

WATER CONSERVATION PLAN

Mustang Special Utility District

June 2013

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Water Conservation Plan for Mustang Special Utility District June 2013

SECTION 1

Introduction and Objectives

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. Mustang considers water conservation 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. This update of the Water Conservation Plan (the “Plan”) is consistent with the latest TCEQ requirements outlined below.

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 municipal uses by Public Water Suppliers, such as Mustang, are contained in Title 30, Part 1, Chapter 288, Subchapter A and Rule 288.2 of the Texas Administrative Code (“TAC”). 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“A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the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 affecting retail public water suppliers:

- 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 Program / Ordinances:* Implementing and achieving the efficient use and stewardship of water in landscape irrigation, including watering a maximum of two times per week and time-of-day watering provisions. (Section 5.6)
- *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 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 Mustang 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 Mustang’s Drought Contingency Plan.

SECTION 2

Water Utility Profile

Mustang’s last required utility profile was submitted electronically to the Texas Water Development Board (“TWDB”) in 2009. A copy of this utility profile is available in the Mustang office. The utility profile is in accordance with the Texas Water Use Methodology developed by TWDB and TCEQ, and includes information regarding population and customer data, water use data, water supply system data (including total GPCD and residential GPCD) and wastewater system data.

SECTION 3

Record Management System

Mustang’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].

SECTION 4

Water Conservation Planning Goals

TCEQ rules require the adoption of specific water conservation goals as part of the Plan. Mustang 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 Mustang’s water system below 10% 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;
- Implement and enforce the Plan by officially adopting the Plan through an ordinance / resolution / tariff, describing the authority by which Mustang will implement and enforce the Plan and documenting coordination with the Region C Water Planning Group;
- Maintain a program of leak detection and repair;
- Decrease waste in lawn irrigation by implementing and enforcing landscape water management regulations and

**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	110	110	105	105
Less Projected Reduction Due to Elements in this Plan	5	5	10	10
Water Conservation Goals	105	105	95	95

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

SECTION 5

Basic Water Conservation Strategies

This section outlines Mustang’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

Mustang uses the following source(s) of water: groundwater pumped plus treated surface water supplied by UTRWD. Mustang 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%). Mustang 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.

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

Water usage for all customers of Mustang, including public and governmental users, is metered. Mustang 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.

Meters registering any unusual or questionable readings are tested for accuracy. Inaccurate meters are repaired or replaced as needed. Mustang replaces meters at 10 to 15-year intervals depending on meter size.

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 Mustang. 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 Mustang is to maintain its water loss below ten percent (10%) annually. If water loss exceeds this goal, Mustang will complete an audit of its water distribution system to determine the source(s) of and reduce the water loss. The annual conservation report described in Section 10 is the primary tool that should be used to monitor water loss.

5.4 Continuing Public Education and Information Program

Mustang's public education and information program is designed to provide information to as many retail customers as possible. Mustang 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, classroom presentations, demonstrations, etc.
- Literature Program. Insert water conservation information with water bills at least once per year as well as make information available to the public at utility offices or other public places. Information may include material developed by Mustang staff using

material obtained from UTRWD, 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 Mustang's website and include links to sites with good information about water conservation, such as to Texas SmartScape, TWDB and TCEQ.
- **Speaking Engagements.** Notify local organizations, schools and civic groups that Mustang's staff, and staff of UTRWD, are available to make presentations on the importance of water conservation and the best ways to save water.

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

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

5.5 Non-Promotional Water Rate Structure

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

5.6 Landscape Water Management Program / Ordinances

Mustang seeks to promote the efficient use and stewardship of water, and provides a consistent message throughout its service area. Mustang 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 Mustang 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 4.

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 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;*
- *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 Mustang due to not owning any reservoirs.

SECTION 6

Additional 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

Mustang 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.

6.2 Water Conservation Plans by Wholesale Customers

Mustang will include 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.

SECTION 7

Enhanced Water Conservation Strategies

Mustang 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. The state standards call for flows of no more than 2.5 gallons per minute (gpm) for faucets, 3.0 gpm for showerheads and 1.28 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. Mustang has or will incorporate these plumbing code standards into its building regulations.

Over the next five (5) years, Mustang may 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 toilet replacement and rebate;
- Pressure reduction in the system or for individual customers;
- Rain / freeze sensors for irrigation systems,
- Low-flow showerhead and sink aerators replacement;
- Water efficient clothes washer rebates or
- Other water conservation incentive programs.

7.2 Reuse and Recycling of Wastewater and / or Gray Water

Mustang cooperates with UTRWD in the promotion of and achieving reuse of treated effluent on a regular basis.

7.3 Pressure Control Program

Mustang 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.

7.4 Means for Measuring Success

Mustang 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 Mustang's water conservation program.

7.5 Water Conserving Landscaping

As part of its public education program, Mustang 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.

7.6 Watershed Protection

Mustang 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 use.

7.7 Irrigation System Evaluations / Technical Assistance

To improve water conservation and efficiency in landscape watering practices, Mustang provides technical assistance to retail customers (residential, industrial, commercial and institutional), and performs irrigation system evaluations to identify potential system leaks, diagnose equipment malfunctions and recommend equipment upgrades to enhance water efficiency.

7.8 Industrial, Commercial and Institutional (ICI) Audits

Mustang 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.

7.9 In-House Water Conservation Efforts

Mustang has implemented an in-house water conservation program, including the following elements:

- Uses native or adapted drought tolerant plants, trees and shrubs in the majority of its landscapes;
- Irrigation of 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

Mustang has designated a Water Conservation Coordinator. The Conservation Coordinator is responsible for the preparation, implementation and enforcement of the water conservation and drought contingency plans, as well as the preparation and submittal of annual conservation status reports and implementation of Mustang's conservation program.

SECTION 8

Implementation and Enforcement

A copy of Mustang's ordinance indicating official adoption of the water conservation plan is provided in Appendix A. 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

Mustang 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.

SECTION 10

Review and Update of Water Conservation Plan and Annual Reports

As required by TCEQ rules, Mustang 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. Any revised Plan must be submitted to the TWDB within 90 days of adoption of the community water system.

Mustang is also required to submit an annual report on the progress in implementing its water conservation plan. Retail public water suppliers providing water service to 3,300 or more connections must also submit an annual report to TWDB by May 1 of each year. Said report will be used to monitor the effectiveness and efficiency of Mustang's water conservation program.

APPENDIX A

Ordinance or Resolution from Governing Body Adopting the Water Conservation Plan

ORDER 062413-01

AN ORDER ADOPTING THE MUSTANG SPECIAL UTILITY DISTRICT WATER CONSERVATION PLAN; PROVIDING A PENALTY CLAUSE AND PROVIDING A SEVERABILITY CLAUSE.

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

WHEREAS, the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require a Water Conservation Plan; and

WHEREAS, the water conservation plan establishes certain rules and policies for the orderly and efficient management of water supplies to reduce consumption, reduce waste and improve water use efficiency.

NOW THEREFORE, BE IT ORDERED THAT:

SECTION 1. The Water Conservation Plan attached hereto and made a part hereof are hereby adopted as the official policy of Mustang SUD.

SECTION 2. The terms and provisions of this Order shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause or phrase should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause or phrase of this ordinance.

PASSED AND APPROVED BY THE BOARD OF DIRECTORS OF THE MUSTANG SPECIAL UTILITY DISTRICT, THIS 24TH DAY OF JUNE 2013.

Bill Hathaway, President

Attest: _____
James Burnham, Secretary