

AN ORDINANCE OF THE TOWN OF PROSPER, TEXAS, AMENDING THE TITLE OF ARTICLE 13.05 OF CHAPTER 13, "UTILITIES," OF THE CODE OF ORDINANCES OF THE TOWN OF PROSPER, TEXAS, FROM "WATER CONSERVATION AND DROUGHT CONTINGENCY AND WATER EMERGENCY RESPONSE PLAN" TO "WATER CONSERVATION PLAN AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN"; AMENDING SECTION 13.05.001, "PLAN ADOPTED," OF ARTICLE 13.05, "WATER CONSERVATION PLAN AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN," OF CHAPTER 13, "UTILITIES," OF THE TOWN'S CODE OF ORDINANCES; AMENDING SECTION XVII, "WATER CONSERVATION AND ENFORCEMENT FEES," OF APPENDIX A OF THE TOWN'S CODE OF ORDINANCES; ADOPTING A WATER CONSERVATION PLAN AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN; PROVIDING FOR REPEALING, SAVINGS AND SEVERABILITY CLAUSES; PROVIDING FOR AN EFFECTIVE DATE OF THIS ORDINANCE; AND PROVIDING FOR THE PUBLICATION OF THE CAPTION HEREOF.

**WHEREAS**, the Town of Prosper, Texas (the "Town"), recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, the Town recognizes that due to natural limitations, drought conditions, system failures and other acts of God which may occur, the Town cannot guarantee an uninterrupted water supply for all purposes at all times; and

**WHEREAS**, the Texas Water Code and the regulations of the Texas Commission on Environmental Quality (the "Commission") require that the Town adopt a Drought Contingency Plan; and

**WHEREAS**, the Town has determined an urgent need in the best interests of the public to adopt a Drought Contingency Plan; and

**WHEREAS**, pursuant to Chapters 51 and 54 of the Texas Local Government Code, the Town is authorized to adopt any such ordinances necessary to preserve and conserve its water resources; and

**WHEREAS**, the Town Council of the Town of Prosper, Texas ("Town Council"), desires to adopt an updated Water Conservation Plan and Water Resource and Emergency Management Plan for the Town of Prosper as official Town policy for water conservation; and

**WHEREAS**, the Town Council has investigated and determined that it will be advantageous and beneficial to the citizens of Prosper and will protect the public health, safety and welfare to adopt a drought contingency plan.

**NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF PROSPER, TEXAS, THAT:**

## SECTION 1

The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein.

## SECTION 2

From and after the effective date of this Ordinance, the title of Article 13.05, "Water Conservation and Drought Contingency and Water Emergency Response Plan," of Chapter 13, "Utilities," of the Code of Ordinances of the Town of Prosper, Texas, is hereby amended to read "Water Conservation Plan and Water Resource and Emergency Management Plan."

## SECTION 2

From and after the effective date of this Ordinance, Section 13.05.01, "Plan Adopted," of Article 13.05, "Water Conservation Plan and Water Resource and Emergency Management Plan" of Chapter 13, "Utilities," of the Town's Code of Ordinances is amended to read as follows:

### **"Sec. 13.05.001 Plan Adopted**

The Town Council hereby approves and adopts for the town, its citizens and water customers the new Water Conservation Plan and Water Resource and Emergency Management Plan (the "Plan"), attached to this Ordinance 15-27 as Exhibit A and incorporated herein for all purposes. A copy of this Ordinance and the Plan are available in the Town Secretary's Office."

## SECTION 3

The Town Council hereby approves and adopts the Water Conservation Plan and Water Resource and Emergency Management Plan (the "Plan") as modified for the Town of Prosper, attached hereto as Exhibit A, as if recited verbatim herein. The Town commits to implement the requirements and procedures set forth in the adopted Plan.

## SECTION 4

From and after the effective date of this Ordinance, Section XVII, "Water Conservation and Enforcement Fees," of Appendix A to the Town's Code of Ordinances is amended to read as follows:

### **"Sec. XVII Water Conservation and Enforcement Fees**

**Administrative Fees.** Administrative fees for violations to the Town's Water Conservation Plan and Water Resource and Emergency Management Plan shall be added to water account holders regular monthly Town utility bill as follows:

First Offense	Courtesy Tag Warning
Second Offense	Certified Letter notifying of violation
Third Offense and Subsequent offenses	\$100
Fourth Offense and Subsequent offenses	\$300

Unpaid assessed administrative fees related to violations of water use restrictions under the Town Plan shall incur late payment penalties and may result in termination of water service.”

**SECTION 5**

All provisions of any ordinance in conflict with this Ordinance are hereby repealed to the extent they are in conflict; but such repeal shall not abate any pending prosecution for violation of the repealed ordinance, nor shall the repeal prevent a prosecution from being commenced for any violation if occurring prior to the repeal of the ordinance. Any remaining portions of said ordinances shall remain in full force and effect.

**SECTION 6**

If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held to be unconstitutional or invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The Town of Prosper hereby declares that it would have passed this Ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, and phrases be declared unconstitutional.

**SECTION 7**

The Town Manger or his designee is hereby directed to file a copy of the Plan and this Ordinance with the Commission in accordance with Title 30, Chapter 288 of the Texas Administrative Code, as amended.

**SECTION 8**

Any person, firm, corporation or business entity violating this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction therefore, shall be fined a sum not exceeding Two Thousand Dollars (\$2,000.00), and each and every day that such violation continues shall be considered a separate offense; provided, however, that such penal provision shall not preclude a suit to enjoin such violation. The Town of Prosper retains all legal rights and remedies available to it pursuant to local, state and federal law.

**SECTION 9**

This Ordinance shall take effect and be in full force from and after its passage and publication, as provided by the Revised Civil Statutes of the State of Texas and the Home Rule Charter of the Town of Prosper, Texas.

**DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF PROSPER, TEXAS ON THIS 12TH DAY OF MAY, 2015.**

**APPROVED:**

  
\_\_\_\_\_  
**Ray Smith, Mayor**

**ATTEST:**

A handwritten signature in blue ink, appearing to read "Robyn Battle", written over a horizontal line.

**Robyn Battle, Town Secretary**

**APPROVED AS TO FORM AND LEGALITY:**

A handwritten signature in blue ink, appearing to read "Terrence S. Welch", written over a horizontal line.

**Terrence S. Welch, Town Attorney**



**WATER  
CONSERVATION  
PLAN AND WATER  
RESOURCE AND  
EMERGENCY  
MANAGEMENT  
PLAN**

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**May 2015**

**Prepared by:**

**Frank E. Jaromin, P.E.  
Prosper Public Works  
Prosper Texas  
972.347.9969**

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Frank E. Jaromin, P.E.

## FORWARD

The following Water Conservation Plan and Water Resource and Emergency Management Plan were both prepared by Freese and Nichols for the North Texas Municipal Water District (NTMWD). They are intended to be used as a guide by NTMWD Member Cities and Customers as they develop their own plans. The model plans were prepared pursuant to Texas Commission on Environmental Quality rules. Some material is based on the existing water conservation plans listed in Appendix A. To develop a regional approach, the conservation plans for the City of Fort Worth and the City of Dallas were consulted.

Questions regarding this model water conservation plan and water resource and emergency management plan should be addressed to the following:

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North Texas Municipal  
Water District  
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[dhickey@ntmwd.com](mailto:dhickey@ntmwd.com)

The model water conservation plan and water resource and emergency management plan are based on the Texas Administrative Code in effect on August 31, 2007. The Texas Commission on Environmental Quality (TCEQ) is currently preparing additional regulations in compliance with the mandates of Senate Bill 3 and House Bill 4 enacted in 2007 by the 80<sup>th</sup> Texas Legislature. The draft regulations have been considered in the preparation of this plan. The following items are presented in the draft regulations and are not currently in the regulations:

- A definition for “best management practices” will be added.
- A copy of the plan must be submitted to the Executive Administrator of the Texas Water Development Board.
- An annual progress report will be required to be submitted to the Texas Water Development Board. (The annual report may be in a different format than the annual report included in Appendix I).
- Requirement that water suppliers providing service to 3,300 or more connections must prepare a water conservation plan.
- Enforcement authority in relation to violations of the rules regulating water conservation plans and annual report is provided to the Texas Water Development Board.

None of the proposed adjustments will cause this model plan to be obsolete. The most current annual report form should be obtained from TCEQ when preparing the annual report (Appendix I) to submit to the TCEQ. A copy of the annual report should be sent to the Texas Water Development Board as well as to the TCEQ.

## **CHAPTERS**

- I. WATER CONSERVATION PLAN**
- II. WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN**



# **CHAPTER I**

## **WATER CONSERVATION PLAN TOWN OF PROSPER**

## TABLE OF CONTENTS

1.	INTRODUCTION AND OBJECTIVES .....	1-1
2.	DEFINITIONS.....	2-1
3.	REGULATORY BASIS FOR WATER CONSERVATION PLAN.....	3-1
3.1	TCEQ Rules Governing Conservation Plans .....	3-1
3.2	Guidance and Methodology for Reporting on Water Conservation and Water Use.....	3-3
4.	WATER UTILITY PROFILE .....	4-1
5.	SPECIFICATION OF WATER CONSERVATION GOALS.....	5-1
6.	BASIC WATER CONSERVATION STRATEGIES.....	6-1
6.1	Metering, Water Use Records, Control of Water Loss, and Leak Detection and Repair.....	6-1
6.1.1	Accurate Metering of Treated Water Deliveries from NTMWD.....	6-1
6.1.2	Metering of Customer and Public Uses and Meter Testing, Repair, and Replacement .....	6-1
6.1.3	Determination and Control of Water Loss.....	6-1
6.1.4	Leak Detection and Repair.....	6-2
6.1.5	Record Management System.....	6-2
6.2	Continuing Public Education and Information Campaign .....	6-3
6.3	NTMWD System Operation Plan .....	6-3
6.4	Coordination with Regional Water Planning Group and NTMWD.....	6-4
6.5	Requirement for Water Conservation Plans by Wholesale Customers .....	6-4
7.	ENHANCED WATER CONSERVATION STRATEGIES.....	7-1
7.1	Water Rate Structure.....	7-1
7.2	Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures.....	7-2
7.3	Reuse and Recycling of Wastewater .....	7-2
7.4	Interactive Weather Stations / Water My Yard Program.....	7-2
7.5	Compulsory Landscape and Water Management Measures .....	7-3
7.6	Additional Water Conservation Measures (Not Required) .....	7-4
7.7	Monitoring of Effectiveness and Efficiency - Annual Water Conservation Report .....	7-5
7.8	Water Conservation Implementation Report .....	7-5
8.	IMPLEMENTATION AND ENFORCEMENT OF THE WATER CONSERVATION PLAN.....	8-1
9.	REVIEW AND UPDATE OF WATER CONSERVATION PLAN .....	9-1

## LIST OF TABLES

Table 5-1	Five-Year and Ten-Year Per Capita Water Use Goals (gpcd) .....	5-2
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## APPENDICES

- APPENDIX A** List of References
- APPENDIX B** Texas Commission on Environmental Quality Rules on Municipal Water Conservation Plans
- Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule §288.1 – Definitions (Page B-1)
  - Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule §288.2 – Water Conservation Plans for Municipal Uses by Public Water Suppliers (Page B-4)
- APPENDIX C** TCEQ Water Utility Profile
- APPENDIX D** NTMWD Member City and Customer Annual Water Conservation Report
- APPENDIX E** Considerations for Landscape Water Management Regulations
- APPENDIX F** Letters to Region C and Region D Water Planning Groups
- APPENDIX G** Adoption of Water Conservation Plan
- Municipal Ordinance Adopting Water Conservation Plan
- APPENDIX H** Illegal Water Connections and Theft of Water
- Municipal Ordinance Pertaining to Illegal Water Connections and Theft of Water
- APPENDIX I** Not Included
- APPENDIX J** TCEQ Water Conservation Implementation Report

## **1. INTRODUCTION AND OBJECTIVES**

Water supply has always been a key issue in the development of Texas. In recent years, the increasing population and economic development of North Central Texas have led to growing demands for water supplies. At the same time, local and less expensive sources of water supply are largely already developed. Additional supplies to meet future demands will be expensive and difficult to secure. Severe drought conditions in recent years have highlighted the importance of efficient use of our existing supplies to make them last as long as possible. This will delay the need for new supplies, minimize the environmental impacts associated with developing new supplies, and delay the high cost of additional water supply development.

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation and drought contingency plans for wholesale water suppliers<sup>2</sup>. The TCEQ guidelines and requirements for wholesale suppliers are included in Appendix B. The North Texas Municipal Water District (NTMWD) has developed this model water conservation plan pursuant to TCEQ guidelines and requirements. The best management practices established by the Water Conservation Implementation Task Force<sup>3</sup> were also considered in the development of the water conservation measures.

This model water conservation plan includes measures that are intended to result in ongoing, long-term water savings. This plan replaces the previous plans dated August 2004, April 2006 and March 2008<sup>4</sup>.

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 efficiency in the use of water.
- Encourage efficient outdoor water use.
- To document the level of recycling and reuse in the water supply.
- To extend the life of current water supplies by reducing the rate of growth in demand.

The water conservation plan presented in this document is a model water conservation plan intended for adoption by the NTMWD Member Cities and Customers. In order to adopt this plan, each Member City and Customer will need to do the following:

- Complete the water utility profile (provided in Appendix C).
- Complete the annual water conservation implementation report (in Appendix J).
- Set five-year and ten-year goals for per capita water use.
- Adopt ordinance(s) or regulation(s) approving the model plan.

