

**UPPER TRINITY REGIONAL WATER DISTRICT  
Draft Model Water Conservation Plan  
February 2019**

**Comments on Upper Trinity's Draft Model Water Conservation Plan  
Requested by March 25**

Upper Trinity is pleased to provide this draft of its updated Model Water Conservation Plan. Certain utilities are required to update their respective Water Conservation Plans and submit those to the Texas Commission on Environmental Quality and/or the Texas Water Development Board, according to state law. Evaluating and updating Water Conservation Plan are a good practice to evaluate the effectiveness of the programs and practices that respective utility has implemented to reduce peak and total water usage in its service area.

If you have any comments or questions, please forward to Blake Alldredge at [balldredge@utrwd.com](mailto:balldredge@utrwd.com) by March 25, 2019.

# Water Conservation Plan for [Name of Entity] *[Date]*

## SECTION 1

### Introduction and Objectives

Water supply has always been a key issue in the development of Texas. In recent years, the growing population and economic development of North Central Texas has led to increasing demands for water. Additional supplies to meet higher demands will be expensive and difficult to develop. Therefore, it is important that we make efficient use of existing supplies - - to minimize the need for new resources.

Effective water conservation can postpone or reduce the need for development of new water supplies, minimize the associated environmental impacts and reduce the high cost of water supply development. Even with robust conservation measures, new sources of water will be needed; conservation alone is not enough. To respond to the growing population of this region, the planning for new water resources must continue. [Name of Entity] considers water conservation (including reuse of reclaimed wastewater) an integral part of this planning process and water supply development process.

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (“TCEQ”) has promulgated guidelines and requirements governing the development of water conservation plans for Public Water Suppliers. [Name of Entity] developed its original plans for water conservation and drought contingency in [Date], later amended in [Date(s)]. This update of the Water Conservation Plan (the “Plan”) has been coordinated with the suggested model water conservation plan prepared by Upper Trinity Regional Water District (“UTRWD”) for its Members and Customers, such as [Name of Entity]; and is consistent with the latest TCEQ requirements outlined below.

Water is a basic tenant in all aspects of sustainability. Water conservation is one critical element of a water supplier’s effort to meet future water supply needs, in an economical manner and without sacrificing quality of life standards. The following are the central objectives of this Plan:

- Reduce water consumption from levels that would prevail without conservation efforts;
- Reduce the loss and waste of water, as evidenced by per capita use;
- Provide support and incentives to retail customers to maintain and continue sound conservation practices;
- Continue to improve efficiency in the use of water and
- Extend the adequacy of current water supplies by reducing the pace of growth in the annual demand for water.

#### 1.1 Texas Commission on Environmental Quality Rules

TCEQ rules governing the development of water conservation plans for Public Water Suppliers, such as [Name of Entity], are contained in Title 30, Part 1, Chapter 288, Subchapter A and Rule 288.2 of the Texas Administrative Code (“TAC”). A copy of these rules is included in Appendix A. The rules define a water conservation plan 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.”

New rules amending 30 TAC Chapter 288 were approved by TCEQ commissioners on November 14, 2012 and made effective on December 6, 2012. The following is a summary of the key changes:

- A utility profile must be prepared in accordance with the Texas Water Use Methodology; water use data must include total gallons per capita per day (GPCD) **and** residential GPCD;
- All Public Water Suppliers must classify water sales and uses into the most detailed level of water use data currently available to the record management system (e.g., (i) residential (single family and multi-family), (ii) commercial, (iii) institutional, (iv) industrial, (v) agricultural and (vi) wholesale);
- Five-year and ten-year targets for water savings must include goals for municipal use in total GPCD **and** residential GPCD and
- The term “unaccounted-for uses of water” is replaced with “water loss.”

A. Minimum Water Conservation Plan Requirements

The minimum requirements for water conservation plans for municipal uses by Public Water Suppliers required by TCEQ are summarized below.

