subsequent Revisions: Every 5 Years<br>Revised Plans: Within 90 Days |
| 288.30(10)(C) | TWDB Water Conservation Annual Report Submission (Form TWDB 1966, Formerly Form WRD-265) | Original: 1 May 2010<br>Subsequent: Annually, 1 May |

A copy of this WMP will be provided to NTMWD for review and comment prior to submission to TCEQ.

# 3 WATER UTILITY PROFILE

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

# 4 WATER CONSERVATION PLAN

## 4.1 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.

## 4.2 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 5.4 and as shown in Table 1.
- Implement and maintain a program of universal metering and meter replacement and repair, as discussed in Section 4.3.2.
- Increase efficient water usage through a water conservation ordinance, order or resolution as discussed in Section 4.10.
- Decrease waste in lawn irrigation by implementation and enforcement of landscape water management regulations, as discussed in Section 4.8.4.
- Raise public awareness of water conservation and encourage responsible public behavior by a public education and information program, as discussed in Section 4.6.

- 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 |
|---|---|---|---|
| Water Conservation Goals (gpcd) | 145 | 144 | 142 |
| Unaccounted Water Maximum (%) | 12.00 | 10.00 | 8.5 |

## 4.3 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.

### 4.3.1 Accurate Metering of Treated Water Deliveries

The water distribution meters shown in Table 2 shall meet the following minimum accuracy requirements.

Table 2. Meter Accuracies

| Meter Type | Required Accuracy |
|---|---|
| Residential | ±5% |
| Commercial | ±5% |
| Industrial | ±5% |
| Public | ±5% |
| Wholesale | ±5% |

### 4.3.2 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 | As Needed | Manufacturer Rating |
| Commercial | As Needed | Manufacturer Rating |
| Industrial | Yearly | Manufacturer Rating |
| Public | Yearly | Manufacturer Rating |
| Wholesale | Yearly | Manufacturer Rating |

All uses of water shall be metered including retail, residential, commercial, industrial, wholesale, internal, public, and governmental 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 on a year-by-year basis.

### 4.3.3 Record Management System

The record management system shall allow for the separation of water sales into the following categories: residential, commercial, public, industrial, and wholesale categories. If the record management system does not allow for such separation then the record management system must comply by the end of 2015.

### 4.3.4 Determination and Control of Unaccounted Water

Unaccounted water is the difference between water delivered to the City of Farmersville from NTMWD and metered water sales to customers plus authorized but unmetered uses. (Authorized but unmetered uses would include use for fire fighting, releases for flushing of lines, uses associated with new construction, etc.) Unaccounted water 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.

Unaccounted water shall be calculated and maintained below twelve (12) percent. 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.

### 4.3.5 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.

## 4.4 Monitoring of Effectiveness and Efficiency - Annual Water Conservation Report

The Annual Water Conservation Report in Appendix D 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 31st of each year.

## 4.5 Water Conservation Implementation Report

Appendix F includes the TCEQ-required water conservation implementation report. The report is due to the TCEQ by May 1st of every year. The TCEQ form number for this report is TCEQ-20159.

## 4.6 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) 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.

## 4.7 Water Rate Structure

An increasing block rate water structure shall be installed to encourage water conservation and discourage excessive use and waste of water. The rate structure shall include the following features as a minimum.

### 4.7.1 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.
- 2nd tier (from the average to two (2) times the approximate average) at 1.25 to 2.0 times the base charge.
- 3rd tier (above two (2) times the approximate average) at 1.25 to 2.0 times the 2nd tier.

### 4.7.2 Commercial/Industrial Rates

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

## 4.8 Other Water Conservation Measures

### 4.8.1 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.

### 4.8.2 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.

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

The City of Farmersville has adopted the International Plumbing Code 2006 by ordinance which sets standards for water-conserving fixtures. This standard 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.

### 4.8.4 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.

### 4.8.5 Requirement for Water Conservation Plans by Wholesale Customers

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.[1]

## 4.9 Coordination with Regional Water Planning Group and NTMWD

Appendix E 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.

## 4.10 Implementation and Enforcement of the Water Conservation Plan

This plan shall be implemented and enforced by ordinance.

## 4.11 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.

# 5 DROUGHT CONTINGENCY AND WATER EMERGENCY RESPONSE PLAN

## 5.1 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.

## 5.2 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.
- Making the draft plan available on the City's website.
- Providing the draft plan to anyone requesting a copy.
- Holding a public meeting.

## 5.3 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.

## 5.4 Initiation and Termination of Drought or Water Emergency Response Stages

### 5.4.1 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.

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.

### 5.4.2 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, 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.

## 5.5 Drought Contingency and Water Emergency Response Stages and Measures

There are five (5) 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 |
|---|---|---|---|
| 0 | Green | Stage 0 | White |
| 1 | Yellow | Stage 1 | Black |
| 2 | Orange | Stage 2 | White |
| 3 | Red | Stage 3 | White |
| 4 | Black | Stage 4 | White |

### 5.5.1 Stage 1

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

- The NTMWD has initiated Stage 1.
- The City's water demand exceeds ninety (90) 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.

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

Stage 1 is intended to raise public awareness of potential drought or water emergency problems. The goal for water use reduction under Stage 1 is a two (2) percent reduction. The City Manager or official designee may order the implementation of any of the actions listed below, as deemed necessary:

- Request voluntary reductions in water use by the public and by wholesale customers.
- Notify wholesale customers of actions being taken and request implementation of similar procedures.
- Increase public education efforts on ways to reduce water use.

- Review the problems that caused the initiation of Stage 1.
- Intensify efforts on leak detection and repair.
- Reduce non-essential city government water use. (Examples include street cleaning, vehicle washing, operation of ornamental fountains, etc.)
- Notify major water users and work with them to achieve voluntary water use reductions.
- Reduce city water use for landscape irrigation.
- Ask the public to follow voluntary landscape watering schedules.

### 5.5.2 Stage 2

Initiation and Termination Conditions for Stage 2

- The NTMWD has initiated Stage 2.
- Supplier's water demand exceeds ninety-five (95) percent of the amount that can be delivered to customers for three consecutive days.
- Supplier's water demand for all or part of the delivery system equals delivery capacity because delivery capacity is inadequate.
- Supply source becomes contaminated.
- Supplier'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.

#### 5.5.2.1 Goal for Use Reduction and Actions Available under Stage 2

The goal for water use reduction under Stage 2 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. 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 the following actions set by Stage 1
  - Notify wholesale customers of actions being taken and request implementation of similar procedures.
  - Increase public education efforts on ways to reduce water use.
  - Intensify efforts on leak detection and repair.
  - Notify major water users and work with them to achieve voluntary water use reductions.
- Review the problems that caused the initiation of Stage 2.
- Initiate engineering studies to evaluate alternatives should conditions worsen.
- Halt non-essential city government water use.
  - Street cleaning.
  - Ornamental fountains.
  - Reduce Splash Pad operational time by at least thirty (30) percent.

- Encourage the public to wait until the current drought or emergency situation has passed before establishing new landscaping.
- ** Limit landscape watering with sprinklers or irrigation systems to no more than two (2) days per week. An exception is allowed for landscape associated with new construction that may be watered as necessary for thirty (30) days from the date of the certificate of occupancy. The following exceptions apply:
  - Foundations, new landscaping, new plantings (first year) of shrubs, and trees may be watered for up to two (2) hours on any day by a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system.
  - Golf courses may water greens and tee boxes without restrictions.
  - 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.
- ** Restrict landscape and lawn irrigation from 10 AM to 6 PM beginning April 1 through October 31 of each year.
- ** Prohibit planting of cool season grasses (such as rye grass or other similar grasses) that intensify cool season water requirements.

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

### 5.5.3 Stage 3

#### 5.5.3.1 Initiation and Termination Conditions for Stage 3

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

#### 5.5.3.2 Goals for Use Reduction and Actions Available under Stage 3

The goal for water use reduction under Stage 3 is ten (10) percent.

The City Manager or official designee shall implement any action(s) required by NTMWD. In addition, the City Manager or official designee may order the implementation of any of the actions listed below, as deemed necessary. Measures described as "requires notification to

TCEQ" impose mandatory requirements on customers. The supplier must notify TCEQ and NTMWD within five (5) business days if these measures are implemented:

- Continue the following actions set by Stage 1
  - Notify wholesale customers of actions being taken and request implementation of similar procedures.
  - Increase public education efforts on ways to reduce water use.
  - Intensify efforts on leak detection and repair.
  - Notify major water users and work with them to achieve voluntary water use reductions.
- Continue the following actions set by Stage 2
  - Halt non-essential city government water use.
    - Street cleaning.
  - Initiate engineering studies to evaluate alternatives should conditions worsen.
  - Encourage the public to wait until the current drought or emergency situation has passed before establishing new landscaping.
- Review the problems that caused the initiation of Stage 3.
- Implement viable alternative water supply strategies.
- Halt non-essential city government water use.
  - Reduce Splash Pad operational time by at least fifty (50) percent.
  - Washing of city vehicles.
- ** Initiate mandatory water use restrictions as follows:
  - Prohibit hosing of paved areas, buildings, or windows. (Pressure washing of impervious surfaces is allowed.)
  - Prohibit operation of all ornamental fountains or other amenity impoundments to the extent they use treated water.
  - Prohibit washing or rinsing of vehicles by hose except with a hose end cutoff nozzle.
  - Prohibit using water in such a manner as to allow runoff or other waste.
- ** Limit landscape watering with sprinklers or irrigation systems at each service address to once every seven (7) days. Exceptions are as follows:
  - Between November 1 and March 31 additional limit landscape watering with sprinklers or irrigation systems at each service address to once every fourteen (14) days
  - Foundations, new landscaping, new plantings (first year) of shrubs, and trees may be watered for up to two (2) hours on any day by a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system.
  - Golf courses may water greens and tee boxes without restrictions.
  - Public athletic fields used for competition may be watered twice per week.
  - Locations using other sources of water supply for irrigation may irrigate without restrictions. Recommend the use of signs to inform the public that irrigation is provided by other sources.
  - Registered and properly functioning ET/Smart irrigation systems and drip irrigation systems may irrigate without restrictions.
- ** Prohibit hydroseeding, hydromulching, and sprigging.
- ** Existing swimming pools may not be drained and refilled (except to replace normal water loss).
- ** Initiate a rate surcharge as requested by NTMWD.

- ** Initiate a rate surcharge for all water use over a certain level.
- ** If NTMWD has imposed a reduction in water available to Member Cities and Customers, impose the same percent reduction on wholesale customers.
- ** Prohibit watering of golf courses using treated water, except as needed to keep greens and tee boxes alive.

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

### 5.5.4 Stage 4

#### 5.5.4.1 Initiation and Termination Conditions for Stage 4

- The NTMWD has initiated Stage 4.
- 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 4 may terminate when NTMWD terminates its Stage 4 condition or when the circumstances that caused the initiation of Stage 4 no longer prevail.

#### 5.5.4.2 Goals for Use Reduction and Actions Available under Stage 4

The goal for water use reduction under Stage 4 is a reduction of whatever amount is necessary as established by NTMWD.