The water utility profile, goals, and ordinance(s) or regulations should be provided to NTMWD in draft form for review and comments. Final adopted versions should also be provided to NTMWD, as well as TCEQ. This model plan includes all of the elements required by TCEQ. Some elements of this model plan go beyond TCEQ requirements. Any water supplier wishing to adjust elements of the plan should coordinate with NTMWD.

<sup>1</sup> Superscripted numbers match references listed in Appendix A.

## **2. DEFINITIONS**

1. **ATHLETIC FIELD** means a public sports competition field, the essential feature of which is turf grass, used primarily for organized sports practice, competition or exhibition events for schools, professional sports, or sanctioned league play.
2. **COOL SEASON GRASSES** are varieties of turf grass that grow best in cool climates primarily in northern and central regions of the U.S. Cool season grasses include perennial and annual rye grass, Kentucky blue grass and fescues.
3. **CUSTOMERS** include those entities to whom NTMWD provides water on a customer basis that are not members of NTMWD.
4. **EVAPOTRANSPIRATION** abbreviated as ET represents the amount of water lost from plant material to evaporation and transpiration. The amount of ET can be estimated based on the temperature, wind, and relative humidity.
5. **ET/SMART CONTROLLERS** are irrigation controllers that adjust their schedule and run times based on weather (ET) data. These controllers are designed to replace the amount of water lost to evapotranspiration.
6. **EXECUTIVE DIRECTOR** means the Executive Director of the North Texas Municipal Water District and includes a person the Director has designated to administer or perform any task, duty, function, role, or action related to this plan or on behalf of the Executive Director.
7. **INSTITUTIONAL USE** means the use of water by an establishment dedicated to public service, such as a school, university, church, hospital, nursing home, prison or government facility. All facilities dedicated to public service are considered institutional regardless of ownership.
8. **MEMBER CITIES** include the cities of Allen, Farmersville, Forney, Frisco, Garland, McKinney, Mesquite, Plano, Princeton, Richardson, Rockwall, Royce City, and Wylie, Texas.
9. **MULTI-FAMILY PROPERTY** means a property containing five or more dwelling units.

10. MUNICIPAL USE means the use of potable water provided by a public water supplier as well as the use of treated wastewater effluent for residential, commercial, industrial, agricultural, institutional, and wholesale uses.
11. RECLAIMED WATER means reclaimed municipal wastewater that has been treated to a quality that meets or exceeds the minimum standards of the 30 Texas Administrative Code, Chapter 210 and is used for lawn irrigation, industry, or other non-potable purposes.
12. REGULATED IRRIGATION PROPERTY means any property that uses 1 million gallons of water or more for irrigation purposes in a single calendar year or is greater than 1 acre in size.
13. RESIDENTIAL GALLONS PER CAPITA PER DAY (Residential GPCD) the total gallons sold for residential use by a public water supplier divided by the residential population served and then divided by the number of days in the year.
14. TOTAL GALLONS PER CAPITA PER DAY (Total GPCD) The total amount of water diverted and/or pumped for potable use divided by the total permanent population divided by the days of the year. Diversion volumes of reuse as defined in TAC 288.1 shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals.
15. WATER CONSERVATION PLAN means this water conservation plan approved and adopted by the NTMWD Board of Directors on \_\_\_\_\_, 20\_\_.

### **3. REGULATORY BASIS FOR WATER CONSERVATION PLAN**

#### **3.1 TCEQ Rules Governing Conservation Plans**

The TCEQ rules governing development of water conservation plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code, which is included in Appendix B. For the purpose of these rules, a water conservation plan is defined as “A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water<sup>2</sup>.” The elements in the TCEQ water conservation rules covered in this conservation plan are listed below.

##### Minimum Conservation Plan Requirements

The minimum requirements in the Texas Administrative Code for Water Conservation Plans for Public Water Suppliers are covered in this report as follows:

- 288.2(a)(1)(A) – Utility Profile – Section 4 and Appendix C
- 288.2(a)(1)(B) – Specification of Goals – Section 5
- 288.2(a)(1)(C) – Specific, Quantified Goals – Section 5
- 288.2(a)(1)(D) – Accurate Metering – Section 6.1.1
- 288.2(a)(1)(E) – Universal Metering – Section 6.1.2
- 288.2(a)(1)(F) – Determination and Control of Water Loss – Section 6.1.3
- 288.2(a)(1)(G) – Public Education and Information Program – Section 6.2
- 288.2(a)(1)(H) – Non-Promotional Water Rate Structure – Section 7.1
- 288.2(a)(1)(I) – Reservoir System Operation Plan – Section 6.3
- 288.2(a)(1)(J) – Means of Implementation and Enforcement – Section 8
- 288.2(a)(1)(K) – Coordination with Regional Water Planning Group – Section 6.4 and Appendix F
- 288.2(c) – Review and Update of Plan – Section 9

Conservation Additional Requirements (Population over 5,000)

- The Texas Administrative Code includes additional requirements for water conservation plans for drinking water supplies serving a population over 5,000
- 288.2(a)(2)(A) – Leak Detection, Repair, and Water Loss Accounting – Sections 6.1.4
- 288.2(a)(2)(B) – Record Management System – Section 6.1.5
- 288.2(a)(2)(C) – Requirement for Water Conservation Plans by Wholesale Customers – Section 6.6

Additional Conservation Strategies

The TCEQ requires that a water conservation implementation report be completed and submitted on an annual basis. The template for this report is included in Appendix J.

In addition to the TCEQ required water conservation strategies, the NTMWD also requires the following strategy to be included in the Member City and Customer plans:

- 288.2(a)(3)(F) – Considerations for Landscape Water Management Regulations – Section 7.5 and Appendix E

TCEQ rules also include optional, but not required, conservation may be adopted by suppliers. The NTMWD recommends that the following strategies be included in the Member City and Customer water conservation plans:

- 288.2(a)(3)(A) – Conservation Oriented Water Rates – Section 7.1
- 288.2(a)(3)(B) – Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures – Section 7.2
- 288.2(a)(3)(C) – Replacement or Retrofit of Water-Conserving Plumbing Fixtures – Section 7.6
- 288.2(a)(3)(D) – Reuse and Recycling of Wastewater – Section 7.3
- 288.2(a)(3)(F) – Considerations for Landscape Water Management Regulations – Section 7.4, 7.5 and Appendix E
- 288.2(a)(3)(G) – Monitoring Method – Section 7.7
- 288.2(a)(3)(H) – Additional Conservation Ordinance Provisions – Section 7.6

### **3.2 Guidance and Methodology for Reporting on Water Conservation and Water Use**

In addition to TCEQ rules regarding water conservation, this plan also incorporates elements of the Guidance and Methodology for Reporting on Water Conservation and Water Use developed by TWDB and TCEQ, in consultation with the Water Conservation Advisory Council (the "Guidance"). The Guidance was developed in response to a charge by the 82<sup>nd</sup> Texas Legislature to develop water use and calculation methodology and guidance for preparation of water use reports and water conservation plans in accordance with TCEQ rules.

#### **4. WATER UTILITY PROFILE**

Appendix C to this model water conservation plan is a template water utility profile based on the format recommended by the TCEQ. In adopting this model water conservation plan, each Member City and Customer will provide a draft water utility profile to NTMWD for review and comment. A final water utility profile will be provided to NTMWD.

## **5. SPECIFICATION OF WATER CONSERVATION GOALS**

TCEQ rules require the adoption of specific water conservation goals for a water conservation plan. As part of plan adoption, each Member City and Customer must develop 5-year and 10-year goals for per capita municipal use. These goals should be submitted to NTMWD in draft form for review. The goals for this water conservation plan include the following:

- Maintain the total and residential per capita water use below the specified amount in gallons per capita per day in a dry year, as shown in the completed Table 5-1.
- Maintain the water loss percentage in the system below 12 percent annually in 2013 and subsequent years, as discussed in Section 6.1.3. (The 12 percent goal for water loss is recommended but is not required. Systems with long distances between customers may adopt a higher percent water loss goal.)
- Implement and maintain a program of universal metering and meter replacement and repair, as discussed in Section 6.1.2.
- Increase efficient water usage through a water conservation ordinance, order or resolution as discussed in Section 7.5 and Appendix E. (This ordinance is required by the NTMWD.)
- Decrease waste in lawn irrigation by implementation and enforcement of landscape water management regulations, as discussed in Section 7.6. (These landscape water management regulations are recommended but are not required.)
- Raise public awareness of water conservation and encourage responsible public behavior by a public education and information program, as discussed in Section 6.2.
- Develop a system specific strategy to conserve water during peak demands, thereby reducing the peak use.

**Table 5-1 Five-Year and Ten-Year Per Capita Water Use Goals (gpcd)**

<b>Description</b>	<b>Current Average (gpcd)</b>	<b>5-Year Goal (gpcd)</b>	<b>10-Year Goal (gpcd)</b>
Current 5-Year Average Total Per Capita Use with Credit for Reuse	161.42	170	155
Current 5-Year Average Residential Per Capita Use	119.14	115	110
Water Loss (GPCD) <sup>1</sup>	9.6	9.5	9.0
Water Loss (Percentage) <sup>2</sup>	5.94	5	5
Expected Reduction due to Low-Flow Plumbing Fixtures	6	7	8
Projected Reduction Due to Elements in this Plan	10	12	13
<b>Water Conservation Goals (with credit for reuse)</b>	<b>161.42</b>	<b>170</b>	<b>155</b>

1. Water Loss GPCD = (Total Water Loss ÷ Permanent Population) ÷ 365

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

## **6. BASIC WATER CONSERVATION STRATEGIES**

### **6.1 Metering, Water Use Records, Control of Water Loss, and Leak Detection and Repair**

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 real losses.

#### **6.1.1 Accurate Metering of Treated Water Deliveries from NTMWD**

Water deliveries from NTMWD are metered by NTMWD using meters with accuracy of  $\pm 2\%$ . These meters are calibrated on an annual basis by NTMWD to maintain the required accuracy.

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

The provision of water to all customers, including public and governmental users, should be metered. In many cases, Member Cities and Customers already meter retail and wholesale water users. For those Member Cities and Customers who do not currently meter all internal water uses, as well as all subsequent users, these entities should implement a program to meter all water uses within the next three years.

Most Member Cities and Customers test and replace their customer meters on a regular basis. All customer meters should be replaced on a minimum of a 15-year cycle. Those who do not currently have a meter testing and replacement program should implement such a program over the next three years.

#### **6.1.3 Determination and Control of Water Loss**

Total water loss is the difference between water delivered to Member Cities and Customers from NTMWD (and other supplies, if applicable) and metered water sales to customers plus authorized for use but not sold. (Authorized for use but not sold would include use for fire fighting, releases for flushing of lines, uses associated with new construction, etc.) Total water loss includes three categories:

- Apparent Losses – including inaccuracies in customer meters. (Customer meters tend to run more slowly as they age and under-report actual use.) Losses due to

illegal connections and theft. (Included in Appendix H.) Accounts which are being used but have not yet been added to the billing system.

- Real Losses – includes physical losses from the system or mains, reported breaks and leaks, storage overflow.
- Unidentified Water Losses – (System Input - Total Authorized - Apparent Losses - Real Losses)

Measures to control water loss should be part of the routine operations of Member Cities and Customers. Maintenance crews and personnel should look for and report evidence of leaks in the water distribution system. A leak detection and repair program is described in Section 6.1.4 below. Meter readers should watch for and report signs of illegal connections, so they can be quickly addressed.

Total water loss should be calculated in accordance with the provisions of Appendix J. With the measures described in this plan, Member Cities and Customers should maintain water loss percentage below 12 percent in 2013 and subsequent years. If total water loss exceeds this goal, the Member City or Customer should implement a more intensive audit to determine the source(s) of and reduce the water loss. The annual conservation report described below is the primary tool that should be used to monitor water loss.

#### **6.1.4 Leak Detection and Repair**

As described above, town crews and personnel should look for and report evidence of leaks in the water distribution system. Areas of the water distribution system in which numerous leaks and line breaks occur should be targeted for replacement as funds are available.

#### **6.1.5 Record Management System**

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), a record management system should allow for the separation of water sales and uses into residential, commercial, public/institutional, and industrial categories. This information should be included in an annual water conservation report, as described in Section 7.7 below. Those entities whose record management systems do not currently comply with this requirement should move to implement such a system within the next five years.

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

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

- Utilize the “Water IQ: Know Your Water” and other public education materials produced by the NTMWD.
- Insert water conservation information with water bills. Inserts will include material developed by Member Cities’ and Customers’ staff and material obtained from the TWDB, the TCEQ, and other sources.
- Encourage local media coverage of water conservation issues and the importance of water conservation.
- Notify local organizations, schools, and civic groups that Member City or Customer staff and staff of the NTMWD are available to make presentations on the importance of water conservation and ways to save water.
- Promote the *Texas Smartscape* web site ([www.txsmartscape.com](http://www.txsmartscape.com)) and provide water conservation brochures and other water conservation materials available to the public at Town Hall and other public places.
- Make information on water conservation available on its website (if applicable) 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 web sites and other resources.
- NTMWD is an EPA Water Sense Partner and participates in the EPA Water Sense sponsored “Fix a Leak Week.” NTMWD encourages all member cities and customers to become EPA Water Sense Partners.
- Utilize the Water My Yard website and encourage customers to sign-up to receive weekly watering advice.