- *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 GPCD and residential GPCD), water supply system data and wastewater system data. (Section 2)
- *Record Management System:* 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 following sectors: (i) residential (single family and multi-family), (ii) commercial, (iii) institutional, (iv) industrial, (v) agricultural and (vi) wholesale). (Section 3)
- *Goals:* 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 are not enforceable under this subparagraph. (Section 4)
- *Accurate Metering Devices:* Metering devices have an accuracy of plus or minus five percent (5%) for measuring water diverted from the source of supply. (Section 5.1)
- *Universal Metering, Testing, Repair and Replacement:* A program for universal metering of both customer and public uses of water, for meter testing and repair and for periodic meter replacement. (Section 5.2)

- *Determination and Control of Water Loss:* Specific measures to determine and control water loss. The measures may include periodic visual inspections along distribution pipelines, periodic audits of the water system for illegal connections or abandoned services. (Section 5.3)
- *Continuing Public Education Program:* A continuing public education and information program regarding water conservation is required as part of the Plan. (Section 5.4)
- *Non-Promotional Water Rate Structure:* A water rate structure that is not “promotional,” that is, rates that discourage waste and excessive use of water such as increasing block rate instead of volume discounts. (Section 5.5)
- *Landscape Water Management Strategy:* Implementing and achieving the efficient use and stewardship of water in landscape irrigation, including watering a maximum of two times per day and time-of-day watering provisions. It is an optional strategy within the TCEQ regulations. However, UTRWD recommends that [Name of Entity] implement a landscape water management ordinance as part of the Plan. (Section 5.6)
- *Reservoir Systems Operational Plan:* If applicable, providing for the coordinated operation of reservoirs owned by the water supply entity within a common watershed or river basin in order to optimize available water supplies. (Section 5.7)
- *Means of Implementation and Enforcement:* The regulations require a strategy for implementing and enforcing the provisions of this Plan, as evidenced by an ordinance, resolution or tariff, and a description of the authority by which the Plan is enforced. (Section 8)
- *Coordination with Regional Water Planning Group:* Document that the Plan has been coordinated with the Regional Water Planning Group to ensure consistency with the appropriate approved regional water plan. (Section 9)

**B. Additional Requirements for Larger Public Water Suppliers**

Water conservation plans for municipal uses by Public Drinking Water Suppliers serving a population of 5,000 or more and/or a projected population of 5,000 or more within the 10 years subsequent to the effective date of this Plan must include the elements summarized below.

- *Program of Leak Detection, Repair and Water Loss Accounting:* A program of leak detection, repair and water loss accounting for the water transmission, delivery and distribution system in order to control for water loss. (Section 6.1)
- *Wholesale Customer Requirements:* If applicable, a requirement in every wholesale water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements in Title 30 TAC Chapter 288. (Section 6.2)

**C. Enhanced Water Conservation Program Strategies**

TCEQ rules identify the following strategies as optional, if they are necessary to achieve the stated water conservation goals of the Plan.

- Conservation-oriented water rates and water rate structures (Section 5.5);

- 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 (Section 7.1);
- A program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;
- Reuse and/or recycling of wastewater and/or gray water, where feasible and appropriate (Section 7.2);
- A program for pressure control and/or reduction in the distribution system and/or for customer connections (Section 7.3);
- A method for monitoring the effectiveness and efficiency of the Plan (Section 7.4 and Section 10) and
- Any other water conservation practice, method or technique which the Public Water Supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan (Section 7.5 – 7.10).

This Plan sets forth a program of long-term measures under which the [Name of Entity] can improve the overall efficiency of water use and conserve its water resources. Short-term measures that respond to specific water management conditions (i.e., periods of drought, unusually high water demands, unforeseen equipment or system failure or contamination of a water supply source) are provided in the [Name of Entity]'s Drought Contingency Plan.

## **SECTION 2**

### **Water Utility Profile**

Appendix B to this Plan provides the utility profile as recommended by TCEQ. The utility profile must be in accordance with the Texas Water Use Methodology developed by the Texas Water Development Board ("TWDB") and TCEQ to include information regarding population and customer data, water use data, water supply system data (including total GPCD and residential GPCD) and wastewater system data. A copy of the utility profile for [Name of Entity] will also be provided to UTRWD.