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

- Continue the following actions set by Stage 1
  - Notify wholesale customers of actions being taken and request implementation of similar procedures.
  - Increase public education efforts on ways to reduce water use.
  - Intensify efforts on leak detection and repair.
  - Notify major water users and work with them to achieve voluntary water use reductions.
- Continue the following actions set by Stage 2
  - Halt non-essential city government water use.
    - Street cleaning.
  - Initiate engineering studies to evaluate alternatives should conditions worsen.
- Continue the following actions set by Stage 3

  - Implement viable alternative water supply strategies.
  - ** Initiate mandatory water use restrictions as follows:
    - Prohibit hosing of paved areas, buildings, or windows. (Pressure washing of impervious surfaces is allowed.)
    - Prohibit operation of all ornamental fountains or other amenity impoundments to the extent they use treated water.
    - Prohibit using water in such a manner as to allow runoff or other waste.
    - ** Prohibit hydroseeding, hydromulching, and sprigging.
    - ** Initiate a rate surcharge as requested by NTMWD.
    - ** Initiate a rate surcharge for all water use over a certain level.
    - ** If NTMWD has imposed a reduction in water available to Member Cities and Customers, impose the same percent reduction on wholesale customers.
    - ** Prohibit watering of golf courses using treated water, except as needed to keep greens and tee boxes alive.
- Halt the operation of the Splash Pad.
- ** Prohibit the irrigation of new landscaping using treated water.
- ** – Prohibit washing of vehicles except as necessary for health, sanitation, or safety reasons.
- ** Prohibit commercial and residential landscape watering, except that foundations and trees may be watered for two (2) hours on any day with a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system. ET/Smart irrigation systems are <u>not</u> exempt from this requirement.
- ** Prohibit golf course watering with treated water except for greens and tee boxes.
- ** Prohibit the permitting of private pools. Pools already permitted may be completed and filled with water. Existing private and public pools may add water to maintain pool levels but may not be drained and refilled.
- ** Require all commercial water users to reduce water use by a percentage established by the City Manager or official designee.
- ** If NTMWD has imposed a reduction in water available to Member Cities and Customers, impose the same percent reduction on wholesale customers.
- ** Initiate a rate surcharge for all water use over normal rates for all water use.

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

### 5.6 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.

### 5.7 Procedures for Enforcing Mandatory Water Use Restrictions

Mandatory water use restrictions may be imposed in Stage 2, Stage 3 and Stage 4 drought contingency and water emergency response stages. The penalties associated with the mandatory water use restrictions shall be established by ordinance.

### 5.8 Coordination with the Regional Water Planning Groups

Appendix E 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.

### 5.9 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.

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.

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 per Capita Water Use: The sum total of water diverted into a water supply system for residential, commercial, and public and institutional uses divided by actual population served.

Municipal Use: The use of potable water within or outside a municipality and its environs whether supplied by a person, privately owned utility, political subdivision, or other entity as well as the use of sewage effluent for certain purposes, including the use of treated water for domestic purposes, fighting fires, sprinkling streets, flushing sewers and drains, watering parks and parkways, and recreational purposes, including public and private swimming pools, the use of potable water in industrial and commercial enterprises supplied by a municipal distribution system without special construction to meet its demands, and for the watering of lawns and family gardens.

Municipal Use in Gallons per Capita per Day: The total average daily amount of water diverted or pumped for treatment for potable use by a public water supply system. The calculation is made by dividing the water diverted or pumped for treatment for potable use by population served. Indirect reuse volumes shall be credited against total diversion volumes for the purpose of calculating gallons per capita per day for targets and goals.

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 Use: The use of water internally by a public water supplier.

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 for domicile purposes.

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.

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: The use of water delivered to a wholesale public water supplier.

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

**Texas Administrative Code**

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

(a) A water conservation plan for municipal water use by public water suppliers shall 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 including, but not limited to, information regarding population and customer data, water use data, water supply system data, and wastewater system data;

(B) until May 1, 2005, specification of conservation goals including, but not limited to, municipal per capita water use goals, the basis for the development of such goals, and a time frame for achieving the specified goals;

(C) beginning May 1, 2005, specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use, in gallons per capita per day. 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 unaccounted-for uses of water (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 in order to control unaccounted-for uses of water;

(B) a record management system to record water pumped, water deliveries, water sales, and water losses which allows for the desegregation of water sales and uses into the following user classes:

(i) residential;

(ii) commercial;

(iii) public and institutional; and

(iv) industrial;

(C) 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) Beginning May 1, 2005, 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 not later than May 1, 2009, and every five years after that date 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.

**Texas Administrative Code**

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

(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.

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 | Interim 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 |

## 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 miles |
| 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 | 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<br>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 Baseball Field | 3,070 | Treated |

| Position | Customer | Use (1,000gal./yr.) | Treated/Raw Water |
|---|---|---|---|
| 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<br>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<br>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