## **6.3 NTMWD System Operation Plan**

Member Cities and Customers of NTMWD purchase treated water from NTMWD and do not have surface water supplies for which to implement a system operation plan. NTMWD operates multiple sources of water supply as a system. The operation of the reservoir system is intended to optimize the use of the District’s sources (within the constraints of existing water rights) while

minimizing energy use cost for pumping, maintaining water quality, minimizing potential impacts on recreational users of the reservoirs and fish and wildlife.

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

Appendix F includes a letter sent to the Chair of the Region C and Region D water planning group with this model water conservation plan. Each Member City and Customer will send a copy of their draft ordinance(s) or regulation(s) implementing the plan and their water utility profile to NTMWD for review and comment. The adopted ordinance(s) or regulation(s) and the adopted water utility profile will be sent to the Chair of the appropriate Water Planning Group and to NTMWD.

#### **6.5 Requirement for Water Conservation Plans by Wholesale Customers**

Every contract for the wholesale sale of water by Member Cities and/or Customers that is entered into, renewed, or extended after the adoption of this water conservation plan will 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. The requirement will also extend to each successive wholesale customer in the resale of the water.

## **7. ENHANCED WATER CONSERVATION STRATEGIES**

### **7.1 Water Rate Structure**

Member Cities and Customers should adopt, if they have not already done so, an increasing block rate water structure that is intended to encourage water conservation and discourage excessive use and waste of water upon completion of their next rate study or within five years. An example water rate structure is as follows:

#### Residential Rates

1. Monthly minimum charge. This can (but does not have to) include up to 2,000 gallons water use with no additional charge.
2. Base charge per 1,000 gallons up to the approximate average residential use.
3. 2<sup>nd</sup> tier (from the average to 2 times the approximate average) at 1.25 to 2.0 times the base charge.
4. 3<sup>rd</sup> tier (above 2 times the approximate average) at 1.25 to 2.0 times the 2<sup>nd</sup> tier.
5. Additional tiers with further increases if desired.
6. The residential rate can also include a lower tier for basic household use up to 4,000 gallons per month or a determined basic use.

#### Commercial/Industrial Rates

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

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

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

## **7.3 Reuse and Recycling of Wastewater**

Most Member Cities and Customers do not own and operate their own wastewater treatment plants. Their wastewater is treated by NTMWD. NTMWD currently has the largest wastewater reuse program in the state. NTMWD has water rights allowing reuse of up to 71,882 acre-feet per year of this treated wastewater through Lavon Lake for municipal purposes. In addition, NTMWD has also developed the East Fork Raw Water Supply Project which can divert up to 157,393 acre-feet per year based on treated wastewater discharges by the NTMWD. When fully developed, these two reuse projects will provide up to 44 percent of the NTMWD's currently permitted water supplies. NTMWD also provides treated effluent from its wastewater treatment plants available for direct reuse for landscape irrigation and industrial use.

Those Member Cities and Customers who own and operate their own wastewater treatment plants should move toward reusing treated effluent for irrigation purposes at their plant site over the next three years. These entities should also seek other alternatives for reuse of recycled wastewater effluent.

## **7.4 Interactive Weather Stations / Water My Yard Program**

NTMWD has developed the Water My Yard program to install weather stations throughout its service area to provide consumers with a weekly e-mail and information through the Water My Yard website in determining an adequate amount of supplemental water that is needed to maintain healthy grass in specific locations. This service represents the largest network of weather stations providing ET-based irrigation recommendations in the State of Texas, and provides the public advanced information regarding outdoor irrigation needs, thereby reducing water use. Through a series of selections on the type of irrigation system a consumer has, a weekly email is provided that will determine how long (in minutes) that an irrigation system

needs to run based on the past seven days of weather. This recommendation provides the actual amount of supplemental water that is required for a healthy lawn based on research of the Texas A&M Agrilife Extension Service and proven technologies. This innovative program has been available to those within the NTMWD service area since May 2013.

## **7.5 Compulsory Landscape and Water Management Measures**

The following landscape water management measures are required by the NTMWD for this plan. These measures represent minimum measures to be implemented and enforced in order to irrigate the landscape appropriately, and are to remain in effect on a permanent basis unless water resource management stages are declared.

### **1. Landscape Water Management Measures**

- Limit landscape watering with sprinklers or irrigation systems at each service address to no more than two days per week (April 1 – October 31), with education that less than twice per week is usually adequate. Additional watering of landscape may be provided by hand-held hose with shutoff nozzle, use of dedicated irrigation drip zones, and/or soaker hose provided no runoff occurs.
- Limit landscape watering with sprinklers or irrigation systems at each service address to no more than one day per week beginning November 1 and ending March 31 of each year, with education that less than once per week is usually adequate.
- Prohibit lawn irrigation watering from 10 AM to 6 PM (April 1 – October 31).
- Prohibit the use of irrigation systems that water impervious surfaces. (Wind driven water drift will be taken into consideration.)
- Prohibit outdoor watering during precipitation or freeze events.
- Prohibition of use of poorly maintained sprinkler systems that waste water.
- Prohibit excess water runoff or other obvious waste.
- Require rain and freeze sensors and/or ET or Smart controllers on all new irrigation systems. Rain and freeze sensors and/or ET or Smart controllers must be maintained to function properly.

- Prohibit overseeding, sodding, sprigging, broadcasting or plugging with cool season grasses or watering cool season grasses, except for golf courses and athletic fields.
- Require that irrigation systems be inspected at the same time as initial backflow preventer inspection.
- Requirement that all new irrigation systems be in compliance with state design and installation regulations (TAC Title 30, Part 1, Chapter 344).
- Require the owner of a regulated irrigation property to obtain an evaluation of any permanently installed irrigation system on a periodic basis. The irrigation evaluation shall be conducted by an licensed irrigator in the state of Texas and be submitted to your local water provider (i.e., city, water supply corporation).

## **2. Additional Water Management Measures**

- Prohibit the use of potable water to fill or refill residential, amenity, and any other natural or manmade ponds. A pond is considered to be a still body of water with a surface area of 500 square feet or more.
- Non –commercial car washing can be done only when using a water hose with a shut-off nozzle.
- Hotels and motels shall offer a linen reuse water conservation option to customers.
- Restaurants, bars, and other commercial food or beverage establishments may not provide drinking water to customers unless a specific request is made by the customer for drinking water.

Member Cities and Customers are responsible for developing regulations, ordinances, policies, or procedures for enforcement of water conservation guidelines.

Appendix E is a summary of considerations for landscape water management regulations adopted as part of the development of this water conservation plan. These regulations are intended to minimize waste in landscape irrigation. Appendix E includes the required landscape water measures in this section.

## **7.6 Additional Water Conservation Measures (Not Required)**

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

Appendix D is a form that should be used in the development of an annual water conservation report by Member Cities and Customers. This form should be completed by March 31 of the following year and used to monitor the effectiveness and efficiency of the water conservation program and to plan conservation-related activities for the next year. The form records the water use by category, per capita municipal use, and total water loss for the current year and compares them to historical values. As part of the development of Appendix D, Member Cities and Customers will complete the tracking tool by March 31 of the following year and submit them to NTWMD. The annual water conservation report should be sent to NTMWD, which will monitor NTMWD Member Cities' and Customers' water conservation trends.

## **7.8 Water Conservation Implementation Report**

Appendix J includes the TCEQ-required water conservation implementation report. The report is due to the TCEQ by May 1 of every year. This report lists the various water conservation strategies that have been implemented, including the date the strategy was implemented. The report also calls for the five-year and ten-year per capita water use goals from the previous water conservation plan. The reporting entity must answer whether or not these goals have been met and if not, why not. The amount of water saved is also requested.

## **8. IMPLEMENTATION AND ENFORCEMENT OF THE WATER CONSERVATION PLAN**

Appendix G contains a draft ordinance, order, or resolution which may be tailored to meet Member or Customer City needs and be adopted by the Town Council or governing board regarding the model water conservation plan. The ordinance, order, or resolution designates responsible officials to implement and enforce the water conservation plan. Appendix E, the considerations for landscape water management regulations, also includes information about enforcement. Appendix H includes a copy of an ordinance, order, or resolution that may be adopted related to illegal connections and water theft.

## **9. REVIEW AND UPDATE OF WATER CONSERVATION PLAN**

TCEQ requires that the water conservation plans be updated prior to May 1, 2014. The plans are required to be updated every five years thereafter. The plan will be updated as required and as appropriate based on new or updated information.

**APPENDIX A**  
**LIST OF REFERENCES**

## APPENDIX A

### LIST OF REFERENCES

1. Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter B, Rules 288.20 and 288.22, downloaded from  
[http://info.sos.state.tx.us/pls/pub/readtac\\$ext.ViewTAC?tac\\_view=4&ti=30&pt=1&ch=288](http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=288),  
June 2013
2. Freese and Nichols, Inc.: Model Water Resource Management Plan for NTMWD Members Cities and Customers, prepared for the North Texas Municipal Water District, Fort Worth, October 2012.
3. Definitions from City of Austin Water Conservation and Drought Contingency Ordinance adopted August 16, 2012.  
[http://www.austintexas.gov/sites/default/files/files/Water/Conservation/Planning\\_and\\_Policy/ProposedCodeRevision\\_DRAFT\\_with\\_watering\\_schedule-8-15-2012.pdf](http://www.austintexas.gov/sites/default/files/files/Water/Conservation/Planning_and_Policy/ProposedCodeRevision_DRAFT_with_watering_schedule-8-15-2012.pdf)
4. Definition from City of San Antonio Water Conservation Ordinance adopted 2005.  
[http://saws.org/conservation/ordinance/docs/Ch34\\_Ordinance\\_2009.pdf](http://saws.org/conservation/ordinance/docs/Ch34_Ordinance_2009.pdf)
5. Definition developed by Freese and Nichols, Inc.
6. Freese and Nichols, Inc.: Water Conservation and Drought Contingency and Water Emergency Response Plan, prepared for North Texas Municipal Water District, Fort Worth, March 2008.
7. Texas Water Development Board, Texas Commission on Environmental Quality, Water Conservation Advisory Council. "Guidance and Methodology for Water Conservation Reporting.", December 2012.
8. Freese and Nichols, Inc., Alan Plummer and Associates, CP &Y Inc., Cooksey Communications, "2011 Region C Water Plan".

**APPENDIX B**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES ON  
MUNICIPAL WATER CONSERVATION PLANS**

## APPENDIX B

### TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES ON MUNICIPAL WATER CONSERVATION PLANS

	<b>Texas Administrative Code</b>
<b><u>TITLE 30</u></b>	ENVIRONMENTAL QUALITY
<b><u>PART 1</u></b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<b><u>CHAPTER 288</u></b>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
<b><u>SUBCHAPTER A</u></b>	WATER CONSERVATION PLANS
<b>RULE §288.1</b>	<b>Definitions</b>

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

(1) 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.

- (2) Agricultural use--Any use or activity involving agriculture, including irrigation.
- (3) Best management practices--Voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific time frame.
- (4) 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.
- (5) Commercial use--The use of water by a place of business, such as a hotel, restaurant, or office building. This does not include multi-family residences or agricultural, industrial, or institutional users.
- (6) 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).
- (7) 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, and the development of power by means other than hydroelectric, but does not include agricultural use.
- (8) Institutional use--The use of water by an establishment dedicated to public service, such as a school, university, church, hospital, nursing home, prison or government facility. All facilities dedicated to public service are considered institutional regardless of ownership.
- (9) 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 from a public water supplier.
- (10) 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.
- (11) Mining use--The use of water for mining processes including hydraulic use, drilling, washing sand and gravel, and oil field re-pressuring.

(12) Municipal use--The use of potable water provided by a public water supplier as well as the use of sewage effluent for residential, commercial, industrial, agricultural, institutional, and wholesale uses.

(13) 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.

(14) 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.

(15) Public water supplier--An individual or entity that supplies water to the public for human consumption.

(16) Residential use--The use of water that is billed to single and multi-family residences, which applies to indoor and outdoor uses.

(17) Residential gallons per capita per day--The total gallons sold for residential use by a public water supplier divided by the residential population served and then divided by the number of days in the year.

(18) 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.

(19) 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.

(20) 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.

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

(22) Total gallons per capita per day (GPCD)--The total amount of water diverted and/or pumped for potable use divided by the total permanent population divided by the days of the year. Diversion volumes of reuse as defined in this chapter shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals.

(23) 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).

(24) 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.

(25) Wholesale use--Water sold from one entity or public water supplier to other retail water purveyors for resale to individual customers.

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**Source Note:** The provisions of this §288.1 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 August 15, 2002, 27 TexReg 7146; amended to be effective October 7, 2004, 29 TexReg 9384; amended to be effective January 10, 2008, 33 TexReg 193; amended to be effective December 6, 2012, 37 TexReg 9515

## **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**

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(a) A water conservation plan for municipal water use by public water suppliers must provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for municipal uses by public water suppliers must include the following elements:

(A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;

(B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) - (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph:

(i) residential;

(I) single family;

(II) multi-family;

(ii) commercial;

(iii) institutional;

(iv) industrial;

(v) agricultural; and,

(vi) wholesale.

(C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. The goals established by a public water supplier under this subparagraph are not enforceable;

(D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;

(F) measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);

(G) a program of continuing public education and information regarding water conservation;

(H) a water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water;

(I) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies; and

(J) a means of implementation and enforcement which shall be evidenced by:

(i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and

(ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(K) documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:

(A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;

(B) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in this chapter. If the customer intends to resell the water, the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

(3) Additional conservation strategies. Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by the water supplier if the commission determines that the strategy is necessary to achieve the goals of the water conservation plan:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

(B) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

(C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;

(D) reuse and/or recycling of wastewater and/or graywater;

(E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;

(F) a program and/or ordinance(s) for landscape water management;

(G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and

(H) any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.