*(Additional information may be included in this section if desired)*

## **SECTION 3**

### **Record Management System**

[Entity Name]'s current record management system is able to classify water use data into the following sectors: [list sectors – i.e., residential (single family and multi-family), commercial, institutional, industrial, agricultural and wholesale]. When [Name of Entity] upgrades its software, which is expected to occur [approximate date], [Name of Entity] will purchase software capable of reporting detailed water use data to include all sectors (residential, commercial, institutional, industrial, agricultural and wholesale).

**Guidance.** *Public Water Suppliers must classify water sales and uses into the most detailed level of water use data currently available to the record management system (e.g., (i) residential (single family and multi-family), (ii) commercial, (iii) institutional, (iv) industrial, (v) agricultural and (vi) wholesale). If Public Water Suppliers' current record management system is not able to capture water sales and uses at this detailed level, Public Water Suppliers do not need to purchase new software immediately, but will need to purchase the appropriate software when upgrading.*

## SECTION 4

### Water Conservation Planning Goals

TCEQ rules require the adoption of specific water conservation goals as part of the Plan. [Name of Entity] has developed 5-year and 10-year target water saving goals (see Table 4.1 below) for municipal use in total GPCD and residential GPCD. Specific water conservation strategies are discussed in the subsequent sections of this Plan. The goals of this Plan include the following:

- Maintain accurate supply source metering to measure and account for the amount of water diverted from the source of supply;
- Maintain a program of universal metering, meter replacement and repair and periodic meter replacement;
- Maintain the level of water loss in [Name of Entity]'s water system below ~~5%~~15% annually;
- Raise public awareness of water conservation and encourage responsible public behavior through a coordinated public education and information program;
- Continue to implement a water rate structure to encourage water conservation;
- *(if applicable)* Maintain a reservoir systems operations plan, providing for the coordinated operation of reservoirs;
- Implement and enforce the Plan by officially adopting the Plan through an ordinance / resolution / tariff, describing the authority by which [Name of Entity] will implement and enforce the Plan and documenting coordination with the Region C Water Planning Group;
- *(applicable to larger Public Water Suppliers)* Maintain a program of leak detection and repair;
- *(if applicable)* Ensure that each wholesale customer develops and implements a water conservation plan with similar and consistent strategies as provided in this Plan;
- Decrease waste in lawn irrigation by implementing and enforcing landscape water management regulations and
- *(Include other goals as appropriate)*

**Table 4.1**  
**Municipal Per Capita Target Water Saving Goals**

Description	5-Year Goal (GPCD)		10-Year Goal (GPCD)	
	*Total	Residential	*Total	Residential
Average Per-Capita Municipal Use				
Less Projected Reduction Due to Elements in this Plan				
<b>Water Conservation Goals</b>				

\*Includes (i) residential (single family and multi-family), (ii) commercial, (iii) institutional, (iv) industrial, (v) agricultural and (vi) wholesale

	<u>Historic 5-yr Average</u>	<u>Baseline</u>	<u>5-yr Goal for year</u>	<u>10-yr Goal for year</u>
<u>Total GPCD<sup>1</sup></u>				
<u>Residential GPCD<sup>2</sup></u>				
<u>Water Loss (GPCD)<sup>3</sup></u>				
<u>Water Loss (%)<sup>4</sup></u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>

1. Total GPCD = (Total Gallons in System ÷ Permanent Population) ÷ 365

2. Residential GPCD = (Gallons Used for Residential Use ÷ Residential Population) ÷ 365

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

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

Guidance. Utilities can use the Texas Water Development Board Municipal Water Conservation Planning Tool to help determine 5 and 10-year water use goals. The Tool can also help utilities determine the effectiveness of certain best management practices in reducing water usage. The Tool can be downloaded from the TWDB website.

## SECTION 5

### Basic Water Conservation Strategies

This section outlines the [Name of Entity]'s basic water conservation program strategies that are planned to be implemented to achieve or exceed the stated water conservation goals above.

#### 5.1 Accurate Supply Source Metering

[Name of Entity] uses the following source(s) of water: groundwater pumped plus treated surface water supplied by UTRWD. [Name of Entity] meters all water delivered into the distribution system from each water well site using meters having an accuracy of plus or minus five percent (5%). [Name of Entity] currently calibrates its meters at each water well site on a regular basis and regularly checks the calibration of each meter at one (1) to two (2) year intervals.