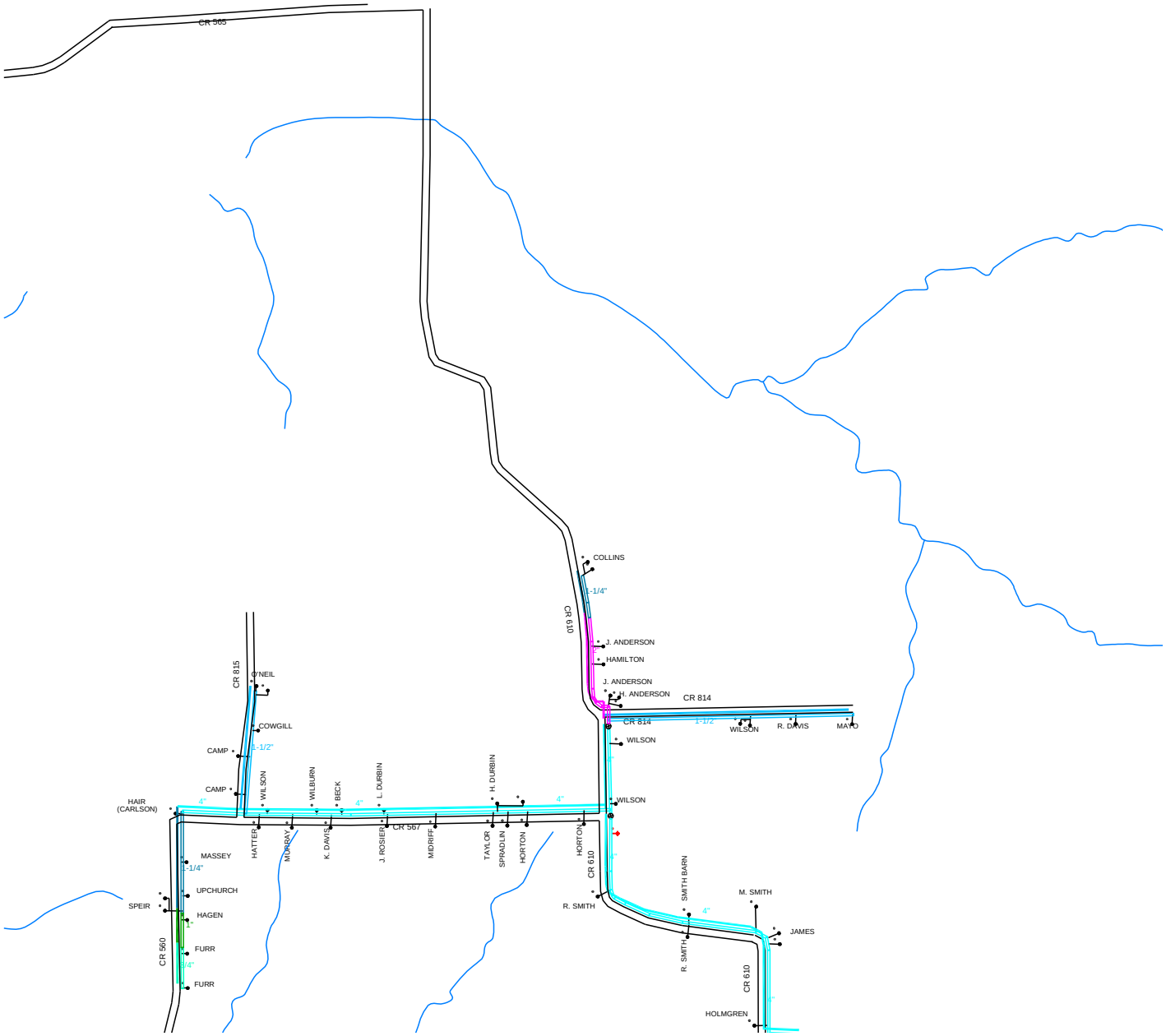



Figure 1. Water System Diagram, Sheet 1

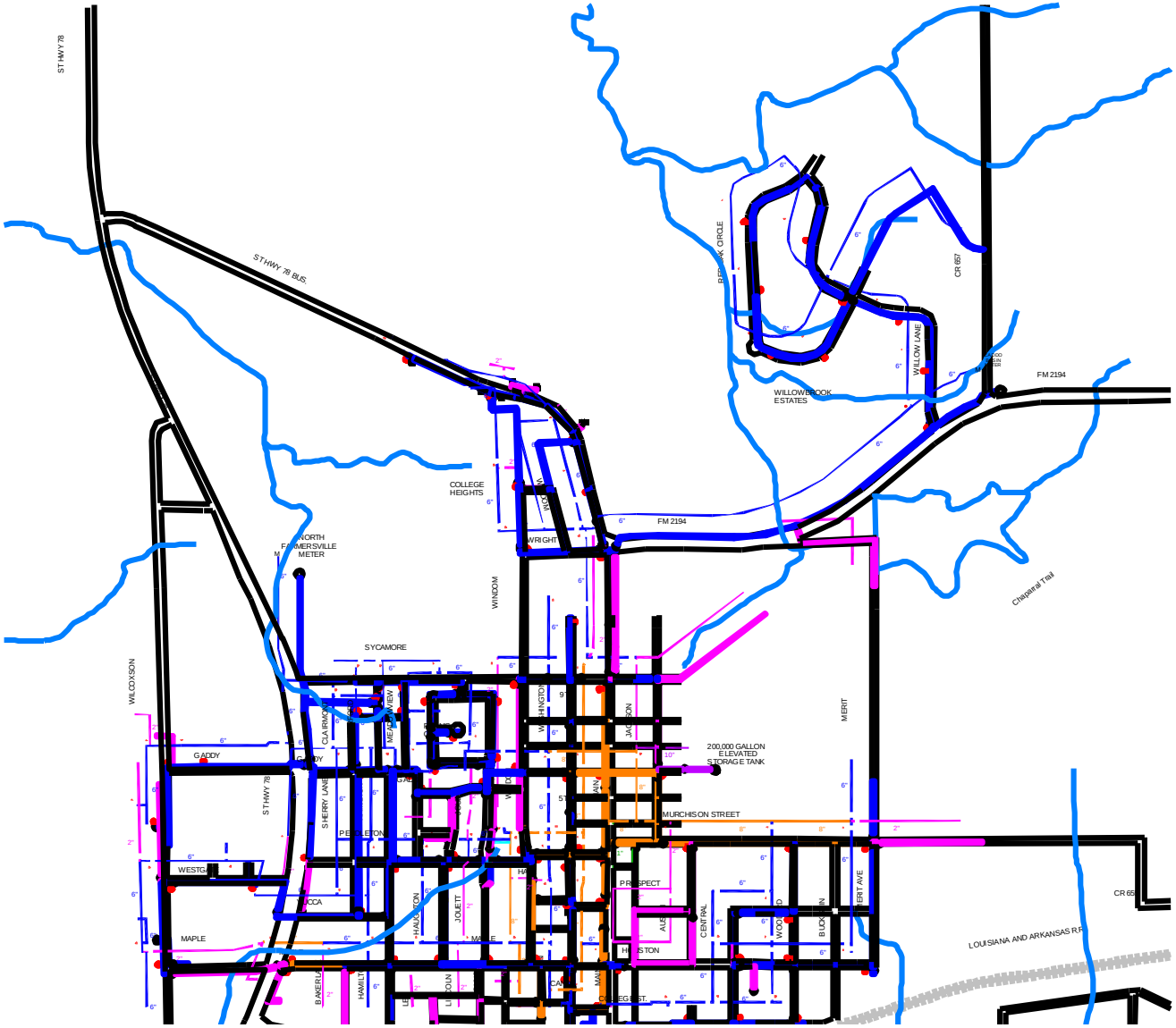



Figure 2. Water System Diagram, Sheet 2

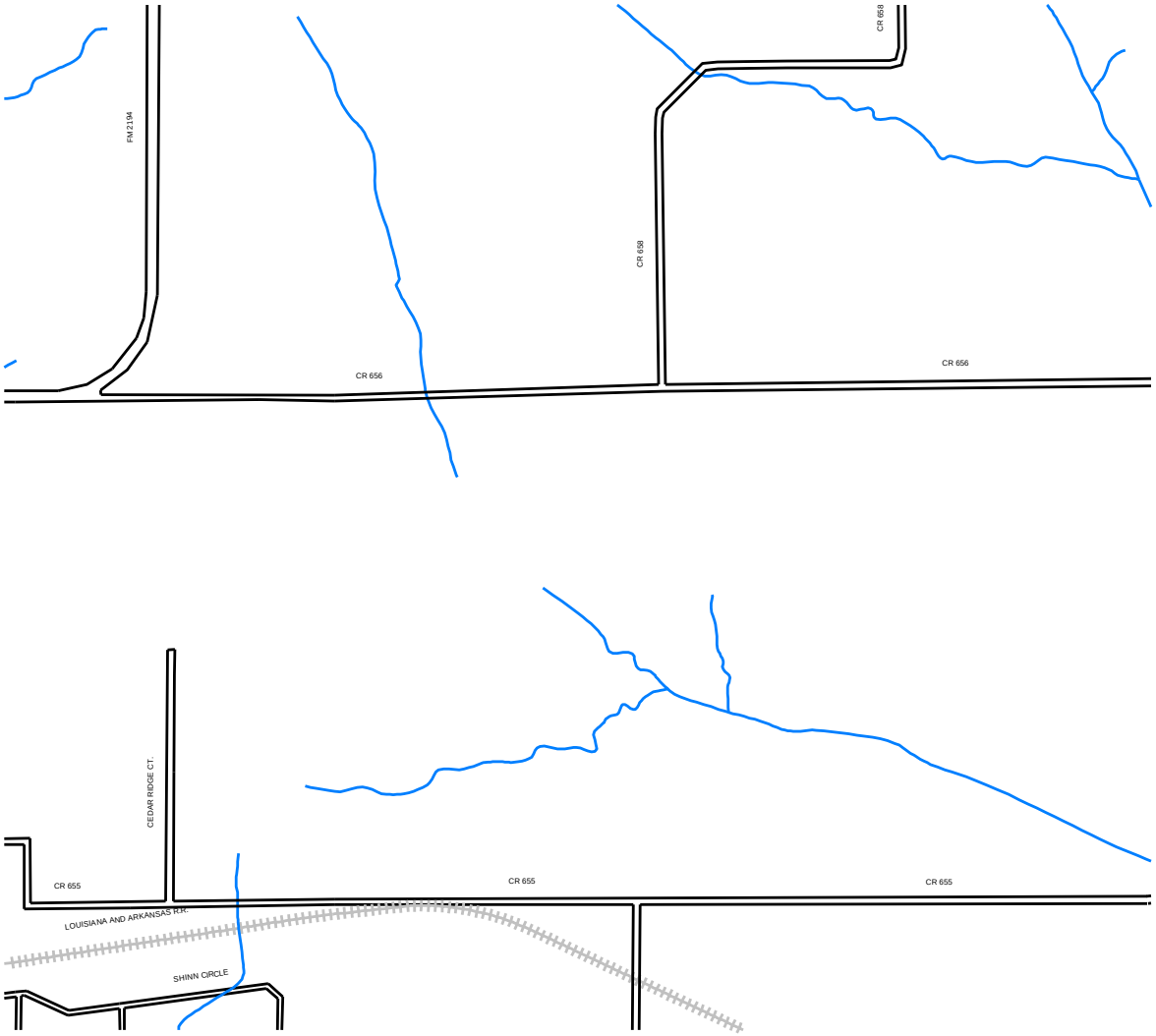



Figure 3. Water System Diagram, Sheet 3

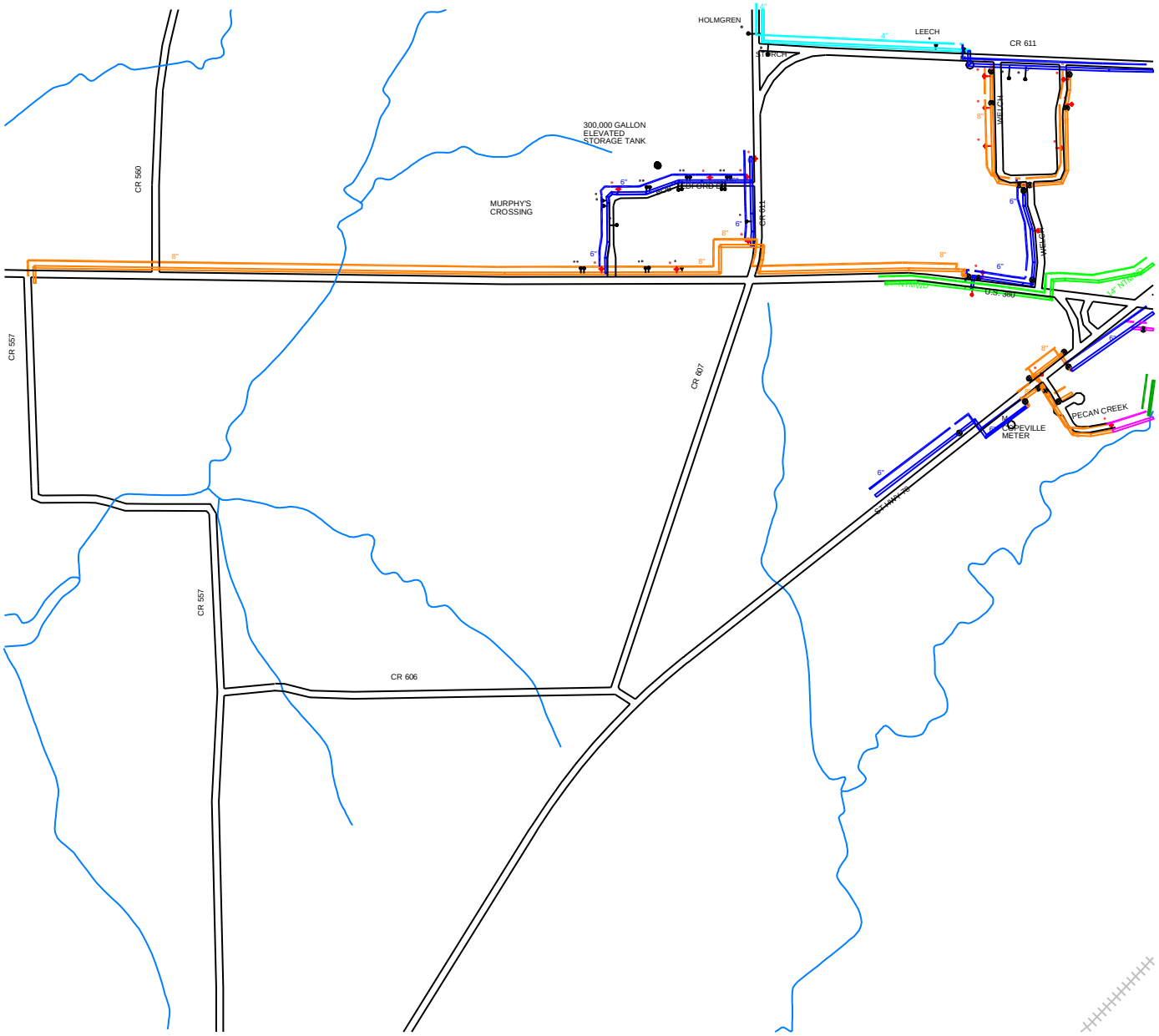



Figure 4. Water System Diagram, Sheet 4