(c) A public water supplier for municipal use shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The public water supplier for municipal use shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

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

**APPENDIX C**  
**LETTERS TO REGION C AND REGION D WATER PLANNING GROUPS**

## **APPENDIX C**

### **LETTERS TO REGION C AND REGION D WATER PLANNING GROUPS**

Date

Region C Water Planning Group  
c/o North Texas Municipal Water District  
P.O. Box 2408  
Wylie, TX 75098

Dear Sir:

Enclosed please find a copy of the Model Water Resource and Emergency Management Plan (which is an update to the previous Drought Contingency and Water Emergency Response Plan) for Member Cities and Customers 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. The Board of the North Texas Municipal Water District adopted the updated model plan on \_\_\_\_\_, 2014.

Sincerely,

Thomas W. (Tom) Kula, Executive Director  
North Texas Municipal Water District

Date

Mr. Brett McCoy  
Chair, Region D Water Planning Group  
700 CR3347  
Omaha, TX 75571

Dear Mr. McCoy:

Enclosed please find a copy of the recently updated Model Water Resource and Emergency Management Plan for Member Cities and Customers 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. The Board of the North Texas Municipal Water District adopted the updated model plan on \_\_\_\_\_, 2014.

Sincerely,

Thomas W. (Tom) Kula, Executive Director  
North Texas Municipal Water District

**APPENDIX D**

**NTMWD MEMBER CITY AND CUSTOMER ANNUAL WATER  
CONSERVATION REPORT**

**APPENDIX D**  
**NTMWD MEMBER CITY AND CUSTOMER WATER CONSERVATION REPORT**

Due: March 31 of every year

**Entity Reporting:** Town of Prosper  
**Filled Out By:** Glenn Soike  
**Date Completed:** 2/3/2015  
**Year Covered:** 2014  
**# of Connections:** 4,880

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

Month	Deliveries from NTMWD	Other Supplies	Sales by Category					Total
			Residential	Commercial	Public/Institutional	Industrial	Wholesale	
January	52.778		30.500	4.915				35.415
February	49.112		29.504	8.020				37.524
March	58.081		42.094	12.596				54.690
April	67.938		42.802	11.669				54.471
May	96.455		59.487	11.670				71.157
June	88.932		63.559	12.024				75.583
July	72.239		71.727	15.052				86.779
August	108.332		60.769	10.639				71.408
September	108.025		85.326	19.079				104.405
October	82.483		73.086	19.536				92.622
November	66.027		57.050	12.691				69.741
December	46.81		39.629	6.445				46.074
<b>TOTAL</b>	<b>897.212</b>	<b>0.000</b>	<b>655.533</b>	<b>144.336</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>799.869</b>

**Peak Day Usage**

Peak Day (MG) 5.177 Total peak day use (Peak day delivery from NTMWD + other supplies)  
 Average Day (MG) 2.458 Average day use (Annual deliveries from NTMWD + other supplies / 365 days)  
 Peak/Average Day Ratio 2.106 Total peak day use/average day use

**Unaccounted Water (Million Gallons):**

NTMWD Deliveries 897.212 from Table above  
 Other Supplies 0.000 from Table above  
 Total Supplies 897.212 from Table above  
 Total Sales 799.869 from Table above  
 Estimated Fire Use 3.180 estimated from best available data  
 Estimated Line Flushing Use 55.079 estimated from best available data  
 Unaccounted Water 39.084  
 % Unaccounted 4.36%  
 Goal for % Unaccounted 10.00%

**Per Capita Use (Gallons per person per day)**

Total Use (MG)	897.212 from Table above (NTMWD deliveries+ other supplies - wholesale)
Municipal Use (MG)	897.212 from Table above (NTMWD deliveries+ other supplies - industrial sales - wholesale - other sales)
Residential Use (MG)	752.876 from Table above (NTMWD deliveries+ other supplies - commercial sales - public/institutional sales - industrial sales - wh
Estimated Population	14,710 NCTCOG
Total Per Capita Use (gpcd)	167.11
Municipal Per Capita Use (gpcd)	167.11
Residential Per Capita Use (gpcd)	140.22
5-year Per Capita Goal ( )	190
10-year Per Capita Goal ( )	180

**Recorded Wholesale Sales by Month (in Million Gallons):**

Month	Sales to	Total Wholesale Sales									
January											0.000
February											0.000
March											0.000
April											0.000
May											0.000
June											0.000
July											0.000
August											0.000
September											0.000
October											0.000
November											0.000
December											0.000
<b>TOTAL</b>	<b>0.000</b>										

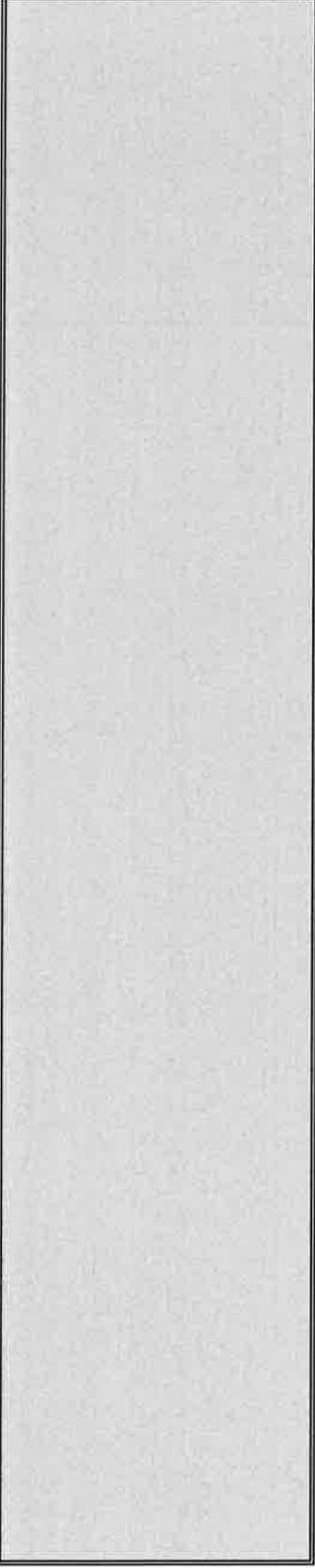
**Information on Wholesale Customers:**

Estimated

Population

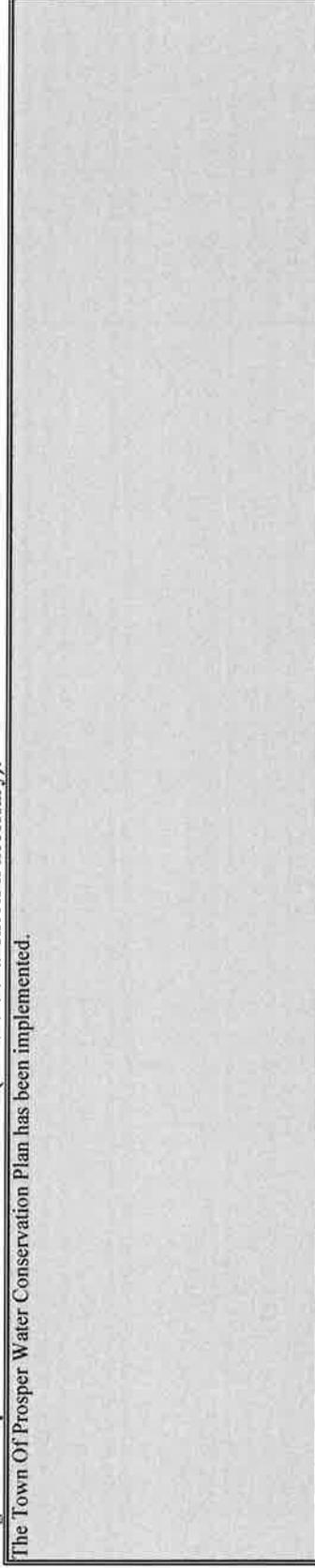


**Unusual Circumstances (use additional sheets if necessary):**

A large, empty rectangular box with a black border, intended for providing details on unusual circumstances. The interior of the box is white.

**Progress in Implementation of Conservation Plan (use additional sheets if necessary):**

The Town Of Prosper Water Conservation Plan has been implemented.

A large, empty rectangular box with a black border, intended for providing details on the progress of the conservation plan. The interior of the box is white.

**Conservation measures planned for next year (use additional sheets if necessary):**

The Town of Prosper will host numerous free Water Conservation Courses and a five week Landscape and Garden Program in the Spring led by Dr. Greg Church with Collin County Extension Services and Texas A&M Agri-Life and Collin County Master Gardeners. Staff will also present water conservation courses to several schools in Prosper to help educate the children.

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

**Other (use additional sheets if necessary):**

**APPENDIX E**  
**CONSIDERATIONS FOR LANDSCAPE WATER MANAGEMENT**  
**REGULATIONS**

**APPENDIX E**  
**CONSIDERATIONS FOR LANDSCAPE WATER MANAGEMENT**  
**REGULATIONS**

A. Purpose

The purpose of these proposed landscape water management regulations is to provide a consistent mechanism for preventing the waste of water resources. To enact these provisions, entities must verify legal authority to adopt such provisions, and must promulgate valid rules, orders, or ordinances.

B. Required Measures

The following landscape water conservation measures are required to be included in the landscape management regulations adopted and enforced in this plan.

1. Lawn and Landscape Irrigation Restrictions

- a. A person commits an offense if the person irrigates, waters, or knowingly or recklessly causes or allows the irrigation or watering of any lawn or landscape located on any property owned, leased, or managed by the person between the hours of 10:00 a.m. and 6:00 p.m. from April 1 through October 31 of any year.
- b. A person commits an offense if the person knowingly or recklessly irrigates, waters, or causes or allows the irrigation or watering of lawn or landscape located on any property owned, leased, or managed by that person in such a manner that causes:
  - 1) over-watering lawn or landscape, such that a constant stream of water overflows from the lawn or landscape onto a street or other drainage area; or
  - 2) irrigating lawn or landscape during any form of precipitation or freezing conditions. This restriction applies to all forms of irrigation, including automatic sprinkler systems; or
  - 3) the irrigation of impervious surfaces or other non-irrigated areas, wind driven water drift taken into consideration.
- c. A person commits an offense if the person knowingly or recklessly allows the irrigation or watering of any lawn or landscape located on any property owned, leased, or managed by the person more than two days per week.

2. Rain and Freeze Sensors and/or ET or Smart Controllers

Any new irrigation system installed on or after November 4, 2004, must be equipped with rain and freeze sensing devices and/or ET or Smart controllers in compliance with state design and installation regulations.

- a. A person commits an offense on property owned, leased or managed if the person:
  - 1) knowingly or recklessly installs or allows the installation of new irrigation systems in violation of Subsection B.2.a; or
  - 2) knowingly or recklessly operates or allows the operation of an irrigation system that does not comply with Subsection B.2.a.

3. Filling or Refilling of Ponds

A person commits an offense if the person knowingly or recklessly fills or refills any natural or manmade pond located on any property owned, leased, or managed by the person by introducing any treated water to fill or refill the pond. This does not restrict the filling or maintenance of pond levels by the effect of natural water runoff or the introduction of well water into the pond. A pond is considered to be a still body of water with a surface area of 500 square feet or more.

4. Washing of Vehicles

A person commits an offense if the person knowingly or recklessly washes a vehicle without using a water hose with a shut-off nozzle on any property owned, leased, or managed by the person.

5. Enforcement

Each entity will develop its own set of penalties for violations of the ordinance, order, or resolution. The ordinance, order, or resolution will designate the responsible official(s) to implement and enforce the landscape water conservation measures.

C. Recommended Measures

1. Lawn and Landscape Irrigation Restrictions

- a. A person commits an offense if the person knowingly or recklessly operates a lawn or irrigation system or device on property that the person owns, leases, or manages that:
  - 1) has broken or missing sprinkler head(s); or
  - 2) has not been properly maintained to prevent the waste of water.

- b. A person commits an offense if the person knowingly or recklessly overseeds a lawn with rye or winter grass on property that the person owns, leases, or manages. Golf courses and public athletic fields are exempt from this restriction.
  - c. All new athletic fields must have separate irrigation systems that are capable of irrigating the playing fields separately from other open spaces.
2. Rain and Freeze Sensors
- a. New irrigation systems are required to have rain and freeze sensors.

D. Variances

1. In special cases, variances may be granted to persons demonstrating extreme hardship or need. Variances may be granted under the following circumstances:
- a. the applicant must sign a compliance agreement agreeing to irrigate or water the lawn and/or landscape only in the amount and manner permitted by the variance; and
  - b. the variance must not cause an immediate significant reduction to the water supply; and
  - c. the extreme hardship or need requiring the variance must relate to the health, safety, or welfare of the person making the request; and
  - d. the health, safety, and welfare of the public and the person making the request must not be adversely affected by the requested variance.
2. A variance will be revoked upon a finding that:
- a. the applicant can no longer demonstrate extreme hardship or need; or
  - b. the terms of the compliance agreement are violated; or
  - c. the health, safety, or welfare of the public or other persons requires revocation.