For surface water, UTRWD measures all water delivered to [Name of Entity] using meters with an accuracy of plus or minus two percent (2%) in accordance with American Water Works Association ("AWWA") standards. Said meters are calibrated annually in accordance with AWWA standards. When necessary, UTRWD repairs or replaces meters not conforming to an accuracy of plus or minus two percent (2%).

#### 5.2 Universal Metering, Meter Testing and Repair and Periodic Meter Replacement

Water usage for all customers of the [Name of Entity], including public and governmental users, is metered. (Mention any exceptions. If exceptions, describe a plan to meter, as appropriate.)

[Name of Entity] will continue to implement its meter testing and calibration program of its service connections to identify any water loss and to determine if the meter readings are outside the acceptable range according to AWWA standards (*Describe program, e.g., testing schedule, etc.*).

Meters registering any unusual or questionable readings are tested for accuracy. Inaccurate meters are repaired or replaced as needed. [Name of Entity] replaces meters at 10 to 15-year intervals depending on meter size. Repair or replacement of larger general service meters is generally provided at 5-year intervals.

[Name of Entity] understands the benefits of Advanced Metering Infrastructure (AMI), including greater customer service opportunities and alerting retail customers of potential leaks. [Name of Entity] will evaluate the costs and benefits of implementing AMI in the future and will determine if it is a feasible solution for conservation efforts.

*(Further describe program as necessary.)*

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

Water loss is the difference between the amount of water produced or received and the amount delivered to retail, public and governmental users - - plus authorized but unmetered uses. Water loss can include several categories:

- Inaccuracies in retail meters;
- Accounts which are being used but have not yet been added to the billing system;
- Losses due to water main breaks and leaks in the water distribution system;
- Losses due to illegal connections and theft and
- Unmetered uses such as firefighting, flushing water mains and water for public buildings and water treatment plants.

Measures to control water loss are part of the routine operations of [Name of Entity]. Field crews and other personnel are expected to look for and report evidence of leaks in the water distribution system. Personnel are trained to watch for and report signs of illegal connections so they can be quickly addressed.

Water loss is calculated in accordance with the water utility profile in Appendix B. With the measures described in this Plan, the goal for [Name of Entity] is to maintain its water loss below ~~five~~fifteen percent (15%) annually. If water loss exceeds this goal, [Name of Entity] will complete an audit of its water distribution system to determine the source(s) of and reduce the water loss.

According to the Texas Water Code Section 16.0121, all retail public water suppliers are required to submit a water loss audit once every five years. Retail public water suppliers with either an active financial obligation with the TWDB or having more than 3,300 connections must submit a water loss audit every year. [Name of Entity] will complete the water loss audit every [Number] years(s) as required, and will be ~~The annual conservation report described in Section 10 is the~~ primary tool that ~~should~~will be used to monitor water loss.

(Further describe measures for determining and controlling water loss as necessary.)

#### 5.4 Continuing Public Education and Information Program

The ultimate success of any water conservation program is dependent on an informed public. Individual retail customers must have an awareness of the benefits and needs for water conservation. They must also have knowledge of how to contribute to the success of the Plan. [Name of Entity]'s public education and information program, (if applicable) including dedicated staff for this program, is designed to provide information to as many retail customers as possible. [Name of Entity] works in collaboration with UTRWD to provide this information. [Name of Entity] will promote its water conservation strategies outlined in this Plan as well as the measures and activities discussed below.