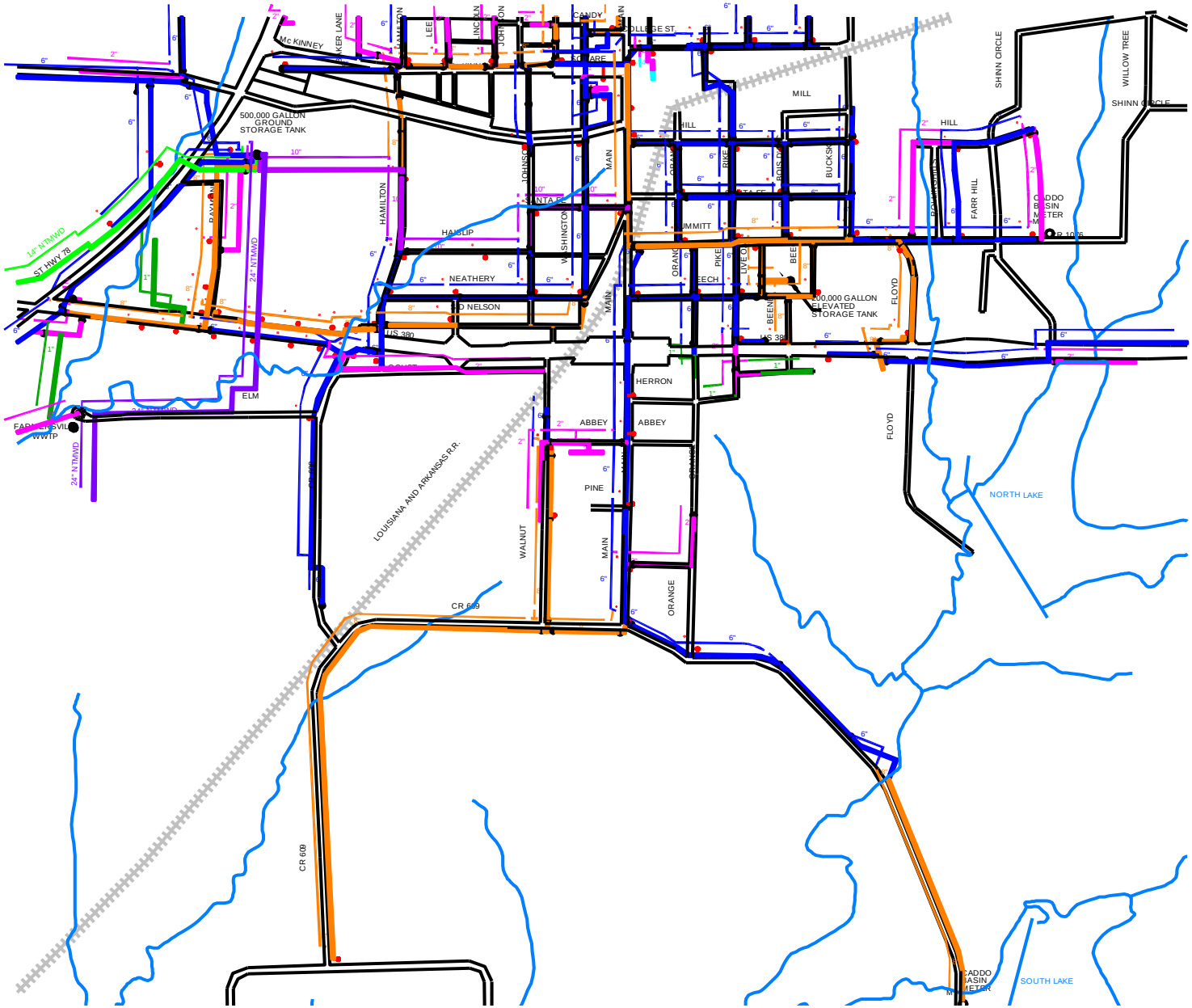



Figure 5. Water System Diagram, Sheet 5

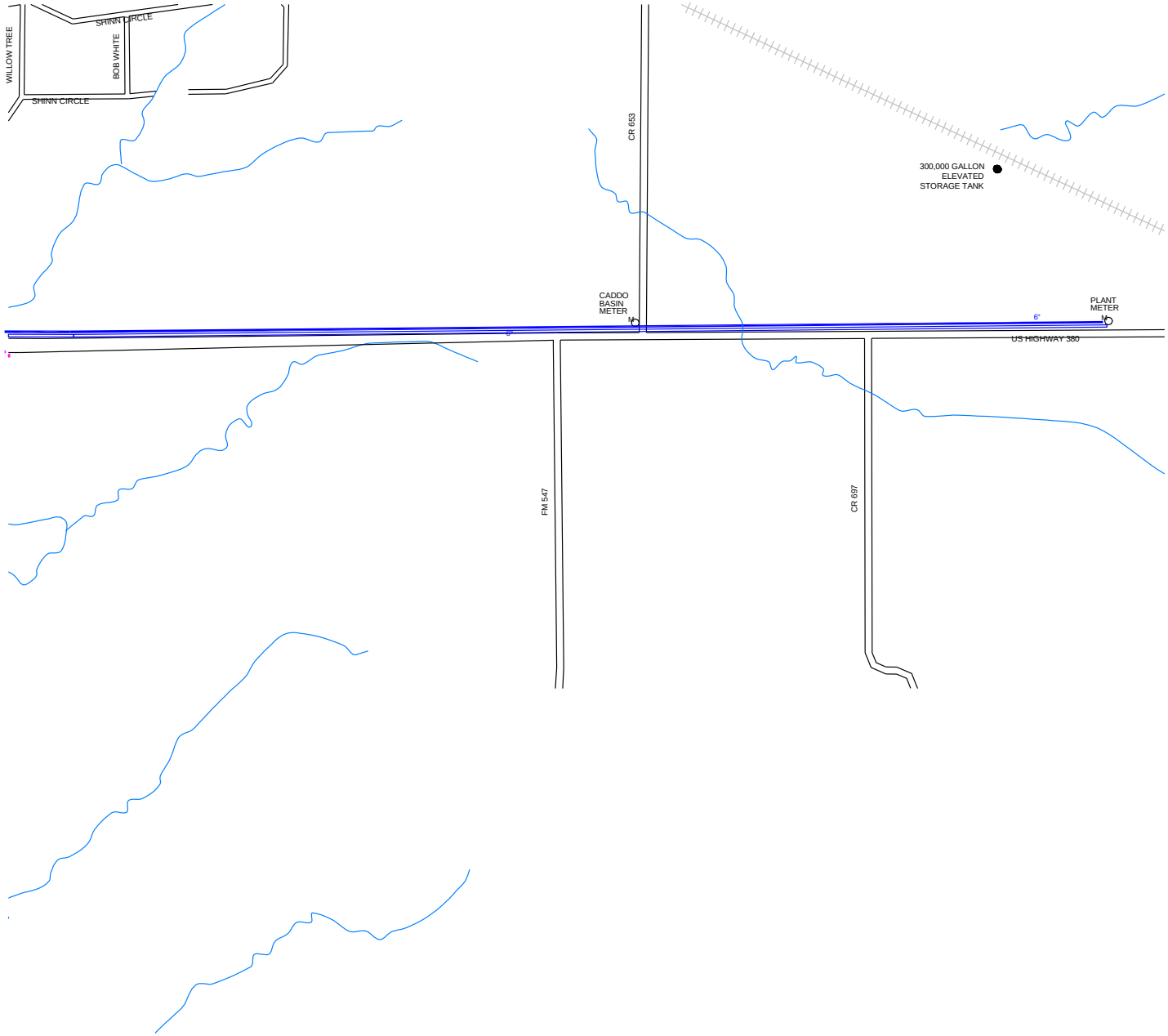



Figure 6. Water System Diagram, Sheet 6


Figure 7. Waste Water System Diagram, Sheet 1

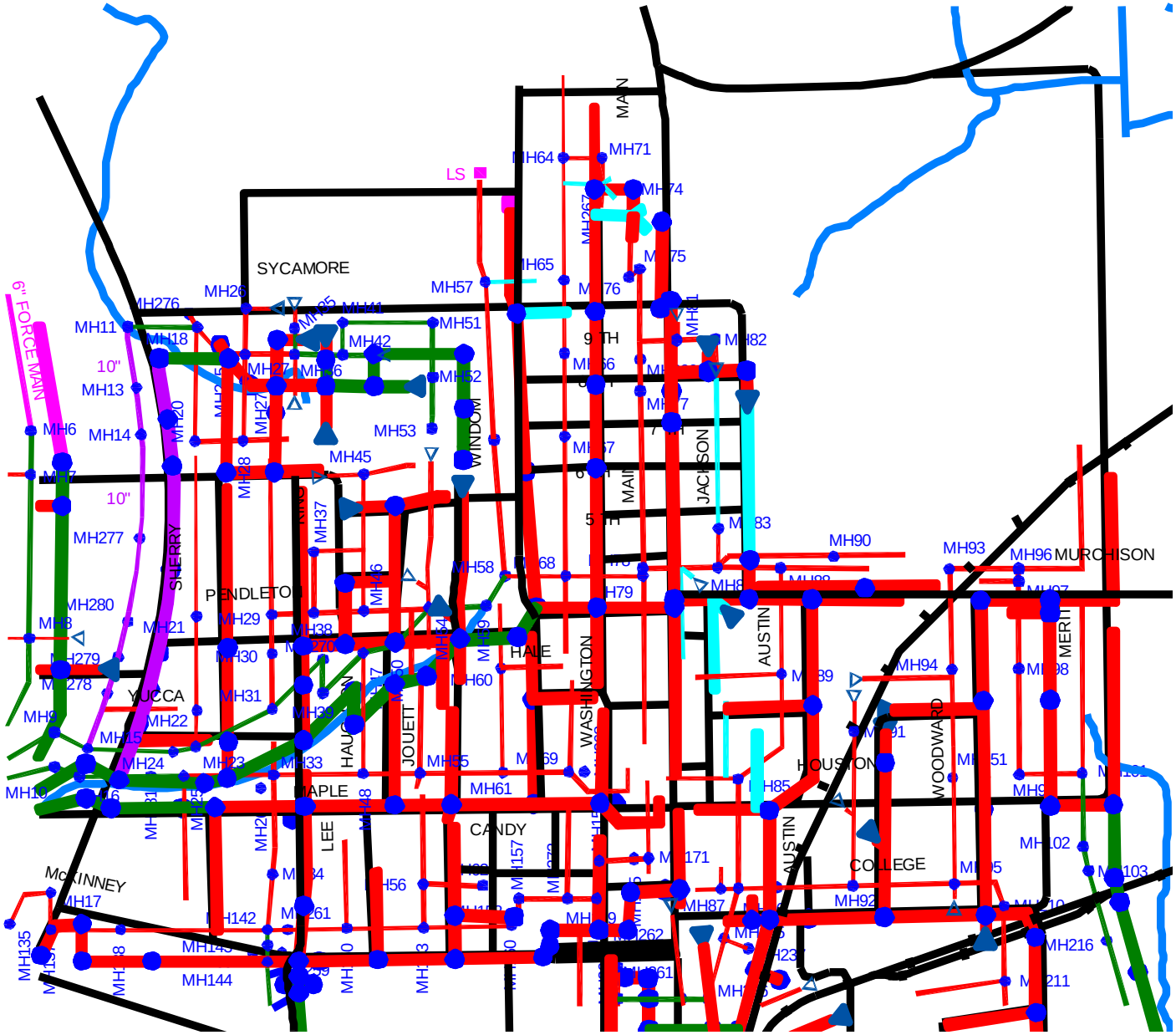



Figure 8. Waste Water System Diagram, Sheet 2