**APPENDIX F**  
**LETTERS TO REGION C AND REGION D WATER PLANNING GROUPS**

**APPENDIX F**

**LETTERS TO REGION C AND REGION D WATER PLANNING GROUPS**

Date

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

Dear Sir:

Enclosed please find a copy of the recently updated Model Water Conservation Plan for the Member Cities and Customers of the North Texas Municipal Water District. I am submitting a copy of this model plan to the Region C Water Planning Group in accordance with the Texas Water Development Board and Texas Commission on Environmental Quality rules. The Board of the North Texas Municipal Water District adopted the updated model plan on \_\_\_\_\_, 201\_\_.

Sincerely,

Thomas W. (Tom) Kula  
Executive Director  
North Texas Municipal Water District

Date

Mr. Bret McCoy  
Chair, Region D Water Planning Group  
700 CR3347 Omaha, TX 75571

Dear Mr. McCoy:

Enclosed please find a copy of the recently updated Model Water Conservation Plan for the Member Cities and Customers of the North Texas Municipal Water District. I am submitting a copy of this model plan to the Region D Water Planning Group in accordance with the Texas Water Development Board and Texas Commission on Environmental Quality rules. The Board of the North Texas Municipal Water District adopted the updated model plan on \_\_\_\_\_, 201\_\_.

Sincerely,

Thomas W. (Tom) Kula  
Executive Director  
North Texas Municipal Water District

**APPENDIX G**

**ADOPTION OF WATER CONSERVATION PLAN**

**AN ORDINANCE OF THE TOWN OF PROSPER, TEXAS, AMENDING THE TITLE OF ARTICLE 13.05 OF CHAPTER 13, "UTILITIES," OF THE CODE OF ORDINANCES OF THE TOWN OF PROSPER, TEXAS, FROM "WATER CONSERVATION AND DROUGHT CONTINGENCY AND WATER EMERGENCY RESPONSE PLAN" TO "WATER CONSERVATION PLAN AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN"; AMENDING SECTION 13.05.001, "PLAN ADOPTED," OF ARTICLE 13.05, "WATER CONSERVATION PLAN AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN," OF CHAPTER 13, "UTILITIES," OF THE TOWN'S CODE OF ORDINANCES; AMENDING SECTION XVII, "WATER CONSERVATION AND ENFORCEMENT FEES," OF APPENDIX A OF THE TOWN'S CODE OF ORDINANCES; ADOPTING A WATER CONSERVATION PLAN AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN; PROVIDING FOR REPEALING, SAVINGS AND SEVERABILITY CLAUSES; PROVIDING FOR AN EFFECTIVE DATE OF THIS ORDINANCE; AND PROVIDING FOR THE PUBLICATION OF THE CAPTION HEREOF.**

**WHEREAS**, the Town of Prosper, Texas (the "Town"), recognizes that the amount of water available to its water customers is limited; and

**WHEREAS**, the Town recognizes that due to natural limitations, drought conditions, system failures and other acts of God which may occur, the Town cannot guarantee an uninterrupted water supply for all purposes at all times; and

**WHEREAS**, the Texas Water Code and the regulations of the Texas Commission on Environmental Quality (the "Commission") require that the Town adopt a Drought Contingency Plan; and

**WHEREAS**, the Town has determined an urgent need in the best interests of the public to adopt a Drought Contingency Plan; and

**WHEREAS**, pursuant to Chapters 51 and 54 of the Texas Local Government Code, the Town is authorized to adopt any such ordinances necessary to preserve and conserve its water resources; and

**WHEREAS**, the Town Council of the Town of Prosper, Texas ("Town Council"), desires to adopt an updated Water Conservation Plan and Water Resource and Emergency Management Plan for the Town of Prosper as official Town policy for water conservation; and

**WHEREAS**, the Town Council has investigated and determined that it will be advantageous and beneficial to the citizens of Prosper and will protect the public health, safety and welfare to adopt a drought contingency plan.

**NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF PROSPER, TEXAS, THAT:**

**SECTION 1**

The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein.

**SECTION 2**

From and after the effective date of this Ordinance, the title of Article 13.05, "Water Conservation and Drought Contingency and Water Emergency Response Plan," of Chapter 13, "Utilities," of the Code of Ordinances of the Town of Prosper, Texas, is hereby amended to read "Water Conservation Plan and Water Resource and Emergency Management Plan."

**SECTION 2**

From and after the effective date of this Ordinance, Section 13.05.01, "Plan Adopted," of Article 13.05, "Water Conservation Plan and Water Resource and Emergency Management Plan" of Chapter 13, "Utilities," of the Town's Code of Ordinances is amended to read as follows:

**"Sec. 13.05.001      Plan Adopted**

The Town Council hereby approves and adopts for the town, its citizens and water customers the new Water Conservation Plan and Water Resource and Emergency Management Plan (the "Plan"), attached to this Ordinance 15-\_\_ as Exhibit A and incorporated herein for all purposes. A copy of this Ordinance and the Plan are available in the Town Secretary's Office."

**SECTION 3**

The Town Council hereby approves and adopts the Water Conservation Plan and Water Resource and Emergency Management Plan (the "Plan") as modified for the Town of Prosper, attached hereto as Exhibit A, as if recited verbatim herein. The Town commits to implement the requirements and procedures set forth in the adopted Plan.

**SECTION 4**

From and after the effective date of this Ordinance, Section XVII, "Water Conservation and Enforcement Fees," of Appendix A to the Town's Code of Ordinances is amended to read as follows:

**"Sec. XVII      Water Conservation and Enforcement Fees**

**Administrative Fees.** Administrative fees for violations to the Town's Water Conservation Plan and Water Resource and Emergency Management Plan shall be added to water account holders regular monthly Town utility bill as follows:

First Offense	Courtesy Tag Warning
Second Offense	Certified Letter notifying of violation
Third Offense and Subsequent offenses	\$100
Fourth Offense and Subsequent offenses	\$300

Unpaid assessed administrative fees related to violations of water use restrictions under the Town Plan shall incur late payment penalties and may result in termination of water service.”

#### **SECTION 5**

All provisions of any ordinance in conflict with this Ordinance are hereby repealed to the extent they are in conflict; but such repeal shall not abate any pending prosecution for violation of the repealed ordinance, nor shall the repeal prevent a prosecution from being commenced for any violation if occurring prior to the repeal of the ordinance. Any remaining portions of said ordinances shall remain in full force and effect.

#### **SECTION 6**

If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held to be unconstitutional or invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The Town of Prosper hereby declares that it would have passed this Ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, and phrases be declared unconstitutional.

#### **SECTION 7**

The Town Manger or his designee is hereby directed to file a copy of the Plan and this Ordinance with the Commission in accordance with Title 30, Chapter 288 of the Texas Administrative Code, as amended.

#### **SECTION 8**

Any person, firm, corporation or business entity violating this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction therefore, shall be fined a sum not exceeding Two Thousand Dollars (\$2,000.00), and each and every day that such violation continues shall be considered a separate offense; provided, however, that such penal provision shall not preclude a suit to enjoin such violation. The Town of Prosper retains all legal rights and remedies available to it pursuant to local, state and federal law.

#### **SECTION 9**

This Ordinance shall take effect and be in full force from and after its passage and publication, as provided by the Revised Civil Statutes of the State of Texas and the Home Rule Charter of the Town of Prosper, Texas.

**DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF PROSPER, TEXAS ON THIS 12TH DAY OF MAY, 2015.**

**APPROVED:**

---

**Ray Smith, Mayor**

**ATTEST:**

\_\_\_\_\_  
**Robyn Battle, Town Secretary**

**APPROVED AS TO FORM AND LEGALITY:**

\_\_\_\_\_  
**Terrence S. Welch, Town Attorney**

**APPENDIX H**  
**ILLEGAL WATER CONNECTIONS AND THEFT OF WATER**

AN ORDINANCE OF THE TOWN OF PROSPER, TEXAS, CREATING OFFENSES PERTAINING TO ILLEGAL WATER CONNECTIONS AND/OR THE THEFT OF WATER AND METER OR EQUIPMENT TAMPERING FOR THE TOWN OF PROSPER; PROVIDING FOR A PENALTY FOR THE VIOLATION OF THIS ORDINANCE; PROVIDING FOR REPEALING, SAVINGS AND SEVERABILITY CLAUSES; PROVIDING FOR AN EFFECTIVE DATE OF THIS ORDINANCE; AND PROVIDING FOR THE PUBLICATION OF THE CAPTION HEREOF.

WHEREAS, the Town of Prosper, Texas (the "Town") recognizes that the amount of water available to its water customers is limited; and

WHEREAS, pursuant to Chapter 54 of the Local Government Code, the Town is authorized to adopt such policies necessary to preserve and conserve available water supplies; and

WHEREAS, the Town seeks to adopt an ordinance pertaining to illegal water connections and theft of water; and

WHEREAS, the Town Council of the Town ("Town Council") has further investigated and determined that it will be advantageous and beneficial to the citizens of Prosper and will promote the public health, safety and welfare to regulate and prevent water theft.

NOW THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF PROSPER, TEXAS:

**Section 1. Findings Incorporated.** The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein.

**Section 2. Offense Established.** A person commits an offense of theft of water by any of the following actions:

(a) A person may not tamper, connect to, or alter any component of the Town's water system including valves, meters, meter boxes, lids, hydrants, lines, pump stations, ground storage tanks, and elevated storage tanks. This shall include direct or indirect efforts to initiate or restore water service without the approval of the Town.

(b) If, without the written consent of the Town Administrator or Manager or the Town Administrator or Manager's designee, the person causes, suffers or allows the initiation or restoration of water service to the property after termination of service(s). For purposes of this Section 2(b), it shall be assumed that the owner, occupant, or person in control of the property caused, suffered, or allowed the unlawful initiation or restoration of service(s).

(c) A person may not make or cause a false report to be made to the Town of a reading of a water meter installed for metered billing.

(d) A person commits a separate offense each day that the person performs an act prohibited by this Section 2 or fails to perform an act required by this section.

**Section 3. Disconnections of Water Service an Reconnection Fee.** Any violation of this Ordinance, including the first offense, will result in forfeiture of any and all deposits, removal of meters, and/or discontinuance of

water service by the Town. A five hundred (\$500.00) reconnection fee will be required before the Town will restore water service.

**Section 4. Penalty.** Any person violating the provisions of Section 2 of this Ordinance shall be deemed guilty of the offense of criminal mischief, their offense shall be classified, whether a misdemeanor or a felony, in accordance with Section 28.03 of the Texas Penal Code, as it exists or may be amended and, upon conviction thereof, shall be punished in accordance with Section 28.03 of the Texas Penal Code, as it exists or may be amended. For purposes of determining whether an offense has occurred, the presumption in Section 28.03(c) the Texas Penal Code, as it exists or may be amended, shall apply.

**Section 5. Savings/Repealing.** All provisions of any ordinance in conflict with this Ordinance are hereby repealed to the extent they are in conflict; but such repeal shall not abate any pending prosecution for violation of the repealed ordinance, nor shall the repeal prevent a prosecution from being commenced for any violation if occurring prior to the repeal of the ordinance. Any remaining portions of said ordinances shall remain in full force and effect.

**Section 6. Severability.** Should any section, subsection, sentence, clause or phrase of this Ordinance be declared unconstitutional or invalid by a court of competent jurisdiction, it is expressly provided that any and all remaining portions of this Ordinance shall remain in full force and effect. Prosper hereby declares that it would have passed this Ordinance, and each section, subsection, sentence, clause or phrase thereof regardless of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional or invalid.

**Section 7. Effective Date.** This Ordinance shall become effective from and after its adoption and publication as required by law.

**DULY PASSED AND APPROVED BY THE TOWN COUNCIL OF THE TOWN OF PROSPER, TEXAS, on this 10<sup>th</sup> day of January, 2006.**

  
CHARLES NISWANGER, Mayor

**ATTESTED AND CORRECTLY  
RECORDED:**

  
SHANAE JENNINGS, Town Secretary

Date(s) of Publication: 1/20/06 + 1/21/06, *The Dallas Morning News – Collin County Edition*

**APPENDIX J**  
**TCEQ WATER CONSERVATION IMPLEMENTATION REPORT**



## Texas Commission on Environmental Quality

### Water Conservation Implementation Report Public Water Supplier

This five year 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 Availability Division at (512) 239-4691.

### CONTACT INFORMATION

Name of Entity:

Public Water Supply Identification Number (PWS ID): #0430009

CCN numbers: 20888

Water Right Permit numbers:

Wastewater ID numbers: 10915-001

Check all that apply:

- Retail Public Water Supplier
- Wholesale Public Water Supplier

Address: 121 West Broadway St. City: Prosper Zip Code: 75078

Email: publicworks@prospertx.gov Telephone Number: 972-347-9969

Regional Water Planning Group: C

Groundwater Conservation District: District 8

Form Completed By: Frank Jaromin Title: Director of Public Works

Signature: \_\_\_\_\_ Date: [Click here to enter a date.](#)

Contact information for the person or department responsible for implementing the water conservation plan:

Name: Public Works Phone: 972-347-9969 Email: publicworks@prospertx.gov

Report Completed on Date: [Click here to enter a date.](#)

Reporting Period (**check only one**):

- Fiscal Period Begin: \_\_\_\_\_ Period End: \_\_\_\_\_
- Calendar Period Begin: January 2009 Period End: December 2013

Please check all of the following that apply to your entity:

- A surface water right holder of 1,000 acre-feet/year or more for non-irrigation uses
- A surface water right holder of 10,000 acre-feet/year or more for irrigation uses

**\*Important\***

*If your entity meets the following description, please skip page 3 and go directly to page 4.*

Your entity is a Wholesale Public Water Supplier that ONLY provides wholesale water services for public consumption. For example, you only provide wholesale water to other municipalities or water districts.