- Informative School Program. Provide water conservation information to area schools. This may consist of providing ~~textbook covers containing water conservation messages, integrating curriculum into school classrooms (e.g., *Waters to the Sea: Trinity River*) and educating students through poster contests~~literature and coloring books, classroom presentations, demonstrations, etc. Staff may also coordinate with local schools to have Upper Trinity staff make presentations and demonstrations about water conservation and watershed protection, including an Enviroscape watershed model, rainfall simulator, stream erosion trailer, etc.
- Literature Program. Insert water conservation information with water bills at least twice per year as well as make information available to the public at utility offices or other public places. Information may include material developed by [Name of Entity]'s staff using material obtained from UTRWD, AgriLife Water University, TWDB, TCEQ and other sources that pertain to water conservation in general and specific to landscape irrigation conservation.
- Special Events and Promotions. Make available promotional / educational items at special events focusing on water conservation in the landscape, home and business. Items may include Texas SmartScape® bookmarks, water bottles, toilet-leak test kits, water conservation coloring books, etc.
- Website. Make information on water conservation available on [Name of Entity]'s website and include links to sites with good information about water conservation, such as to Texas SmartScape, AgriLife Water University, TWDB and TCEQ.
- Speaking Engagements. Notify local organizations, schools and civic groups that [Name of Entity]'s staff, and staff of UTRWD, are available to make presentations on the importance of water conservation and the best ways to save water.

As a demonstration project, UTRWD maintains a water conservation garden to showcase the beauty and practicality of a water-conserving landscape. The conservation garden includes over 100 varieties of plants that are either native to North Texas or well adapted to the area, and is available for use by [Name of Entity], garden clubs, developers or other civic groups who desire to advance their knowledge and use of water conservation practices in home and business landscapes.

Other best management practices that may be included as part of the public education and information program:

- Public service announcements;
- Water efficient landscape judging / competition and
- Awards / certificates to recognize water efficient commercial users – recognize water saving landscape designs

*(Further describe public education and information program as necessary.)*

## **5.5 Non-Promotional Water Rate Structure**

[Name of Entity] has adopted an increasing block water rate structure that is intended to encourage water conservation and discourage waste and excessive use of water.

*(Further describe public water rate structure as necessary.)*

**Guidance.** An example water rate structure is below:

### 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 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.

*\*The residential rate can also include a lower tier (a life-line rate) 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 two (2) tiers, with rates for the 2<sup>nd</sup> tier at 1.25 to 2.0 times the first tier. Higher water rates for commercial irrigation use are encouraged, but not required.*

## **5.6 Landscape Water Management Program/Ordinances**

[Name of Entity] seeks to promote the efficient use and stewardship of water and to help UTRWD provide a consistent message throughout its service area. [Name of Entity] has implemented the following landscape water management strategies:

- Time of Week. Limit outdoor watering (automatic systems or hose-end sprinklers) to no more than two (2) times per week. Watering with hand-held hoses, soaker hoses or drip irrigation is allowed at any time.

- Time of Day Watering. No outdoor watering with automatic irrigation systems or hose-end sprinklers from 10:00 a.m. to 6:00 p.m. each day beginning June 1 and ending September 30 of each year. Watering with hand-held hoses, soaker hoses or drip irrigation systems is allowed at any time.

These strategies are intended to be actively promoted by [Name of Entity] through public information programs for voluntary compliance by its customers. These strategies become mandatory and enforceable under the Drought and Emergency Response Stages 1 through 34.

In addition, [Name of Entity] and UTRWD have implemented the 'Water My Yard' outdoor watering management program to [Name of Entity]'s area. The 'Water My Yard' website, WaterMyYard.org, allows residents to receive weekly lawn watering recommendations, which are given in minutes. Recommendations are based on data from three weather stations that UTRWD maintains, as well as the landscape's needs, to prevent unnecessary overwatering. 'Water My Yard' is provided at no cost to residents, and [Name of Entity] will promote 'Water My Yard' in utility bills, newsletters and websites as appropriate.

**Guidance.** *For many utilities, water use rises 50% or more during summer months, taking a toll on water treatment and delivery infrastructure and available water resources. Managing peak season water demand is a component of water sustainability. As part of the development of this Plan, UTRWD recommends the implementation of landscape water management strategies consistent with UTRWD. The strategies are intended to reduce waste in landscape irrigation and peak water demands.*

*Additional strategies that may be adopted to reduce waste in landscape irrigation include:*

- *Require all new irrigation systems include rain and freeze sensors;*
- *Require all new irrigation systems be in compliance with state design and installation standards (TAC Title 30, Part 1, Chapter 344);*
- *Prohibit the ~~design and installation~~operation of irrigation systems that spray directly onto impervious surfaces such as sidewalks and roads or onto other non-irrigated areas;*
- *Require well maintained automatic irrigation systems to avoid waste of water, such as repairing broken sprinkler heads, or leaking or broken valves or pipes;*
- *Prohibit outdoor watering during any form of precipitation and during freezing temperatures and;*
- *Enforce strategies by a system of warnings followed by fines for continued or repeat violations.*

## 5.7 Reservoir Systems Operations Plan

Not applicable to [Name of Entity] because [Name of Entity] does not own any reservoirs.