Figure 9. Waste Water System Diagram, Sheet 3

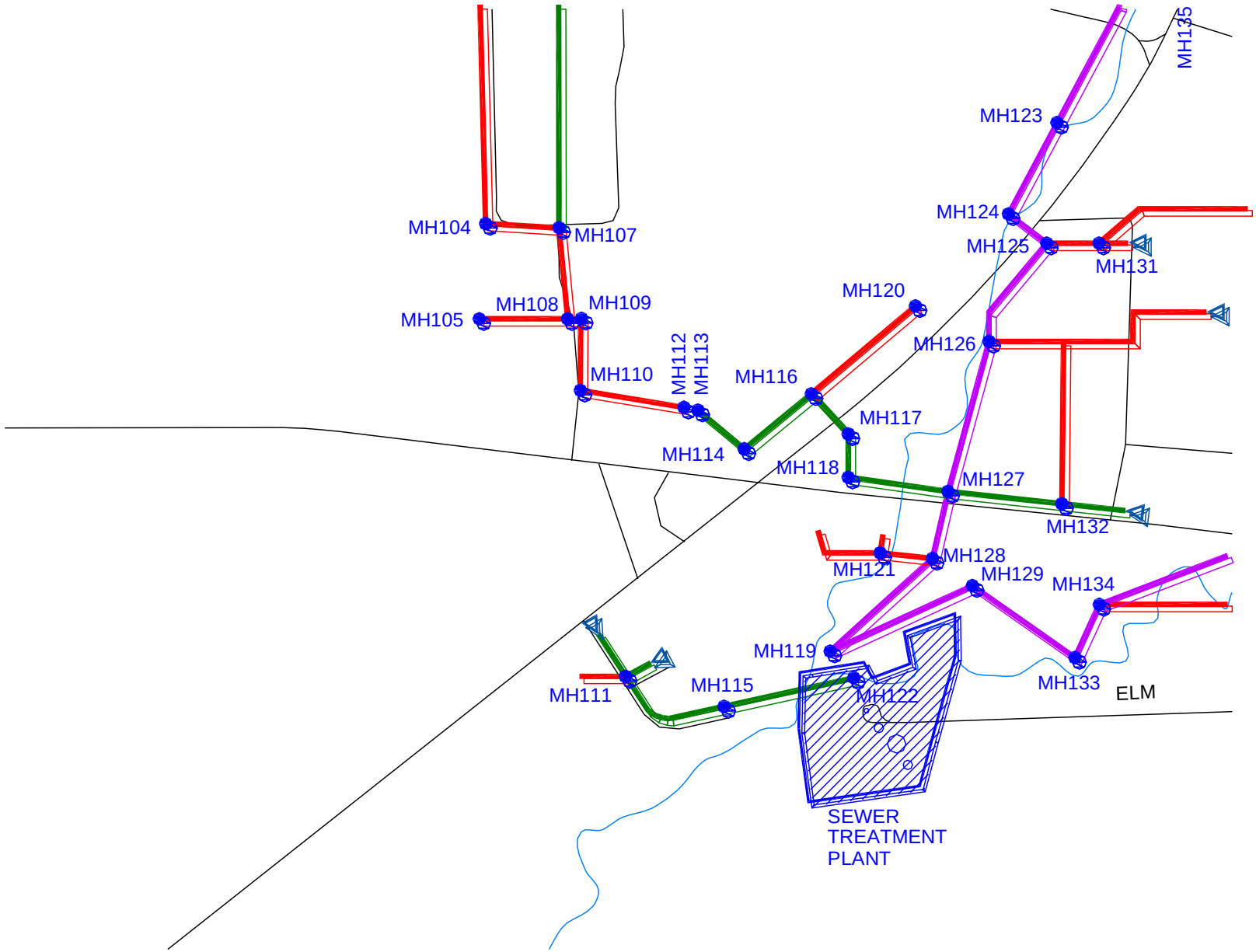



Figure 10. Waste Water System Diagram, Sheet 4

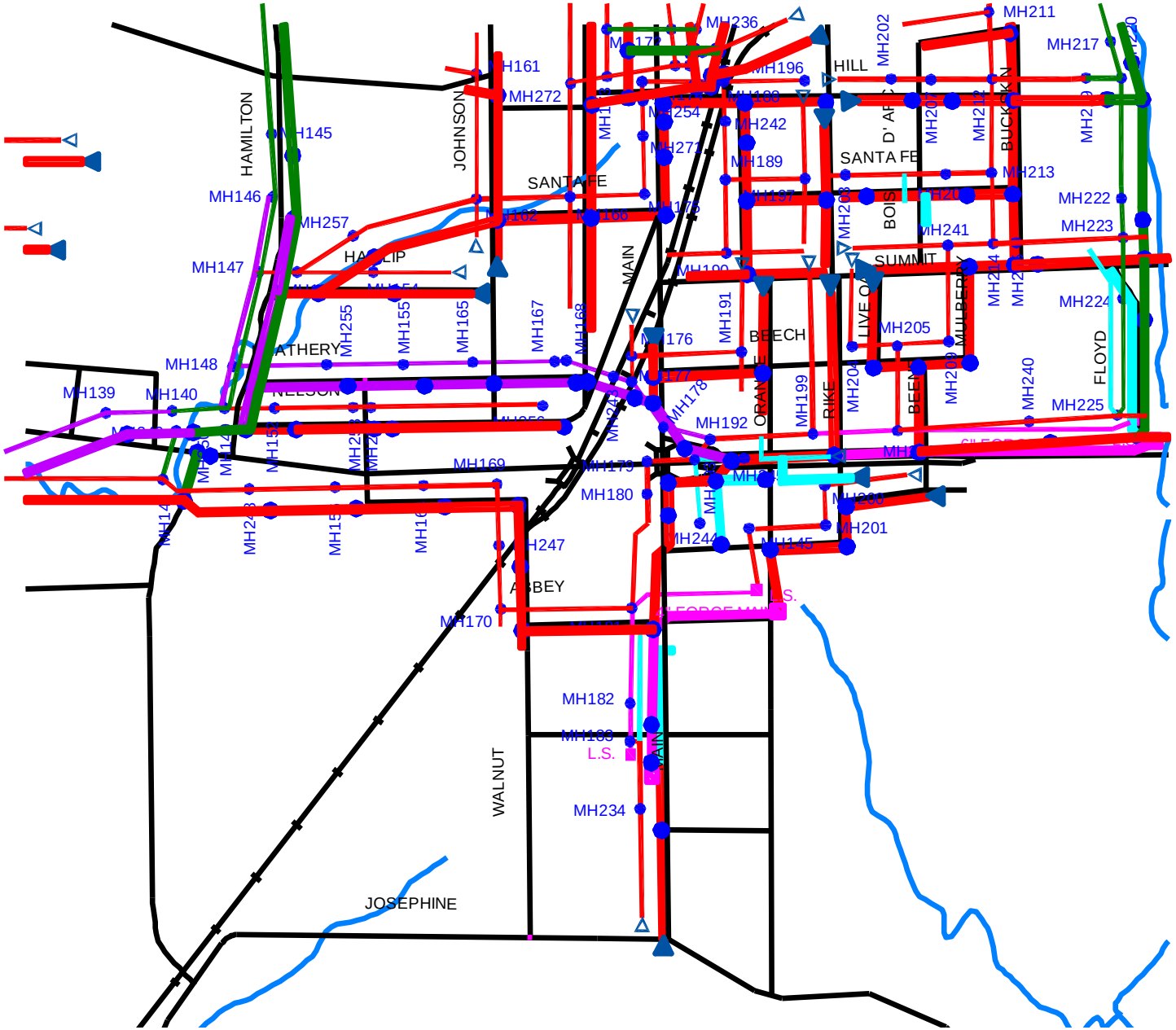



Figure 11. Waste Water System Diagram, Sheet 5

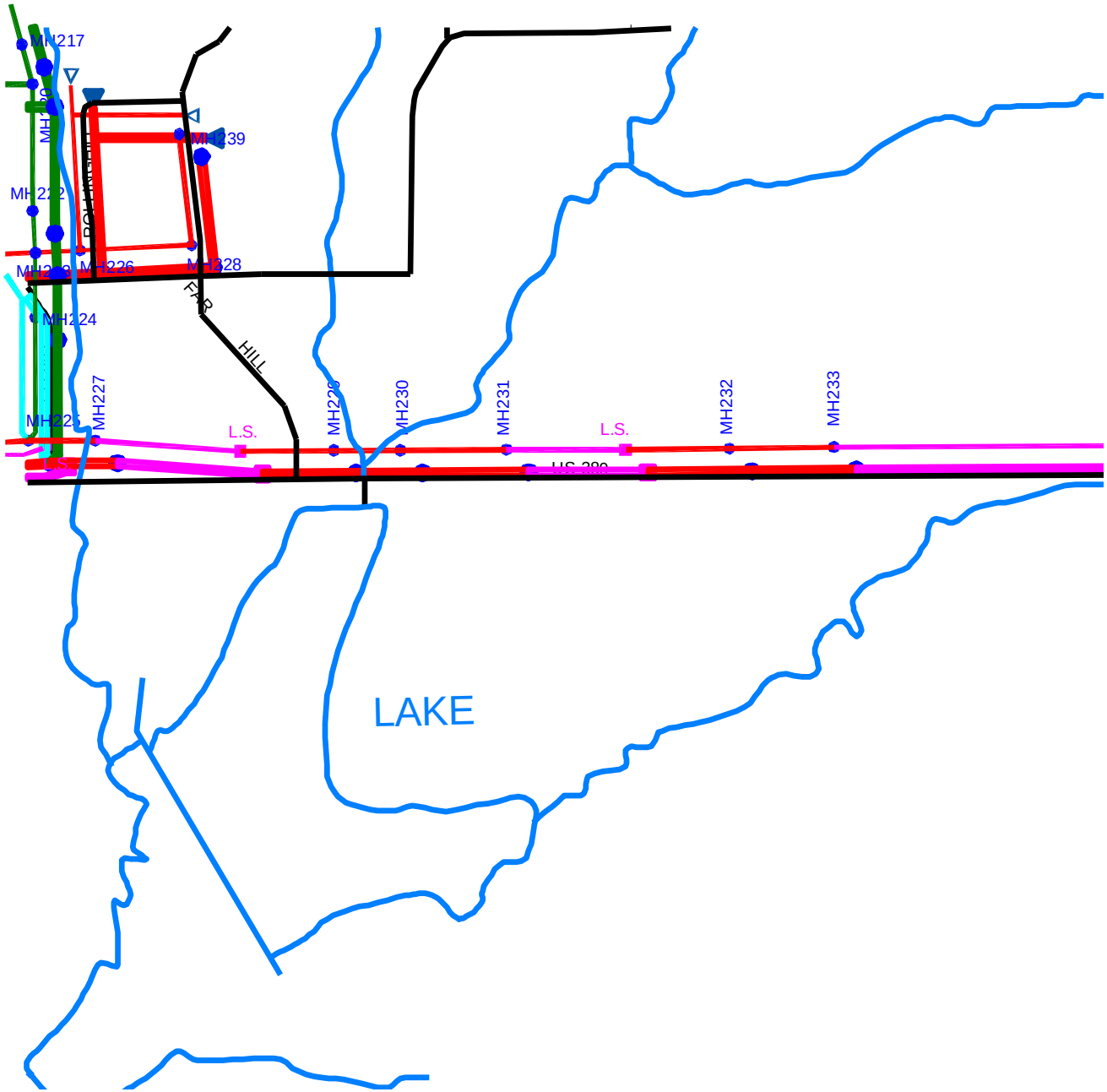
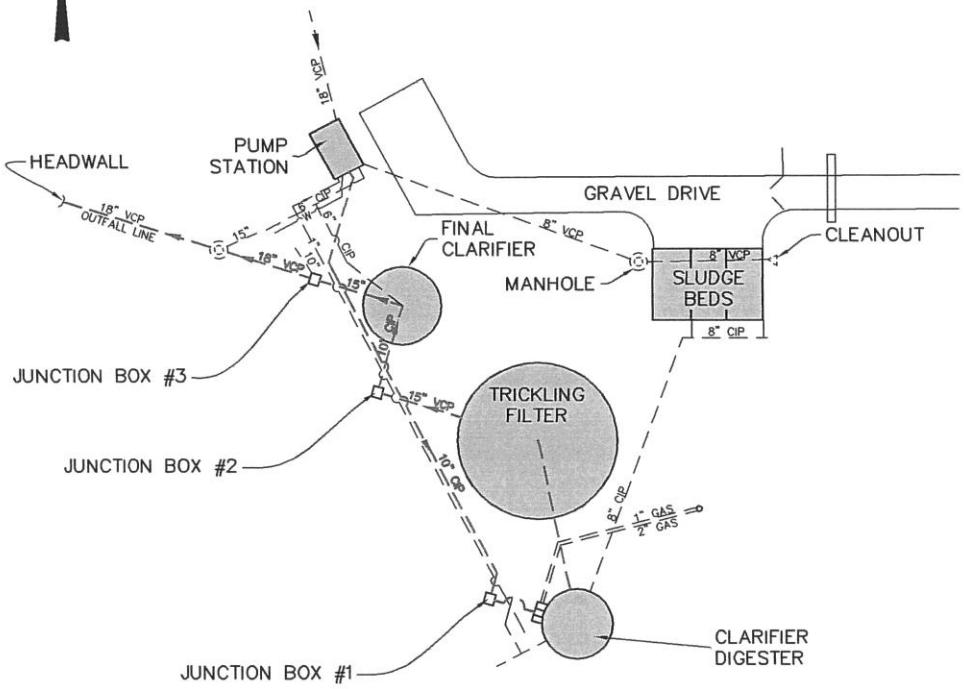