## Water Use Accounting

**Retail Water Sold:** *All retail water sold for public use and human consumption.*

**Helpful Hints:** There are two options available for you to provide the requested information. Both options ask the same information; however, the level of detail and break down of information differs between the two options. Please select just one option that works best for your entity and fill in the fields as completely as possible.

Fields that are gray are entered by the user. Select fields that are white and press F9 to updated fields.

For the five-year reporting period, enter the gallons of **RETAIL water sold** in each major water use category. Use **only one** of the following options.

### Option 1

Water Use Category*	Gallons Sold
Single Family Residential	
Multi-Family Residential	
<b>TOTAL Residential Use<sup>1</sup></b>	0
Industrial	
Commercial	
Institutional	
<b>TOTAL Retail Water Sold<sup>2</sup></b>	0

1. [SF Res +MF Res = Residential Use]
2. [Res +Ind +Com +Ins = Retail Water Sold]

### Option 2

Water Use Category *	Gallons Sold
<b>Residential</b> Select all of the sectors that your account for as "Residential". <input checked="" type="checkbox"/> Single Family <input checked="" type="checkbox"/> Multi-Family	3150.438 MG
<b>Commercial</b> Please select all of the sectors that your account for as "Commercial". <input type="checkbox"/> Commercial <input type="checkbox"/> Multi-Family <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional	663.532 MG
<b>Industrial</b> Please select all of the sectors that your account for as "Industrial". <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Institutional	
<b>Other</b> Please select all of the sectors that your account for as "Other". <input type="checkbox"/> Commercial <input type="checkbox"/> Multi-Family <input type="checkbox"/> Industrial <input type="checkbox"/> Institutional	
<b>TOTAL Retail Water Sold<sup>1</sup></b>	3813.97 MG

1. [Res +Com +Ind + Other = Retail Water Sold]

**Wholesale Water Exported:** *Wholesale water sold or transferred out of the distribution system.*

For the five-year reporting period, enter the gallons of **WHOLESALE water exported** to each major water use category.

<b>Water Use Category*</b>	<b>Gallons of Exported Wholesale Water</b>
Municipal Customers	
Agricultural Customers	
Industrial Customers	
Commercial Customers	
Institutional Customers	
<b>TOTAL Wholesale Water Exported <sup>1</sup></b>	<b>0.00</b>

1. [Mun +Agr +Ind +Com +Ins = Wholesale Water Exported]

## System Data

Fields that are gray are entered by the user.  
Select fields that are white and hit F9 to  
updated fields.

	<b>Total Gallons During the Five-Year Reporting Period</b>
<b>Water Produced:</b> Volume produced from own sources	5.605 MG
<b>Wholesale Water Imported :</b> Purchased wholesale water imported from other sources into the distribution system	4230.362 MG
<b>Wholesale Water Exported:</b> Wholesale water sold or transferred out of the distribution system (Insert Total Volume calculated on Page 4)	0
<b>TOTAL System Input :</b> Total water supplied to the infrastructure	4,235.97 MG <small>[Produced + Imported – Exported = System Input]</small>
<b>Retail Water Sold :</b> All retail water sold for public use and human consumption (Insert Total Residential Use from Option 1 or Option 2 calculated on Page 3)	3813.97 MG
<b>Other Consumption Authorized for Use but not Sold:</b> <ul style="list-style-type: none"> <li>- back flushing water            - line flushing</li> <li>- storage tank cleaning        - golf courses</li> <li>- fire department use         - parks</li> <li>- municipal government offices</li> </ul>	213.297 MG
<b>TOTAL Authorized Water Use:</b> All water that has been authorized for use or consumption.	4,027.27 MG <small>[Retail Water Sold + Other Consumption = Total Authorized]</small>
<b>Apparent Losses – Water that has been consumed but not properly measured</b> (Includes customer meter accuracy, systematic data discrepancy, un- authorized consumption such as theft)	0
<b>Real Losses – Physical losses from the distribution system prior to reaching the customer destination</b> (Includes physical losses from system or mains, reported breaks and leaks, storage overflow)	208.7 MG
<b>Unidentified Water Losses</b>	0.00 <small>[System Input- Total Authorized - Apparent Losses - Real Losses = Unidentified Water Losses]</small>
<b>TOTAL Water Loss</b>	208.70 MG <small>[Apparent + Real + Unidentified = Total Water Loss]</small>

**Targets and Goals**

In the table below, please provide the **specific and quantified five and ten-year targets for water savings** listed in your water conservation plan.

Fields that are gray are entered by the user. Select fields that are white and hit F9 to update fields.

<b>Date</b>	<b>Target for: Total GPCD</b>	<b>Target for: Water Loss (expressed in GPCD)</b>	<b>Target for: Water Loss Percentage (expressed in Percentage)</b>
<b>Five-year target date: 1/1/2019</b>	150	8.5	6%
<b>Ten-year target date: 1/1/2024</b>	140	6.2	4%

Are targets in the water conservation plan being met? Yes  No

If these targets are not being met, provide an explanation as to why, including any progress on these targets:

**Gallons per Capita per Day (GPCD) and Water Loss**

Compare your current gpcd and water loss to the above targets and goals set in your previous water conservation plan.

<b>Total System Input in Gallons</b>	<b>Permanent Population</b>	<b>Current GPCD</b>
4,235,967,000 [Produced + Imported - Exported = System Input]	14710	157.79 [ (System Input ÷ Permanent Population) / 5 / 365 ]

Permanent Population is the total permanent population of the service area. This includes single family, multi-family, and group quarter populations.

<b>Total Residential Use</b>	<b>Permanent Population</b>	<b>Residential GPCD</b>
3,150,438,000	14710	117.35 [ (Residential Use ÷ Residential Population) / 5 / 365 ]

Residential Population is the total residential population of the service area including single & multi-family population.

Total Water Loss	Total System Input in Gallons	Permanent Population	Water Loss calculated in	
			GPCD <sup>1</sup>	Percent <sup>2</sup>
208,700,000 [Apparent + Real + Unidentified = Total Water Loss]	4,235,967,000 [Water Produced + Wholesale Imported - Wholesale Exported]	14710	7.77	4.93 %

1. [Total Water Loss ÷ Permanent Population] / 5/ 365 = Water Loss GPCD]
2. [Total Water Loss ÷ Total System Input] x 100 = Water Loss Percentage]

## Water Conservation Programs and Activities

*As you complete this section, please review your water conservation plan to see if you are making progress towards meeting your stated goals.*

Fields that are gray are entered by the user. Select fields that are white and hit F9 to updated fields.

### 1. Water Conservation Plan

What year did your entity adopt, or revise, their most recent water conservation plan: 2014

Does the plan incorporate Best Management Practices? Yes  No

### 2. Water Conservation Programs

For the reporting period, please select the types of activities and programs that have been actively administered, and estimate the expense and savings that incurred in implementing the conservation activities and programs for the past five years. Leave the field blank if unknown:

Program or Activity	Estimated Expenses	Estimated Gallons Saved
<b>Conservation Analysis &amp; Planning</b>		
<input checked="" type="checkbox"/> Conservation Coordinator	\$25,000.00	200 MG
<input type="checkbox"/> Water Survey for Single-Family and Multi-Family Customers		
<b>Financial</b>		
<input type="checkbox"/> Wholesale Agency Assistance Programs		
<input checked="" type="checkbox"/> Water Conservation Pricing/ Rate Structures	\$8000.00	200 MG
<b>System Operations</b>		
<input type="checkbox"/> Water Loss Audits		
<input checked="" type="checkbox"/> Leak Detection	\$20,000.00	50 MG
<input checked="" type="checkbox"/> Universal Metering and Metering Repair	\$50,000.00	50 MG
<b>Landscaping</b>		
<input type="checkbox"/> Landscape Irrigation Conservation and Incentives		

<input type="checkbox"/> Athletic Fields Conservation		
<input type="checkbox"/> Golf Course Conservation		
<input type="checkbox"/> Park Conservation		
<b>Education &amp; Public Awareness</b>		
<input checked="" type="checkbox"/> School Education	\$5000.00	1 MG
<input checked="" type="checkbox"/> Public Information	\$4000.00	1 MG
<b>Rebate, Retrofit, and Incentive Programs</b>		
<input type="checkbox"/> Conservation Programs for ICI Accounts		
<input type="checkbox"/> Residential Clothes Washer Incentive Program		
<input type="checkbox"/> Water Wise Landscape Design and Conversion Programs		
<input type="checkbox"/> Showerhead, Aerator, and Toilet Flapper Retrofit		
<input type="checkbox"/> Residential Toilet Replacement Programs		
<input type="checkbox"/> Rainwater Harvesting Incentive Program		
<input type="checkbox"/> ICI Incentive Programs		
<b>Conservation Technology</b>		
<input type="checkbox"/> Recycling and Reuse Programs (Water or Wastewater Effluent)		
<input checked="" type="checkbox"/> Rainwater Harvesting and Condensate Reuse Programs	\$500.00	1 MG
<b>Regulatory and Enforcement</b>		
<input checked="" type="checkbox"/> Prohibition on Wasting Water	\$8000.00	5 MG
<b>TOTAL</b>	<b>\$120,500.00</b>	<b>508 MG</b>

### 3. Reuse (Water or Wastewater Effluent)

For the reporting period, please provide the following data regarding the types of direct and indirect reuse activities that were administered for the past five years:

Reuse Activity	Estimated Volume (in gallons)
On-site irrigation	
Plant wash down	
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (parks, golf courses)	
Agricultural	
Other, please describe:	
<b>Estimated Volume of Recycled or Reuse</b>	<b>0</b>

### 4. Water Savings

For the five-year reporting period, estimate the total savings that resulted from your overall water conservation activities and programs?

<b>Estimated Gallons Saved</b> (Total from Conservation Programs Table)	<b>Estimated Gallons Recycled or Reused</b> (Total from Reuse Table)	<b>Total Volume of Water Saved <sup>1</sup></b>	<b>Dollar Value of Water Saved <sup>2</sup></b>
508 MG	0	508 MG	\$221,500.00

1. [Estimated Gallons Saved + Estimated Gallons Recycled or Reused = Total Volume Saved]

2. Estimate this value by taking into account water savings, the cost of treatment or purchase of your water, and any deferred capital costs due to conservation.

### 5. Conservation Pricing / Conservation Rate Structures

During the five-year reporting period, have your rates or rate structure changed? Yes  No

Please indicate the type of rate pricing structures that you use:

<input type="checkbox"/> Uniform rates	<input type="checkbox"/> Water Budget Based rates	<input type="checkbox"/> Surcharge - seasonal
<input type="checkbox"/> Flat rates	<input type="checkbox"/> Excess Use Rates	<input type="checkbox"/> Surcharge - drought
<input checked="" type="checkbox"/> Inclining/ Inverted Block	<input type="checkbox"/> Drought Demand rates	<input type="checkbox"/> Surcharge - usage demand
<input type="checkbox"/> Declining Block rates	<input type="checkbox"/> Tailored rates	
<input type="checkbox"/> Seasonal rates		

### 6. Public Awareness and Education Program

For the five-year reporting period, please check the appropriate boxes regarding any public awareness and educational activities that your entity has provided:

	<b>Implemented</b>	<b>Number/Unit</b>
<i>Example: Brochures Distributed</i>	<input type="checkbox"/>	<i>10,000/year</i>
<i>Example: Educational School Programs</i>	<input type="checkbox"/>	<i>50 students/month</i>
Brochures Distributed	<input type="checkbox"/>	
Messages Provided on Utility Bills	<input checked="" type="checkbox"/>	4500/Quarterly
Press Releases	<input checked="" type="checkbox"/>	10/Year
TV Public Service Announcements	<input type="checkbox"/>	
Radio Public Service Announcements	<input type="checkbox"/>	
Educational School Programs	<input checked="" type="checkbox"/>	500 students/year
Displays, Exhibits, and Presentations	<input checked="" type="checkbox"/>	7/Year
Community Events	<input checked="" type="checkbox"/>	3/Year

Social Media campaigns	<input checked="" type="checkbox"/>	20/Year
Facility Tours	<input type="checkbox"/>	
Other :	<input type="checkbox"/>	

### 7. Leak Detection

During the five-year reporting period, how many leaks were repaired in the system or at service connections: Estimated 350

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

- Leaks and breaks
- Un-metered utility or city uses
- Master meter problems
- Customer meter problems
- Record and data problems
- Other: Click here to enter text.
- Other: Click here to enter text.

### 8. Universal Metering and Meter Repair

For the five-year reporting period, please provide the following information regarding meter repair:

	Total Number	Total Tested	Total Repaired	Total
Production Meters	1	0	0	0
Meters larger than 1 ½"	183	0	0	0
Meters 1 ½ or smaller	4971	2	557	559

Does your system have automated meter reading? Yes  No

**9. Conservation Communication Effectiveness**

In your opinion, how would you rank the effectiveness of your conservation activities in reaching the following types of customers for the past five years?

	Do not have activities or programs that target this type customer.	Less Than Effective	Somewhat Effective	Highly Effective
Residential Customers	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Industrial Customers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Institutional Customers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commercial Customers	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Agricultural Customers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

During the five-year reporting period, did you implement your Drought Contingency Plan?

Yes  No

If yes, indicate the number of days that your water use restrictions were in effect: 3 Years and 5 months. December 13, 2011 - Present

If yes, please check all the appropriate reasons for your drought contingency efforts going into effect.