**Guidance.** A reservoir systems operations plan is required only for those Public Water Suppliers that own reservoirs within a common watershed or river basin. The purpose of this requirement is to provide for the coordinated operation of these reservoirs to optimize available water supplies.

## SECTION 6

### Requirements for Larger Public Drinking Water Suppliers

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 ten (10) years subsequent to the effective date of this Plan must include the elements below.

#### 6.1 Leak Detection, Repair and Water Loss Program

Most water leaks, illegal connections, abandoned water services or other means of water loss are discovered through the visual observation of field crews and other personnel, or are reported by the public. [Name of Entity] trains its personnel (e.g., meter readers, maintenance crews, etc.) to look for and report evidence of water leaks in the water distribution system to the appropriate department. Personnel are asked to watch for and report signs of illegal connections and abandoned services. All leaks are repaired as soon as possible, and all illegal connections and abandoned services are investigated as soon as possible in order to maintain a sound water system. Areas of the water distribution system in which numerous leaks and line breaks occur are programmed for replacement, as funds are available.

Specialized, state-of-the-art leak detection equipment is available to utilities in Texas to borrow free of charge from the Conservation Division of the TWDB to reduce water loss by detecting water leaks within the water distribution system.

*(Further describe leak detection, repair and water loss program as necessary)*

*Guidance. All retail public water suppliers are required to submit a water loss audit once every five years. The first year for this requirement was 2005, then 2010, and the next predetermined scheduled audit for this requirement is for the year 2020 and is due by May 1, 2021. Even if a retail supplier submitted a water loss audit in a non-required year, they are still required to submit one for 2020, per Texas Water Code Section 16.0121.*

*Additionally, any retail water supplier that has an active financial obligation with the Texas Water Development Board, or has more than 3,300 connections, are now required to submit an audit annually. The annual water loss audits are due on May 1st. Water loss audits must be completed by personnel trained to conduct water loss auditing. The TWDB provide in-person training and is also required to make the training available on the TWDB website.*

#### 6.2 Water Conservation Plans by Wholesale Customers

Not applicable to [Name of Entity] because [Name of Entity] does not have any successive wholesale customers.

OR

[Name of Entity] received authorization from the UTRWD Board of Directors on [Date] to provide wholesale water services to [name entities]. [Name of Entity] has language in its wholesale water supply contract with these entities requiring said entity to develop and implement a water conservation plan or water conservation measures using the applicable elements in 30 TAC Chapter 288, and having similar conservation strategies as provided in this Plan.

**Guidance.** Every contract for the wholesale of water that is entered into, renewed or extended after the effective date of this Plan will include a requirement that the wholesale customer develop and implement a water conservation plan meeting the requirements of 30 TAC Chapter 288 and including similar and consistent strategies as provided in the Plan. However, prior to entering into a contract to provide wholesale service, entities are required to gain authorization from the UTRWD Board of Directors.

## SECTION 7

### Additional Water Conservation Strategies

[Entity Name] has selected the following additional water conservation strategies, described below, to achieve the water conservation goals of the plan.

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

The State of Texas has required water-conserving fixtures in new construction and renovations since 1992, with standards updated in 2010 (Texas Administrative Code, Title 30, Section 290.252). The sState's standards call for flows of no more than 2.25 gallons per minute (gpm) at a pressure of 60 pounds per square inch (psi) for faucets, ~~3.0~~2.5 gpm for showerheads at 80 psi, and 1.28 gallons per flush for toilets, 0.5 gallons per flush for urinals, and 1.6 gpm for commercial pre-rinse spray valves. 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. [Name of Entity] has or will incorporate these plumbing code standards into its building regulations.