Figure 12. Waste Water System Diagram, Sheet 6




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

FIGURE 4:
PLANT #1 SCHEMATIC
CITY OF FARMERSVILLE

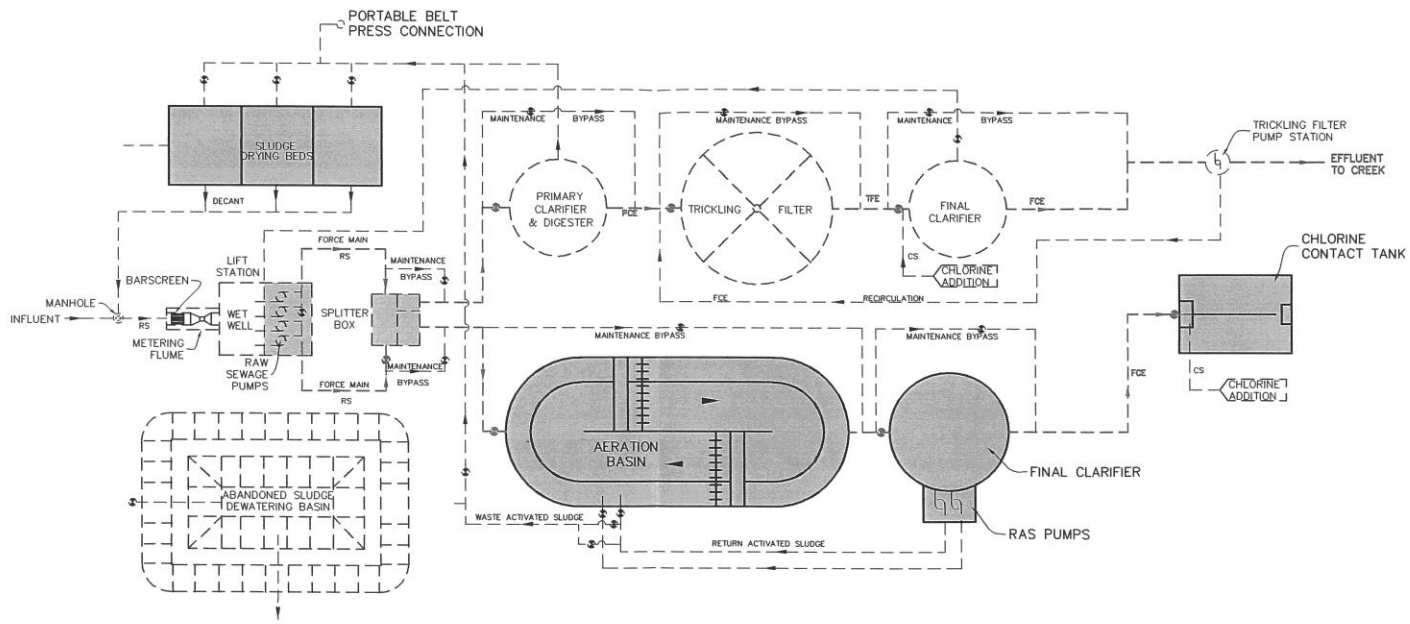



FIGURE 5:
PLANT #2 SCHEMATIC
CITY OF FARMERSVILLE

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

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

Entity Reporting:
Filled Out By:
Date Completed:
Year Covered:
Number of Connections:

Recorded Deliveries and Sales by Month (in Million Gallons)

| Month | Deliveries from NTMWD | Other Supplies | Sales by Category | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Residential | Commercial | Public | Industrial | Wholesale | Total |
| January | | | | | | | | |
| February | | | | | | | | |
| March | | | | | | | | |
| April | | | | | | | | |
| May | | | | | | | | |
| June | | | | | | | | |
| July | | | | | | | | |
| August | | | | | | | | |
| September | | | | | | | | |
| October | | | | | | | | |
| November | | | | | | | | |
| December | | | | | | | | |
| Total | | | | | | | | |

Unaccounted Water (Million Gallons):

| | |
|---|---|
| NTMWD Deliveries | (from table above) |
| Other Supplies | (from table above) |
| Total Sales | (from table above) |
| Estimated Fire Use | estimated from best available data |
| Estimated Line Flushing | estimated from best available data |
| Unaccounted Water | |
| Percent Unaccounted | |
| Goal for Percent Unaccounted | |

Per Capita Municipal Use (Gallons Per Person Per Day)
Municipal Use (MG) from table above (deliveries - industrial sales - municipal sales - other sales
Estimated Population please describe source of population estimate
Per Capita Use (gpcd)
5-Year Per Capita Goal
10-Year Per Capita Goal

Recorded Wholesale Sales by Month (in Million Gallons)

| Month | Caddo Basin SUD | North Farmersville WSC | Copeville SUD | Total Wholesale Sales |
|---|---|---|---|---|
| January | | | | |
| February | | | | |
| March | | | | |
| April | | | | |
| May | | | | |
| June | | | | |
| July | | | | |
| August | | | | |
| September | | | | |
| October | | | | |
| November | | | | |
| December | | | | |
| Total | | | | |

Information on Wholesale Customers

Caddo Basin SUD Population:
North Farmersville WSC Population:
Copeville SUD Population:

Unusal Circumstances (use additional sheets as necessary):

Progress in Implementation of Conservation Plan (use additioanl sheets as necessary):

Conservation Measures Planned for Next Year (use additional sheets as necessay):

Assistance Requested from North Texas Municipal District (use additional sheets as necessay):

Other (use additional sheets as necessay):

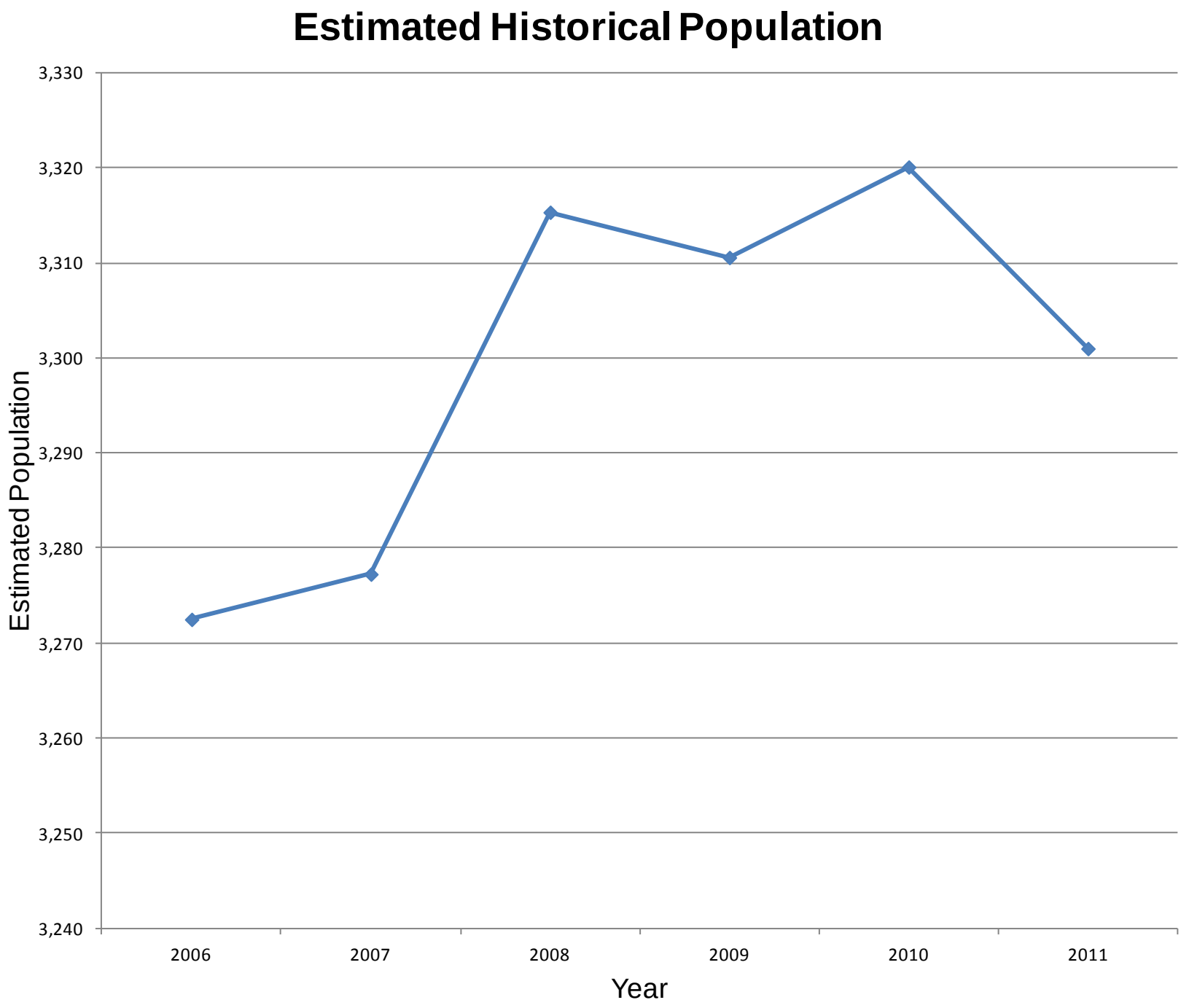
Historical Water Use Data for the City of Farmersville

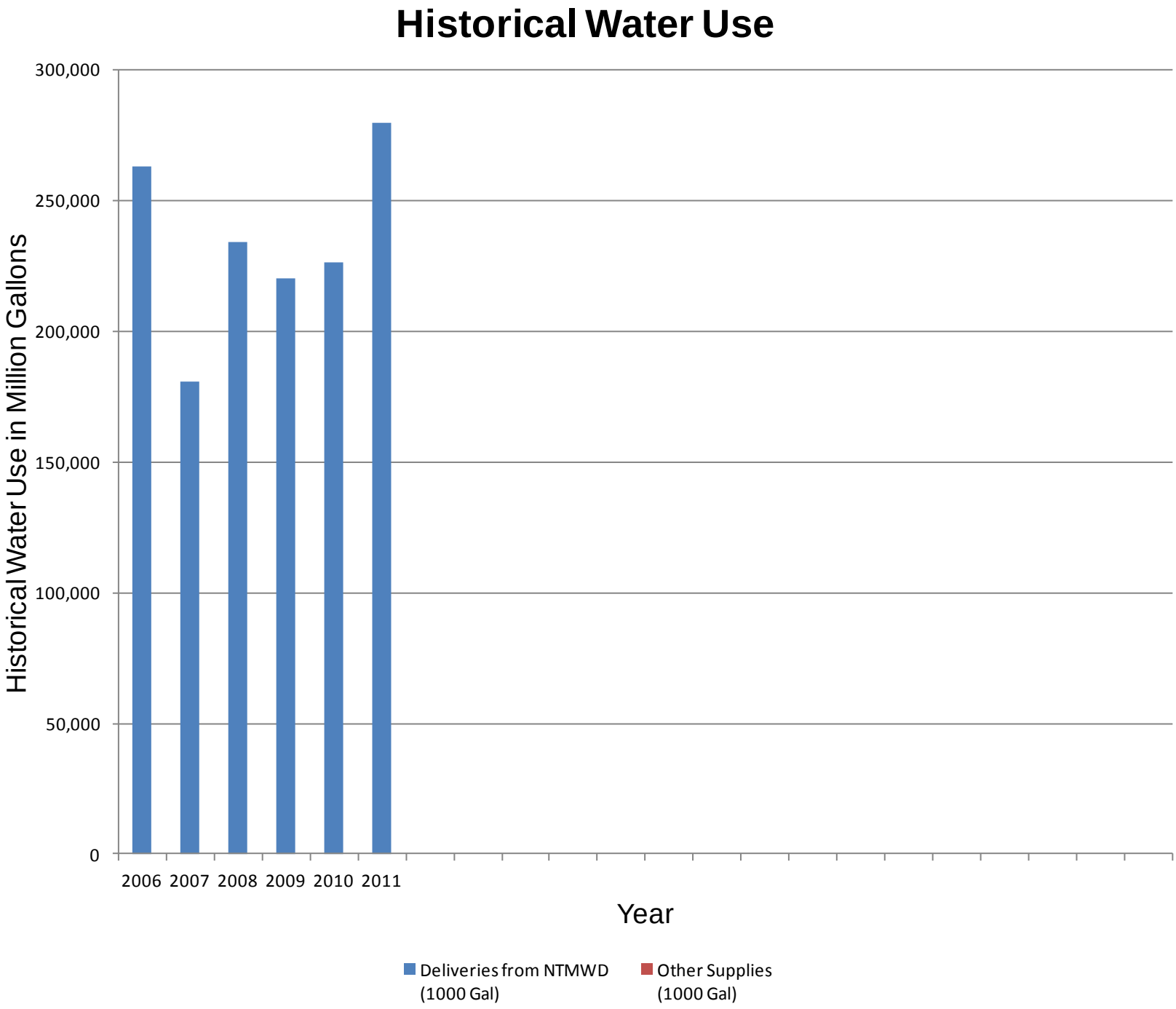
| Year | Connections | Estimated Population | Deliveries from NTMWD (1000 Gal) | Other Supplies (1000 Gal) | Sales by Category (1000 Gal) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Residential | Commercial | Public | Industrial | Wholesale | Total |
| 1990 | | | | | | | | | | |
| 1991 | | | | | | | | | | |
| 1992 | | | | | | | | | | |
| 1993 | | | | | | | | | | |
| 1994 | | | | | | | | | | |
| 1995 | | | | | | | | | | |
| 1996 | | | | | | | | | | |
| 1997 | | | | | | | | | | |
| 1998 | | | | | | | | | | |
| 1999 | | | | | | | | | | |
| 2000 | | | | | | | | | | |
| 2001 | | | | | | | | | | |
| 2002 | | | | | | | | | | |
| 2003 | | | | | | | | | | |
| 2004 | | | | | | | | | | |
| 2005 | | | | | | | | | | |
| 2006 | 1,375 | 3,273 | 263,011 | 0 | 97,365 | 32,050 | 1,326 | 8,575 | 98,931 | 238,247 |
| 2007 | 1,377 | 3,277 | 180,655 | 0 | 87,541 | 35,509 | 1,574 | 2,791 | 46,147 | 173,562 |
| 2008 | 1,393 | 3,315 | 234,346 | 0 | 98,658 | 30,243 | 2,860 | 4,931 | 76,551 | 213,243 |
| 2009 | 1,391 | 3,311 | 220,384 | 0 | 83,398 | 28,039 | 3,425 | 3,099 | 67,344 | 185,305 |
| 2010 | 1,395 | 3,320 | 226,130 | 0 | 82,152 | 27,620 | 4,655 | 6,491 | 92,214 | 213,132 |
| 2011 | 1,387 | 3,301 | 279,624 | 0 | 96,497 | 30,712 | 5,800 | 18,563 | 103,782 | 255,354 |