<input checked="" type="checkbox"/> Water Supply Shortage	<input type="checkbox"/> Equipment Failure
<input type="checkbox"/> High Seasonal Demand	<input type="checkbox"/> Impaired Infrastructure
<input type="checkbox"/> Capacity Issues	<input type="checkbox"/> Other:

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.



## **CHAPTER II**

# **WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN TOWN OF PROSPER**

## TABLE OF CONTENTS

1.	INTRODUCTION AND OBJECTIVES .....	1-1
2.	DEFINITIONS.....	2-1
3.	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES.....	3-1
4.	WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN .....	4-1
4.1	Provisions to Inform the Public and Opportunity for Public Input.....	4-1
4.2	Provisions for Continuing Public Education and Information .....	4-1
4.3	Initiation and Termination of Water Resource and Emergency Management Stages ..	4-2
4.4	Procedures for Granting Variances to the Plan.....	4-12
4.5	Procedures for Enforcing Mandatory Water Use Restrictions.....	4-13
4.6	Coordination with the Regional Water Planning Group and NTMWD.....	4-13
4.7	Review and Update of Water Resource and Emergency Management Plan.....	4-14

## **1. INTRODUCTION AND OBJECTIVES**

This document has been prepared as a Model Water Resource and Emergency Management Plan, intended to be available for use by North Texas Municipal Water District (NTMWD) Member Cities and Customers as they develop their own plans. This model plan addresses all of the current TCEQ requirements for a drought contingency plan<sup>1</sup>. This model plan will replace the plans dated August 2004, April 2006 and March 2008. The March 2008 model plan shall continue to apply until such time that the drought contingency or water emergency response stage currently in effect under the March 2008 model plan terminates and a less restrictive stage is applicable. At such time, this model plan shall take effect, replacing the March 2008 model plan, and the appropriate water resource management stage as provided in this model plan shall be initiated.

The measures included in this Model Water Resource and Emergency Management Plan are intended to provide short-term water savings during drought or emergency conditions. Water savings associated with ongoing, long-term strategies are discussed in the *Model Water Conservation Plan for North Texas Municipal Water District Member Cities and Customers*.<sup>2</sup>

The purpose of this model Water Resource and Emergency Management 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.

The NTMWD supplies treated potable water to its Member Cities and Customers. This model plan was developed by NTMWD in consultation with its Member Cities and Customers. In order to adopt this model plan, each NTMWD Member City and Customer will need to adopt ordinance(s) or regulation(s) implementing the plan, including the determination of fines and enforcement procedures. The model plan calls for Member Cities and Customers to adopt water resource management stages initiated by NTMWD during a drought or water supply emergency. Member Cities and Customers may also adopt more stringent water resource management stages than NTMWD if conditions warrant.

In the absence of drought response measures, water demands tend to increase during a drought due to increased 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.

<sup>1</sup> Superscripted numbers match references listed in Appendix A.

## 2. DEFINITIONS

1. AQUATIC LIFE means a vertebrate organism dependent upon an aquatic environment to sustain its life<sup>i</sup>.
2. ATHLETIC FIELD means a public sports competition field, the essential feature of which is turf grass, used primarily for organized sports practice, competition or exhibition events for schools, professional sports, or sanctioned league play<sup>ii</sup>.
3. COMMERCIAL FACILITY business or industrial buildings and the associated landscaping, but does not include the fairways, greens, or tees of a golf course<sup>i</sup>.
4. COMMERCIAL VEHICLE WASH FACILITY means a permanently-located business that washes vehicles or other mobile equipment with water or water-based products, including but not limited to self-service car washes, full service car washes, roll-over/in-bay style car washes, and facilities managing vehicle fleets or vehicle inventory<sup>i</sup>.
5. COOL SEASON GRASSES are varieties of turf grass that grow best in cool climates primarily in northern and central regions of the U.S. Cool season grasses include perennial and annual rye grass, Kentucky blue grass and fescues<sup>iii</sup>.
6. CUSTOMERS include those entities to whom NTMWD provides water on a customer basis that are not members of NTMWD.
7. DESIGNATED OUTDOOR WATER USE DAY means a day prescribed by rule on which a person is permitted to irrigate outdoors<sup>i</sup>.
8. DRIP IRRIGATION is a type of micro-irrigation system that operates at low pressure and delivers water in slow, small drips to individual plants or groups of plants through a network of plastic conduits and emitters; also called trickle irrigation. <sup>iv</sup>.

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<sup>i</sup> Definitions from City of Austin Water Conservation and Drought Contingency Ordinance adopted August 16, 2012.  
[http://www.austintexas.gov/sites/default/files/files/Water/Conservation/Planning\\_and\\_Policy/ProposedCodeRevision\\_DRAFT\\_with\\_watering\\_schedule-8-15-2012.pdf](http://www.austintexas.gov/sites/default/files/files/Water/Conservation/Planning_and_Policy/ProposedCodeRevision_DRAFT_with_watering_schedule-8-15-2012.pdf)

<sup>ii</sup> Definition from City of San Antonio Water Conservation Ordinance adopted 2005.  
[http://saws.org/conservation/ordinance/docs/Ch34\\_Ordinance\\_2009.pdf](http://saws.org/conservation/ordinance/docs/Ch34_Ordinance_2009.pdf)

<sup>iii</sup> Definition developed by Freese and Nichols, Inc.

9. DROUGHT, for the purposes of this report, means 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<sup>v</sup>.
10. EVAPOTRANSPIRATION abbreviated as ET represents the amount of water lost from plant material to evaporation and transpiration. The amount of ET can be estimated based on the temperature, wind, and relative humidity<sup>iii</sup>.
11. ET/SMART CONTROLLERS are irrigation controllers that adjust their schedule and run times based on weather (ET) data. These controllers are designed to replace the amount of water lost to evapotranspiration<sup>iii</sup>.
12. EXECUTIVE DIRECTOR means the Executive Director of the North Texas Municipal Water District and includes a person the Director has designated to administer or perform any task, duty, function, role, or action related to this plan or on behalf of the Executive Director<sup>iii</sup>.
13. FOUNDATION WATERING means an application of water to the soils directly abutting the foundation of a building structure<sup>i</sup>.
14. MEMBER CITIES include the cities of Allen, Farmersville, Forney, Frisco, Garland, McKinney, Mesquite, Plano, Princeton, Richardson, Rockwall, Royce City, and Wylie, Texas.
15. NEW LANDSCAPE means vegetation: installed at the time of the construction of a residential or commercial facility; installed as part of a governmental entity's capital improvement project; installed to stabilize an area disturbed by construction<sup>i</sup>.
16. ORNAMENTAL FOUNTAIN means an artificially created structure (up to six feet in diameter) from which a jet, stream, valves and emission devices or flow of water emanates and is not typically utilized for the preservation of aquatic life<sup>i</sup>.

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<sup>iv</sup> Amy Vickers: Handbook of Water Use and Conservation, Amherst Massachusetts, June 2002

<sup>v</sup> Freese and Nichols, Inc.: Water Conservation and Drought Contingency and Water Emergency Response Plan, prepared for North Texas Municipal Water District, Fort Worth, March 2008.

17. PERMANANTLY INSTALLED IRRIGATION SYSTEM means a custom-made, site-specific system of delivering water generally for landscape irrigation via a system of pipes or other conduits installed below ground<sup>i</sup>.
18. RAIN/FREEZE SENSOR means a device designed to stop the flow of water to an automatic irrigation system when rainfall or freeze event has been detected<sup>ii</sup>.
19. RECLAIMED WATER means reclaimed municipal wastewater that has been treated to a quality that meets or exceeds the minimum standards of the 30 Texas Administrative Code, Chapter 210 and is used for lawn irrigation, industry, or other non-potable purposes<sup>i</sup>.
20. SOAKER HOSE means a perforated or permeable garden-type hose or pipe that is laid above ground that provides irrigation at a slow and constant rate<sup>i</sup>.
21. SPRINKLER means an above-ground water distribution device that may be attached to a garden hose<sup>i</sup>.
22. SWIMMING POOL means any structure, basin, chamber, or tank including hot tubs, containing an artificial body of water for swimming, diving, or recreational bathing, and having a depth of two (2) feet or more at any point<sup>ii</sup>.
23. WATER RESOURCE MANAGEMENT PLAN means a strategy or combination of strategies for temporary supply management and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies required by Texas Administrative Code Title 30, Chapter 288, Subchapter B. This is sometimes called a drought contingency plan<sup>i</sup>

### **3. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES**

The TCEQ rules governing development of drought contingency plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 of the Texas Administrative Code, a current copy of which is included in Appendix B. For the purpose of these rules, a drought contingency plan is defined as “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.”<sup>1</sup>

#### **Minimum Requirements**

TCEQ’s minimum requirements for drought contingency plans are addressed in the following subsections of this report:

- 288.20(a)(1)(A) – Provisions to Inform the Public and Provide Opportunity for Public Input – Section 4.1
- 288.20(a)(1)(B) – Provisions for Continuing Public Education and Information – Section 4.2
- 288.20(a)(1)(C) – Coordination with the Regional Water Planning Group – Section 4.6
- 288.20(a)(1)(D) – Criteria for Initiation and Termination of Water Resource Management Stages – Section 4.3
- 288.20(a)(1)(E) – Water Resource Management Stages – Section 4.3
- 288.20(a)(1)(F) – Specific, Quantified Targets for Water Use Reductions – Section 4.3
- 288.20(a)(1)(G) – Water Supply and Demand Management Measures for Each Stage – Section 4.3
- 288.20(a)(1)(H) – Procedures for Initiation and Termination of Water Resource Management Stages – Section 4.3
- 288.20(a)(1)(I) - Procedures for Granting Variances – Section 4.4
- 288.20(a)(1)(J) - Procedures for Enforcement of Mandatory Restrictions – Section 4.5
- 288.20(a)(3) – Consultation with Wholesale Supplier – Sections 1, 4.2, and 4.3
- 288.20(b) – Notification of Implementation of Mandatory Measures – Section 4.3
- 288.20(c) – Review and Update of Plan – Section 4.7

## **4. WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN**

### **4.1 PROVISIONS TO INFORM THE PUBLIC AND OPPORTUNITY FOR PUBLIC INPUT**

Member Cities and Customers will provide opportunity for public input in the development of this Water Resource and Emergency Management Plan by the following means:

- Providing written notice of the proposed plan and the opportunity to comment on the plan by newspaper, posted notice, and notice on the supplier's web site (if available).
- Making the draft plan available on the supplier's web site (if available).
- Providing the draft plan to anyone requesting a copy.
- Holding a public meeting.

### **4.2 PROVISIONS FOR CONTINUING PUBLIC EDUCATION AND INFORMATION**

Member Cities and Customers will inform and educate the public about the Water Resource and Emergency Management Plan by the following means:

- Preparing a bulletin describing the plan and making it available at town hall and other appropriate locations.
- Making the plan available to the public through the supplier's web site (if available).
- Including information about the Water Resource and Emergency Management Plan on the supplier's web site (if available).
- Notifying local organizations, schools, and civic groups that staff are available to make presentations on the Water Resource and Emergency Management Plan (usually in conjunction with presentations on water conservation programs).
- At any time that the Water Resource and Emergency Management Plan is activated or the Water Resource and Emergency Management Plan changes, Member Cities and Customers will notify local media of the issues, the water resource management stage (if applicable), and the specific actions required of the public. The information will also be publicized on the supplier's web site (if available). Billing inserts will also be used as appropriate.

### **4.3 INITIATION AND TERMINATION OF WATER RESOURCE AND EMERGENCY MANAGEMENT STAGES**

#### Initiation of a Water Resource Management Stage

The Town Manager, Mayor, or official designee may order the implementation of a water resource management stage when one or more of the trigger conditions for that stage is met. The following actions will be taken when a water resource management stage is initiated:

- The public will be notified through local media and the supplier's web site (if available) as described in Section 4.2.
- Wholesale customers (if any) 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 water resource management stage.
- If any mandatory provisions of the Water Resource and Emergency Management Plan are activated, Member Cities and Customers will notify the Executive Director of the TCEQ and the Executive Director of the NTMWD within 5 business days.
- Water Resource and Emergency Management Plan stages imposed by NTMWD action must be initiated by Member Cities and Customers.
- For other trigger conditions internal to a city or water supply entity, the Town Manager, Mayor, or official designee may decide not to order the implementation of a water resource management 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. The reason for this decision should be documented.

#### Termination of a Water Resource Management Stage

The Town Manager, Mayor, or official designee may order the termination of a water resource management stage when the conditions for termination are met or at their discretion. The following actions will be taken when a water resource management stage is terminated:

- The public will be notified through local media and the supplier's web site (if available) as described in Section 4.2.

- Wholesale customers (if any) and the NTMWD will be notified by e-mail with a follow-up letter or fax.
- If any mandatory provisions of the Water Resource and Emergency Management plan that have been activated are terminated, Member Cities and Customers will notify the Executive Director of the TCEQ and the Executive Director of the NTMWD within 5 business days.

The Town Manager, Mayor, or official designee may decide not to order the termination of a water resource management 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 water resource management stage. The reason for this decision should be documented.