Over the next five (5) years, [Name of Entity] plans to evaluate the feasibility and merits of an optional rebate program to encourage replacement of older fixtures with water conserving fixtures. A rebate program may include one or more of the following concepts:

- ~~Low-flow~~High-efficiency toilet replacement and rebate;
- Pressure reduction in the system or for individual customers;
- Rain/freeze sensors for irrigation systems;
- Smart controllers for irrigation systems;
- ~~Low-flow~~High-efficiency showerhead and sink aerators replacement;
- ~~Water-efficient~~High-efficiency clothes washer rebates or
- Other water conservation incentive programs.

## **7.2 Reuse and Recycling of Wastewater and / or Gray Water**

[Name of Entity] cooperates with UTRWD in the promotion of and achieving reuse of treated effluent on a regular basis.

*(Describe internal water reuse / recycling efforts, as appropriate.)*

## **7.3 Pressure Control Program**

[Name of Entity] has determined a reasonable system pressure for each pressure zone in its retail distribution system, and has installed internal pressure control stations and customer service pressure regulators where needed.

*(Further describe pressure control program, as appropriate.)*

## **7.4 Means for Measuring Success**

[Name of Entity] will make every effort to measure and quantify water savings achieved through its programs. The water saving results will be used to monitor the effectiveness and efficiency of [Name of Entity]'s water conservation program. The results will also be regularly reported to UTRWD.

## **7.5 Water Conserving Landscaping**

As part of its public education program, [Name of Entity] encourages its retail customers to incorporate Texas SmartScape® principles into their respective landscapes. Texas Smartscape was developed through the North Central Texas Council of Governments in cooperation with cities, utilities and other agencies to educate citizens on the ecological, economic and aesthetic benefit of using landscape plants, shrubs, grasses and trees that are native or adapted to the regional climate and local conditions. Using Texas SmartScape principles -can be both practical and beautiful, using earth-friendly techniques that conserve water resources and protect water quality.

## **7.6 Watershed Protection**

Protecting our watershed is a priority need for every citizen and every community. As a double benefit, strategies that promote water conservation also tend to protect the quality of water resources. Using earth-friendly techniques, such as native and adaptive plant materials and organic techniques for landscaped areas, requires less water and less use of fertilizers, pesticides and other chemicals. Overuse or improper use of fertilizer, pesticides and other chemicals from landscape activities is also a major source of pollutants that find their way into water resources.

[Name of Entity] is participating in UTRWD's coordinated program for watershed protection aimed at educating the public about protecting local watersheds and water quality. To help communicate the important role that watersheds have in the water supply for this region, UTRWD created a watershed logo and sign for Customers', such as [Name of Entity], use. [Name of Entity] has installed [number] watershed signs along roadways / waterways as a constant reminder that we need to keep our watersheds clean.

Guidance. In 2015, Upper Trinity partnered with Denton County and the Upper Trinity Conservation Trust to develop the Denton County Greenbelt Plan (“Plan”). The Plan identifies greenbelt corridors (the vegetated areas along creeks, rivers and lakes) that are in need of preservation in order to protect water quality in the three major water supply reservoirs in Denton County. The Plan serves as a guide for municipalities, developers, landowners and others and outlines strategies that can be used to protect and preserve greenbelts in their respective areas. The Plan is voluntary in nature and can be implemented according to the needs of the stakeholders adopting the Plan. The Plan Sponsors continue to encourage the implementation of the Plan throughout the County by establishing and maintaining a Coordinating Committee, made up of a diverse group of stakeholders, to champion the Plan for years to come.

[Name of Entity] has adopted the Denton County Greenbelt Plan and is evaluating various strategies to implement in [Name of Entity]’s respective area. [Name of Entity] is also participating on the Coordinating Committee to encourage other municipalities to adopt the Plan as well.

## **7.5 Irrigation System Evaluations / Technical Assistance**

To improve water conservation and efficiency in landscape watering practices, [Name of Entity], in cooperation with UTRWD, provides technical assistance to retail customers (residential, industrial, commercial and institutional). [Name of Entity] has partnered with UTRWD to provide performs irrigation system evaluations to retail customers at no cost. During the evaluation, the licensed irrigator may identify potential system leaks, diagnose equipment malfunctions and recommend equipment upgrades to enhance water efficiency. During the evaluation, education about good landscape watering practices and the use of earth-friendly materials is also shared with the retail customer.