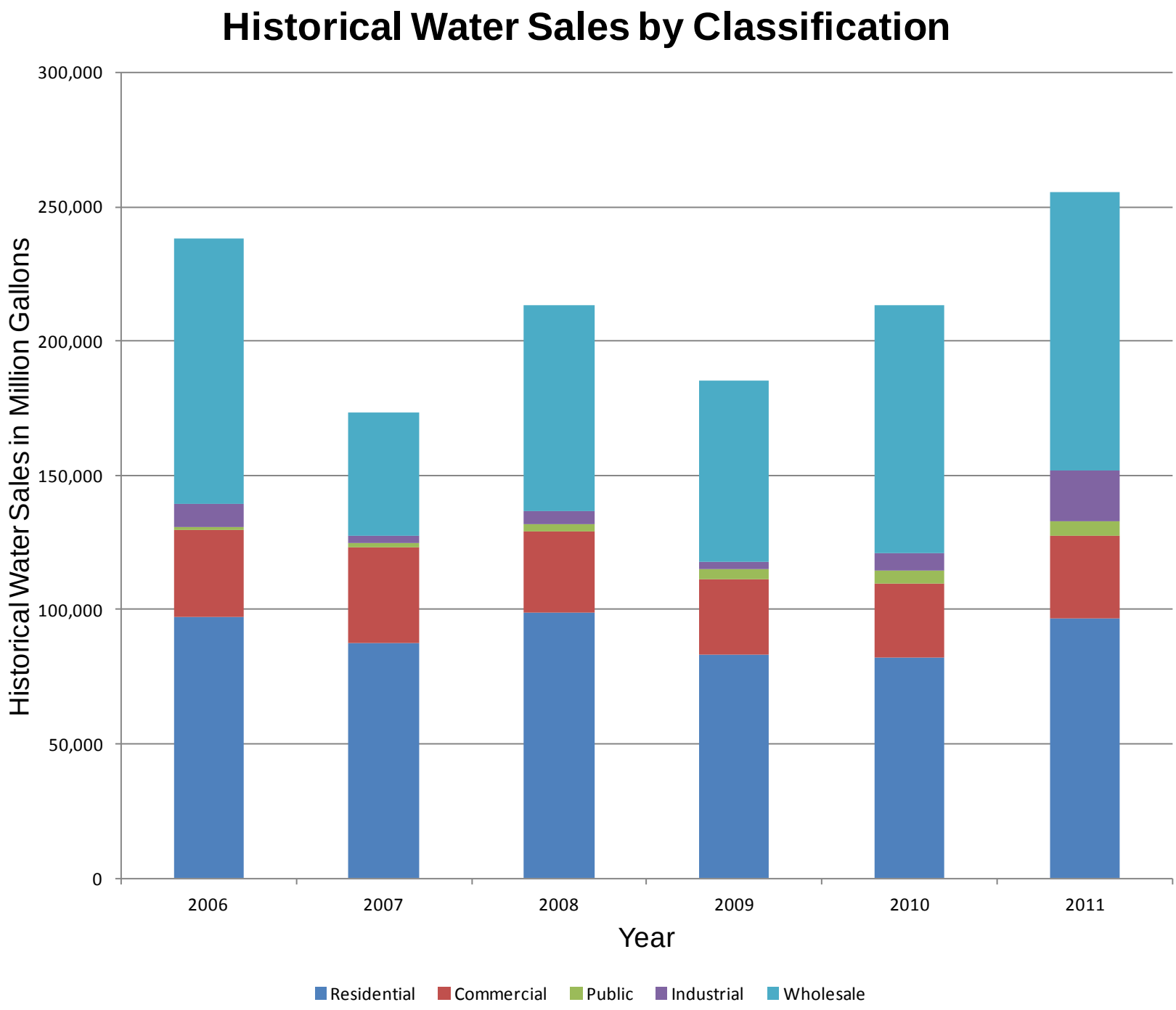
Historical Per Capita Use Data and Unaccounted Water for the City of Farmersville

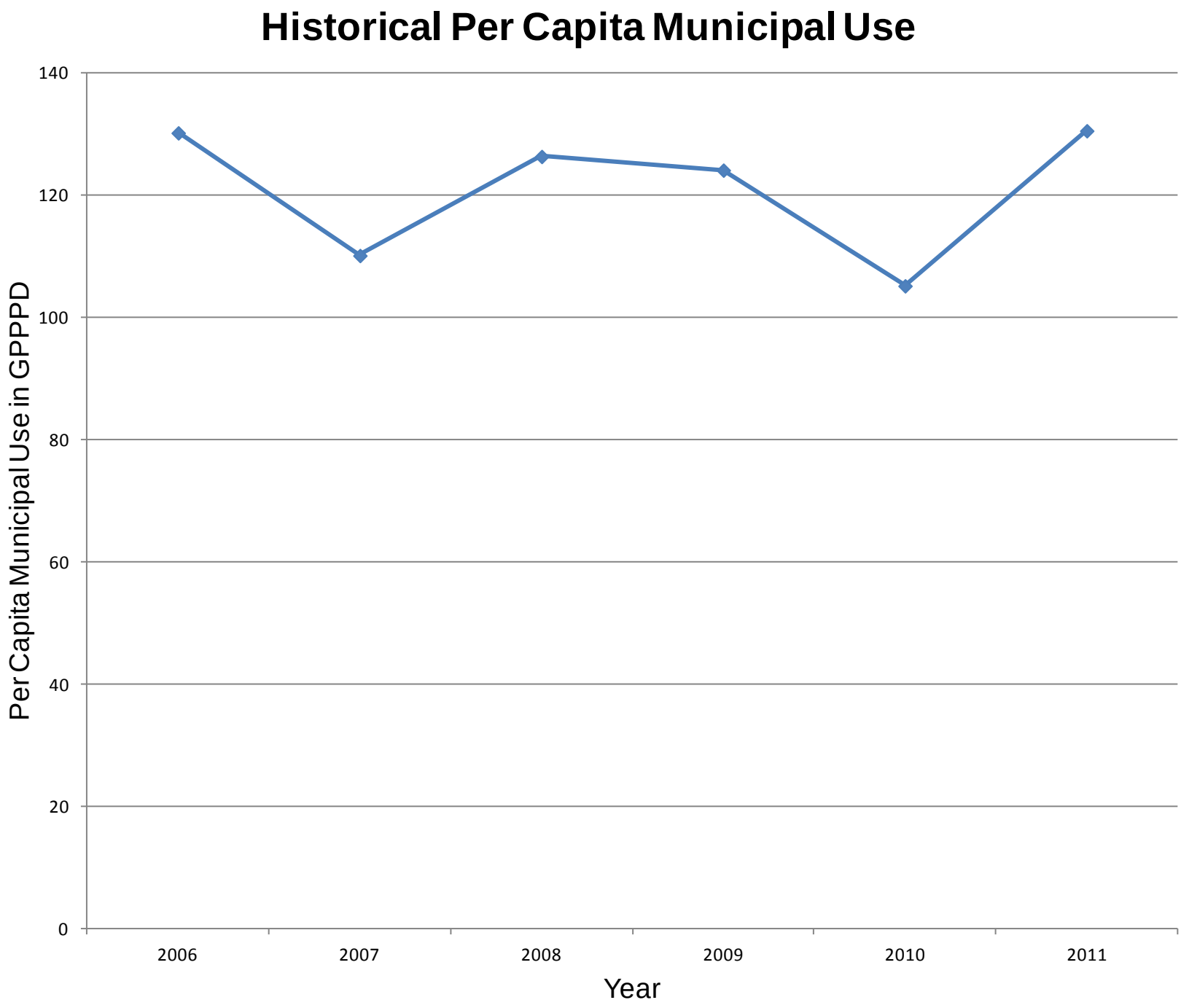
| Year | Estimated Population | In-City Municipal Use (1000 Gal) | Per Capita Municipal Use (1000 Gal) | Deliveries from NTMWD (1000 Gal) | Other Supplies (1000 Gal) | Total Metered Sales (1000 Gal) | Estimated Fire Use (1000 Gal) | Estimated Line Flushing (1000 Gal) | Unaccounted Water (1000 Gal) | Percent Unaccounted |
|---|---|---|---|---|---|---|---|---|---|---|
| 1990 | | | | | | | | | | |
| 1991 | | | | | | | | | | |
| 1992 | | | | | | | | | | |
| 1993 | | | | | | | | | | |
| 1994 | | | | | | | | | | |
| 1995 | | | | | | | | | | |
| 1996 | | | | | | | | | | |
| 1997 | | | | | | | | | | |
| 1998 | | | | | | | | | | |
| 1999 | | | | | | | | | | |
| 2000 | | | | | | | | | | |
| 2001 | | | | | | | | | | |
| 2002 | | | | | | | | | | |
| 2003 | | | | | | | | | | |
| 2004 | | | | | | | | | | |
| 2005 | | | | | | | | | | |
| 2006 | 3,273 | 155,505 | 130 | 263,011 | 0 | 238,247 | | | 24,764 | 9.42% |
| 2007 | 3,277 | 131,717 | 110 | 180,655 | 0 | 173,562 | | | 7,093 | 3.93% |
| 2008 | 3,315 | 152,864 | 126 | 234,346 | 0 | 213,243 | | | 21,103 | 9.01% |
| 2009 | 3,311 | 149,941 | 124 | 220,384 | 0 | 185,305 | | | 35,079 | 15.92% |
| 2010 | 3,320 | 127,425 | 105 | 226,130 | 0 | 213,132 | | | 12,998 | 5.75% |
| 2011 | 3,301 | 157,279 | 131 | 279,624 | 0 | 255,354 | | | 24,270 | 8.68% |