## Water Resource and Emergency Management Plan Stages and Measures

### Stage 1

#### Initiation and Termination Conditions for Stage 1

- The NTMWD has initiated Stage 1, which may be initiated due to one or more of the following:
  - The NTMWD Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the declaration of Stage 1.
  - Water demand is projected to approach the limit of the permitted supply.
  - The storage in Lavon Lake is less than 55 percent of the total conservation pool capacity.
  - NTMWD's storage in Jim Chapman Lake is less than 55 percent of NTMWD's total conservation pool capacity.
  - The Sabine River Authority has indicated that its Upper Basin water supplies used by NTMWD (Lake Tawakoni and/or Lake Fork) are in a Mild drought.
  - NTMWD has concern that Lake Texoma, the East Fork Raw Water Supply Project, or some other NTMWD source may be limited in availability in the next 6 months.
  - NTMWD water demand exceeds 95 percent of the amount that can be delivered to customers for three consecutive days.
  - NTMWD water demand for all or part of the delivery system equals delivery capacity because delivery capacity is inadequate.
  - NTMWD's supply source becomes contaminated.
  - Supply source is interrupted or unavailable due to invasive species.
  - NTMWD's water supply system is unable to deliver water due to the failure or damage of major water system components.
- Supplier's water demand exceeds 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.
- Supplier’s individual plan may be implemented if other criteria dictate.

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.

Goal for Use Reduction and Actions Available under Stage 1

The goal for water use reduction under Stage 1 is a five percent (5%) reduction in the amount of water produced by NTMWD from the previous annual payment period prior to drought restrictions. If circumstances warrant or if required by NTMWD, the Town Manager, Mayor, or official designee can set a goal for greater or lesser water use reduction. Town Manager, Mayor, or official designee may order the implementation of any or all of the actions listed below, as deemed necessary to achieve a five percent reduction. Measures described as “requires notification to TCEQ” impose mandatory requirements on customers. The supplier must notify TCEQ and NTMWD within five business days if these measures are implemented:

- Continue actions in the water conservation plan.
- Notify wholesale customers of actions being taken and request them to implement similar procedures.
- Initiate engineering studies to evaluate alternatives should conditions worsen.
- Further accelerate public education efforts on ways to reduce water use.
- Halt non-essential city government water use. (Examples include street cleaning, vehicle washing, operation of ornamental fountains, etc.)
- Encourage the public to wait until the current drought or emergency situation has passed before establishing new landscaping.
- All users are encouraged to reduce the frequency of draining and refilling swimming pools.
- **Requires Notification to TCEQ** – Limit landscape watering with sprinklers or irrigation systems at each service address to no more than two days per week on designated days between April 1 – October 31. Zone I will be permitted to water on Monday and Thursday. Zone II will be permitted to water on Wednesday and Saturday. Zone III will be permitted to water on Tuesday and Friday. Limit landscape watering with sprinklers or irrigation

systems at each service address to once every week on designated days between November 1 – March 31. Zone I will be permitted to water on Monday. Zone II will be permitted to water on Wednesday. Zone III will be permitted to water on Friday. Exceptions are as follows:

- An exception is allowed for landscape associated with new construction that may be watered as necessary for 30 days from the installation of new landscape features.
- An exception for additional watering of landscape may be provided by hand held hose with shutoff nozzle, use of dedicated irrigation drip zones, and/or soaker hose provided no runoff occurs.
- Foundations, new landscaping, new plantings (first year) of shrubs, and trees (within a ten foot radius of its trunk) may be watered by a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system provided no runoff occurs.
- **Requires Notification to TCEQ** - Initiate a rate surcharge for all water use over a certain level.
- **Requires Notification to TCEQ** – Landscape watering of parks, golf courses and athletic fields using potable water are required to meet the same reduction goals and measures outlined in this stage. Exception for golf course greens and tee boxes which may be hand watered as needed.

## Stage 2

### Initiation and Termination Conditions for Stage 2

- The NTMWD has initiated Stage 2, which may be initiated due to one or more of the following:
  - The NTMWD Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the declaration of Stage 2.
  - Water demand is projected to approach or exceed the limit of the permitted supply.
  - The storage in Lavon Lake is less than 45 percent of the total conservation pool capacity.
  - NTMWD's storage in Jim Chapman Lake is less than 45 percent of NTMWD's total conservation pool capacity.
  - The Sabine River Authority has indicated that its Upper Basin water supplies used by NTMWD (Lake Tawakoni and/or Lake Fork) are in a Moderate drought. (Measures required by SRA under a Moderate drought designation are similar to those under NTMWD's Stage 2.)
  - The supply from Lake Texoma, the East Fork Raw Water Supply Project, or some other NTMWD source has become limited in availability within the next 3 months.
  - NTMWD water demand exceeds 98 percent of the amount that can be delivered to customers for three consecutive days.
  - NTMWD water demand for all or part of the delivery system exceeds delivery capacity because delivery capacity is inadequate.
  - NTMWD's supply source becomes contaminated.
  - NTMWD's water supply system is unable to deliver water due to the failure or damage of major water system components.
- Supplier's water demand exceeds 98 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 exceeds delivery capacity because delivery capacity is inadequate.
- Supply source becomes contaminated.
- Supply source is interrupted or unavailable due to invasive species.

- Supplier’s water supply system is unable to deliver water due to the failure or damage of major water system components.
- Supplier’s individual plan may be implemented if other criteria dictate.
- 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.

Goals for Use Reduction and Actions Available under Stage 2

The goal for water use reduction under Stage 2 is a reduction of ten percent (10%) in the amount of water obtained from NTMWD from the previous annual payment period prior to drought restrictions. If circumstances warrant or if required by NTMWD, the Town Manager, Mayor, or official designee can set a goal for greater or lesser water use reduction. The Town Manager, Mayor, or official designee may order the implementation of any or all of the actions listed below, as deemed necessary to achieve a ten percent reduction. Measures described as “requires notification to TCEQ” impose mandatory requirements on customers. The supplier must notify TCEQ and NTMWD within five business days if these measures are implemented:

- Continue or initiate any actions available under Stage 1.
- Notify wholesale customers of actions being taken and request them to implement similar procedures.
- Implement viable alternative water supply strategies.
- All users are encouraged to reduce the frequency of draining and refilling swimming pools.
- **Requires Notification to TCEQ** – Limit landscape watering with sprinklers or irrigation systems at each service address to once per week on designated days between April 1 – October 31. Zone I will be permitted to water on Monday. Zone II will be permitted to water on Wednesday. Zone III will be permitted to water on Friday. Limit landscape watering with sprinklers or irrigation systems at each service address to once every other week on designated days between November 1 – March 31. Zone I will be permitted to water on Monday on second and fourth weeks only. Zone II will be permitted to water on Wednesday on second and fourth weeks only. Zone III will be permitted to water on Friday on second and fourth weeks only. Exceptions are as follows:
  - New construction may be watered as necessary for 30 days from the date of the installation of new landscape features.

- Foundations, new plantings (first year) of shrubs, and trees (within a ten foot radius of its trunk) may be watered for up to two hours on any day by a hand-held hose, a dedicated zone using a drip irrigation system and/or soaker hose provided no runoff occurs.
- Public athletic fields used for competition may be watered twice per week.
- Locations using alternative sources of water supply only for irrigation may irrigate without day of the week restrictions provided proper signage is employed. However, irrigation using alternative sources of supply is subject all other restrictions applicable to this stage. If the alternative supply source is a well, proper proof of well registration with the North Texas Groundwater Conservation District or Red River Ground Water Conservation District is required. Other sources of water supply may not include imported treated water.
- Hand watering with shutoff nozzle, drip lines, and soaker hoses is allowed before 10 am and after 6 pm provided no runoff occurs.
- **Requires Notification to TCEQ – Prohibit hydro seeding, hydro mulching, and sprigging.**
- **Requires Notification to TCEQ - Initiate a rate surcharge as requested by NTMWD.**
- **Requires Notification to TCEQ - Initiate a rate surcharge for all water use over a certain level.**
- **Requires Notification to TCEQ – If NTMWD has imposed a reduction in water available to Member Cities and Customers, impose the same percent reduction on wholesale customers.**
- **Requires Notification to TCEQ – Landscape watering of parks and golf courses using potable water are required to meet the same reduction goals and measures outlined in this stage. Exception for golf course greens and tee boxes which may be hand watered as needed.**

## Stage 3

### Initiation and Termination Conditions for Stage 3

- The NTMWD has initiated Stage 3, which may be initiated due to one or more of the following:
  - The NTMWD Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the declaration of Stage 3.
  - Water demand is projected to approach or exceed the limit of the permitted supply.
  - The storage in Lavon Lake is less than 35 percent of the total conservation pool capacity.
  - NTMWD's storage in Jim Chapman Lake is less than 35 percent of NTMWD's total conservation pool capacity.
  - The Sabine River Authority has indicated that its Upper Basin water supplies used by NTMWD (Lake Tawakoni and/or Lake Fork) are in a Severe drought or Emergency.
  - The supply from Lake Texoma, the East Fork Raw Water Supply Project, or some other NTMWD source has become severely limited in availability.
  - NTMWD water demand exceeds the amount that can be delivered to customers.
  - NTMWD water demand for all or part of the delivery system seriously exceeds delivery capacity because the delivery capacity is inadequate.
  - NTMWD's supply source becomes contaminated.
  - NTMWD's water supply system is unable to deliver water due to the failure or damage of major water system components.
- Supplier's water demand exceeds the amount that can be delivered to customers.
- Supplier'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.
- Supplier's water supply system is unable to deliver water due to the failure or damage of major water system components.
- Supplier's individual plan may be implemented if other criteria dictate.
- 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.

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

The goal for water use reduction under Stage 3 is a reduction of whatever amount is necessary in the amount of water obtained from NTMWD from the previous annual payment period prior to drought restrictions. If circumstances warrant or if required by NTMWD, the Town Manager, Mayor, or official designee can set a goal for greater or lesser water use reduction.

The Town Manager, Mayor, or official designee may order the implementation of any or all of the actions listed below, as deemed necessary. Measures described as “requires notification to TCEQ” impose mandatory requirements on member cities and customers. The supplier must notify TCEQ and NTMWD within five business days if these measures are implemented.

- Continue or initiate any actions available under Stages 1, and 2.
- Notify wholesale customers of actions being taken and request them to implement similar procedures.
- Implement viable alternative water supply strategies.
- **Requires Notification to TCEQ** – Initiate mandatory water use restrictions as follows:
  - Hosing and washing of paved areas, buildings, structures, windows or other surfaces is prohibited except by variance and performed by a professional service using high efficiency equipment.
  - Prohibit operation of ornamental fountains or ponds that use potable water except where supporting aquatic life or water quality.
- **Requires Notification to TCEQ** – Prohibit new sod, hydro seeding, hydro mulching, and sprigging.
- **Requires Notification to TCEQ** – Prohibit the use of potable water for the irrigation of new landscaping.
- **Requires Notification to TCEQ** – Prohibit all commercial and residential landscape watering, except that foundations and trees (within a ten foot radius of its trunk) may be watered for two hours one day per week with a hand-held hose, a dedicated zone using a drip irrigation system and/or soaker hose provided no runoff occurs. ET/Smart irrigation systems and drip irrigation systems are not exempt from this requirement.
- **Requires Notification to TCEQ** – Prohibit washing of vehicles except at commercial vehicle wash facilities.

- **Requires Notification to TCEQ** – Landscape watering of parks, golf courses, and athletic fields with potable water is prohibited. Exception for golf course greens and tee boxes which may be hand watered as needed. Variances may be granted by the water provider under special circumstances.
- **Requires Notification to TCEQ** – Prohibit the filling, draining and refilling of existing swimming pools, wading pools, Jacuzzi and hot tubs except to maintain structural integrity, proper operation and maintenance or to alleviate a public safety risk. Existing pools may add water to replace losses from normal use and evaporation. Permitting of new swimming pools, wading pools, Jacuzzi and hot tubs is prohibited.
- **Requires Notification to TCEQ** – Prohibit the operation of interactive water features such as water sprays, dancing water jets, waterfalls, dumping buckets, shooting water cannons, or splash pads that are maintained for public recreation.
- **Requires Notification to TCEQ** – Require all commercial water users to reduce water use by a percentage established by the Town Manager, Mayor, or official designee.
- **Requires Notification to TCEQ** – If NTMWD has imposed a reduction in water available to Member Cities and Customers, impose the same percent reduction on wholesale customers.
- **Requires Notification to TCEQ** - Initiate a rate surcharge for all water use over normal rates for all water use.

#### **4.4 PROCEDURES FOR GRANTING VARIANCES TO THE PLAN**

The Town Manager, Mayor, or official designee may grant temporary variances for existing water uses otherwise prohibited under this Water Resource and Emergency Management 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 Town Manager, Mayor, or official designee. 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.

#### **4.5 PROCEDURES FOR ENFORCING MANDATORY WATER USE RESTRICTIONS**

Mandatory water use restrictions may be imposed in Stage 1, Stage 2 and Stage 3 Water Resource and Emergency Management Plan stages. The penalties associated with the mandatory water use restrictions will be determined by each entity.

Appendix D contains the Town of Prosper draft ordinance to be adopted by the Town Council regarding the water resource and emergency management plan, including enforcement of same.

#### **4.6 COORDINATION WITH THE REGIONAL WATER PLANNING GROUP AND NTMWD**

Appendix C includes a copy of a letter sent to the Chairs of the Region C Water Planning Group and the North East Texas Water Planning Group with this model Water Resource and Emergency Management plan.

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

#### **4.7 REVIEW AND UPDATE OF WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN**

As required by TCEQ rules, Member Cities and Customers must review the Water Resource and Emergency Management plan every five years. The plan will be updated as appropriate based on new or updated information.