## **7.6 Industrial, Commercial and Institutional (ICI) Audits**

[Name of Entity], in coordination with UTRWD, offers an outreach program to assist large water users find ways to operate more efficiently, save water and energy and lower their costs. Water savings are realized as the ICI customers implement audit recommendations. In addition to these audits, ICI customers who have implemented said recommendations and have taken proactive steps in using water more wisely and efficiently are publicly recognized.

In 2018, the Denton County Commissioners Court entered into an agreement to make the Property Assessed Clean Energy (PACE) financing program available to non-residential property owners. The PACE program provides low cost, long-term financing for energy and water efficiency upgrades for commercial, industrial, institutional and multi-family properties. [Name of Entity] may promote this to ICI customers to encourage water use reduction.

## **7.9 In-House Water Conservation Efforts**

[Name of Entity] has implemented an in-house water conservation program, including the following elements (*adapt as needed*):

- [Name of Entity] uses native or adapted drought tolerant plants, trees and shrubs in the majority of its landscapes;
- Irrigation at [Name of Entity]’s facilities occurs during off-peak times at night and early

morning to avoid evaporation losses;

- Irrigation is limited to the amount needed to promote survival and health of plants and lawns, including limitation on frequency and time-of-day watering (see Section 5.6);
- Irrigation will be avoided on Saturday and Sunday if possible, since these are periods of high water use by the public and
- Irrigation will be accomplished with treated wastewater effluent wherever feasible and practicable.

## **7.10 Water Conservation Coordinator**

UTRWD has requested each Customer, such as [Name of Entity], designate a Water Conservation Coordinator. State law now requires utilities with 3,300 connections or more to designate a Water Conservation Coordinator, according to Section 13.146 of the Texas Water Code. The Conservation Coordinator is responsible for the preparation, implementation and enforcement of [Name of Entity]'s water conservation and drought contingency plans, as well as the preparation and submittal of annual conservation status reports and implementation of [Name of Entity]'s conservation program.

## **SECTION 8**

### **Implementation and Enforcement**

A copy of [Name of Entity]'s ordinance / resolution / tariff indicating official adoption of the water conservation plan is provided in Appendix C. The Water Conservation Coordinator is authorized to implement and enforce the Plan as described in Section 7.10. Such responsibilities may involve:

- Overseeing the execution and administration of all Plan elements;
- Supervising the keeping of records for the program verification and to assess the program effectiveness and
- Making recommendations for changes in the Plan as needed.

## **SECTION 9**

### **Coordination with Regional Water Planning Group and UTRWD**

[Name of Entity] has coordinated with the Region C Water Planning Group and UTRWD to ensure consistency with the approved regional water plan and UTRWD's water conservation plan. [Name of Entity] sent a copy of the draft ordinance(s) or resolution(s) implementing the Plan and the water utility profile to UTRWD for review and approval. After adoption, [Name of Entity] sent the final ordinance(s) or resolution(s), the Plan and the adopted water profile to UTRWD. Appendix D includes a copy of the letter sent to the Chair of the Region C Water Planning along with [Name of Entity]'s Plan.

## **SECTION 10**

### **Review and Update of Water Conservation Plan and Annual Reports**

As required by TCEQ rules, the [Name of Entity] will review and update this Plan every five (5) years. The Plan will be updated as appropriate based on an assessment of previous five-year and ten-year targets and any other new or updated information. The next revision of the Plan is due by May 1, 2014<sup>9</sup>. Any revised Plan must be submitted to the TCEQ within 90 days of adoption and include an implementation report as provided in Appendix E. The revised plan must also be submitted to the TWDB within 90 days of adoption.

[Name of Entity] is also required to submit an annual report. Annual reports are due to TWDB by May 1 of each year to report [Name of Entity]'s progress in implementing its water conservation plan. Said report will be used to monitor the effectiveness and efficiency of [Name of Entity]'s water conservation program. The results of the annual report may also be used to plan conservation-related activities for the following year. [Name of Entity] will send a copy of the annual report to UTRWD by March 31 of each year.