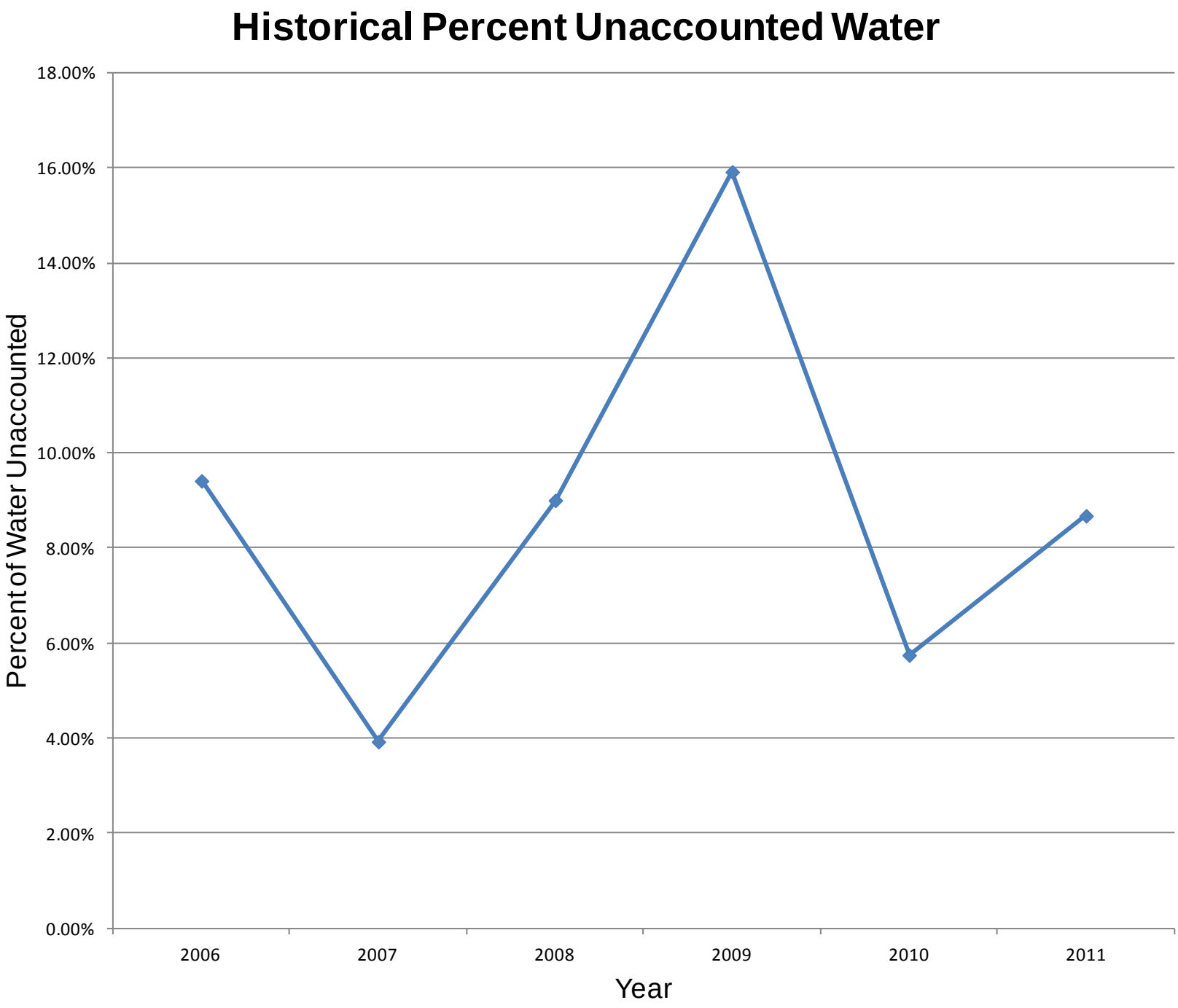
Note: In-city municipal use = total water supplied less sales to industry and wholesale sales


Estimated Historical Population
3,330
3,320
3,310
3,300
3,290
3,280
3,270
3,260
3,250
3,240
Estimated Population
2006
2007
2008
2009
2010
2011
Year


Historical Water Use
300,000
250,000
200,000
150,000
100,000
50,000
0
Historical Water Use in Million Gallons
2006
2007
2008
2009
2010
2011
Year
Deliveries from NTMWD (1000 Gal)
Other Supplies (1000 Gal)


Historical Water Sales by Classification
300,000
250,000
200,000
150,000
100,000
50,000
0
Historical Water Sales in Million Gallons
2006
2007
2008
2009
2010
2011
Year
Residential
Commercial
Public
Industrial
Wholesale


Historical Per Capita Municipal Use
Per Capita Municipal Use in GPPPD
140
120
100
80
60
40
20
0
2006
2007
2008
2009
2010
2011
Year


Historical Percent Unaccounted Water
18.00%
16.00%
14.00%
12.00%
10.00%
8.00%
6.00%
4.00%
2.00%
0.00%
Percent of Water Unaccounted
2006
2007
2008
2009
2010
2011
Year

Appendix E. Example Letters to Region C and Region D Water Planning Groups

Farmersville
DISCOVER A TEXAS TREASURE

14 February 2012

Mr. Jim Parks
Region C Water Planning Group
North Texas Municipal Water District
P.O. Box 2408
Wylie, TX 75098

Subject: City of Farmersville Water Management Plan

Dear Mr. Parks:

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.
Interim City Manager/Public Works Director
City of Farmersville
205 South Main Street
Farmersville, Texas 75442
Office Phone: 972-782-6151

Farmersville
DISCOVER A TEXAS TREASURE

14 February 2012

Mr. Bret McCoy
Region D Water Planning Group
700 County Road 3347
Omaha, TX 75571

Subject: City of Farmersville Water Management Plan

Dear Mr. McCoy:

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 D Water Planning Group in accordance with the Texas Water Development Board and Texas Commission on Environmental Quality rules.

Sincerely,

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

Appendix F. Water Conservation Implementation Report for the Texas Commission on Environmental Quality
(TCEQ Form 201549)

# Texas Commission on Environmental Quality

**Water Conservation Implementation Report**

This report must be completed by entities that are required to submit a water conservation plan to the TCEQ in accordance with Title 30 Texas Administrative Code, Chapter 288. Please complete this report and submit it to the TCEQ. If you need assistance in completing this form, please contact the Resource Protection Team in the Water Supply Division at (512) 239-4691.

| | | | |
|---|---|---|---|
| **Name:** | City of Farmersville | | |
| **Address:** | 205 South Main Street, Farmersville, Texas, 75442 | | |
| **Telephone Number:** | 972-782-6151 | **Fax:** | 972-782-6604 |
| **Form Completed By:** | Benjamin L. White | **Title:** | Public Works Director |
| **Signature:** | | **Date:** | 21 Jan 2012 |

## I. WATER USES

Indicate the type(s) of water uses (example: municipal, industrial, or agricultural).

Residential Use
Commercial Use
Industrial Use
Public Use
Wholesale Use

## II. WATER CONSERVATION MEASURES IMPLEMENTED

Provide the water conservation measures and the dates the measures were implemented.

Description of Water Conservation Measure:

Date Implemented:

Description of Water Conservation Measure

Date Implemented:

Description of Water Conservation Measure

Date Implemented:

Description of Water Conservation Measure

Date Implemented:

Description of Water Conservation Measure

Date Implemented:

Description of Water Conservation Measure

Date Implemented:

Description of Water Conservation Measure

Date Implemented:

Description of Water Conservation Measure

Date Implemented:

Description of Water Conservation Measure

Date Implemented:

Description of Water Conservation Measure

Date Implemented:

Description of Water Conservation Measure

Date Implemented:

## III. TARGETS

A. Provide the **specific and quantified five and ten-year targets** as listed in water conservation plan for previous planning period.

5-Year Specific/Quantified Target:
Date to achieve target:

10-Year Specific/Quantified Target:
Date to achieve target:

B. State if these targets in the water conservation plan are being met.

C. List the **actual amount of water saved.**

D. If the targets are not being met, provide an explanation as to why, including any progress on the targets.

**If you have any questions on how to fill out this form or about the Water Conservation program, please contact us at 512/239-4691.**

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512-239-3282.

Appendix G. Water Conservation Annual Report for the Texas Water Development Board
(Form WRD-265)

| 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** |
|---|---|---|---|
| **Five-year target** | 170 | 34 | 2012 |
| **Ten-year target** | 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 |

* 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 |
|---|---|---|---|---|
| ○ | ⦿ | ○ | ○ | ○ |

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** |
|---|---|---|
| **Brochures Distributed** | ☐ | |
| **Messages Provided on Utility Bills** | ☑ | |
| **Press Releases** | ☑ | |
| **TV Public Service Announcements** | ☐ | |
| **Radio Public Service Announcements** | ☐ | |
| **School Program** | ☐ | |
| **Displays and Presentations** | ☐ | |
| **Plant Tours** | ☐ | |
| **Other, please describe:** | | |

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** |
|---|---|---|---|
| **Toilets** | ☐ | ☐ | ☐ |
| **Showerheads** | ☐ | ☐ | ☐ |
| **Faucet Aerators** | ☐ | ☐ | ☐ |
| **Other, please describe:** | | | |

## 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 |
|---|---|---|---|---|
| **Production Meters** | 1,346 | 8 | 1 | 15 |
| **Meters larger than 1 ½"** | 37 | 3 | 1 | 0 |
| **Meters 1 ½" or smaller** | 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 |
|---|---|
| **A. PRODUCTION - Water treated or raw (minus Wholesale)** | 140,790,288 |
| **B. Water sold** | 112,873,255 |
| **C. Water used for line flushing** | |
| **D. Water used for fire department use** | |
| **E. Water used for flushing and storage tank cleaning** | |
| **F. Water used for any un-metered use (facility use, etc.)** | |
| **G. WATER LOSS* = A minus B,C,D,E,F** | 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:

| | |
|---|---|
| **Leaks** | ☑ |
| **Un-metered utility or city uses** | ☑ |
| **Master meter problems** | ☐ |
| **Customer meter problems** | ☑ |
| **Record and data problems** | ☐ |
| **Other, please describe:** | |

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:

| | |
|---|---|
| **Landscape Program** | ☐ |
| **Educational and Information Program** | ☐ |
| **School Education Program** | ☐ |
| **Rainwater Harvesting** | ☑ |
| **Leak Detection** | ☐ |
| **Water Loss** | ☑ |
| **Reuse** | ☐ |
| **Treated Effluent** | ☐ |
| **Other, please describe:** | |

**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?

| |
|---|
| |

**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 |
| **Total** | 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** | ☐ |
| **High Demand** | ☐ |
| **Capacity Issues** | ☐ |
| **Equipment Failure** | ☐ |
| **Other, please describe:** | |