# WATER CONSERVATION PLAN

# FOR CITY OF SILSBEE, TEXAS

#### 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 in Region I, have led to growing demands for water. At the same time, local and less expensive sources of water supply are largely developed. Additional supplies to meet higher demands will be expensive and difficult to develop. Therefore, it is important that we conserve our supply to make it 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 public water suppliers. The TCEQ guidelines and requirements for water suppliers are included in Appendix A. The City of Silsbee has adopted this water conservation plan pursuant to TCEQ guidelines and requirements.

The objectives of the water conservation plan are:

- To reduce water consumption
- To reduce the loss and waste of water
- To identify the level of water reuse
- To improve efficiency in the use of water
- To extend the life of current water supplies by reducing the rate of growth and demand

# 2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES

#### 2.1 <u>Conservation Plans</u>

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"A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the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

#### Table 3.1

#### Summary of Water Utility Profile for the City of Silsbee

Water Service Area = <u>N/A</u> square miles

Miles of Distribution Pipe = Approx. N/A miles

**Population:** 

Current Population = <u>9960</u> in 2018

2000 Population --- <u>6393</u>

Projected 2050 Population = 10,000

#### **Connections:**

Current Connections = 3320 in 2018

Total Increase in Connections in Last Five Years = 115

#### Information on Water Use for the Last Five Years

	<u>Use (Million Gal)</u>	<u>Est. Pop</u>	<u>Unaccounted Water</u>	<u>Per Capita</u>	<u>Peak to Avg. Ratio</u>
Year					
2016	326,713,100	9,546	105,325,400	94	2.31
2015	284,911,608	9,864	74,557,508	79	2.48
2014	309,971,064	9,849	75,545,380	86	2.70
2013	309,275,575	9,927	58,502,900	85	1.88
2012	326,467,120	9,921	71,562,220	90	1.97

\*Source of population estimate is US Census

#### Water Supply Source(s) = Chicot and Evangeline Aquifers.

#### **Treatment and Distribution System:**

Treatment Plant Capacity = 2,275000 million gallons per day

Elevated Storage = 650,000 million gallons

Ground Storage = 1,625,000 million gallons

#### **Current Total Annual Wastewater Flow =** <u>287,092,200</u> million gallons in 2018.

The TWDB projections include the impact of low-flow plumbing fixtures and water conservation measures that have been in effect since at least 2000 but do not include the effect of water conservation measures recommended in this plan. The impact of low-flow plumbing fixtures has been itemized to show the total amount of projected water conservation in the City of Silsbee. Table 3.2 shows the projected per capita water use after implementation of this water conservation plan.

#### Table 3.2

#### Per Capita Use Without Implementing of Water Conservation Measures Beyond Those in Effect in 2000 and Water Conservation Goals

Description		lighest Historical	Five Year Goal	Ten Year Goal
Per Capita Municipal Use	Year	GPCD	GPCD	GPCD
	2010	90	83	90

The City of Silsbee water conservation goals include the following:

- Achieve 2023 per capita municipal water use of 83 gpcd or less, as shown in Table 3.2
- Implement and maintain a meter replacement program (Section 3.4)

- Keep the level of unaccounted water in the system less than 19 percent in 2023 and subsequent years (Section 3.5)
- Raise public awareness of water conservation and encourage responsible public behavior through a public education and information program, as discussed in Section 3.6

# 3.3 Accurate Metering of Raw Water Supplies and Treated Water Deliveries

Raw water and treated water pumpage for all customers of City of Silsbee, including public and governmental users, is metered. Each meter has an accuracy of plus or minus  $1\frac{12}{5}$ . The meters are calibrated annually by qualified personnel to maintain the required accuracy and are repaired and/or replaced as needed.

# 3.4 Metering of Customers and Public Uses and Meter Testing, Repair and Replacement

Water usages for all customers of City of Silsbee, not including public and governmental users, are metered. On average the City of Silsbee replaces approximately 100 meters per year. As part of water conservation, the City of Silsbee operates a meter replacement program that will replace every meter based on its usage identified life cycle not to exceed 15 years. In addition, meter registering any unusual or questionable readings are tested and repaired or replace to restore full functionality.

# 3.5 Determination and Control of Unaccounted Water

Unaccounted water is the difference between raw water drawn from <u>Chicot and Evangeline</u> <u>Aquifers</u> and metered deliveries to customers. (This includes authorized but unmetered uses such as firefighting and releases for flushing of lines.) Unaccounted water can include several categories:

- Inaccuracies in customer meter (customer meters tend to run more slowly as they age and under-report actual use)
- Losses due to water main breaks and leaks in the water distribution system
- Losses due to illegal connections
- Other

Water losses are divided into two categories: apparent losses and real losses. Apparent water losses include water that was actually used but not accounted for, such as customer meter errors or theft. Accounting for apparent losses increases the City's utility revenue but does not reduce water usage. Real losses include leakage and overflows at the water treatment plant. Identifying and preventing real losses decreases a utility's cost and decreases water usage. The City will target real losses under this conservation strategy.

As shown in Appendix C, unaccounted water for the City of Silsbee has varied from 5.28% to 19.01% in the last 5 years. With the measure described in this plan, the City of Silsbee intends to maintain the unaccounted water below 19% in 2023 and subsequent years. If unaccounted water exceeds this goal, the City of Silsbee will implement a more intensive audit to determine the source(s) of water loss and reduce the unaccounted water.

# 3.6 Continuing Public Education and Information Campaign

The continuing public education and information campaign on water conservation for the City of Silsbee includes the following elements:

- Promote the City's water conservation measures (presented in Sections 3, 4 and 5)
- Notify local organizations, schools, and civic groups that the City of Silsbee staff is available to educate on the importance of water conservation and ways to save water
- Make water conservation plan information and other water conservation materials available to the public at the Silsbee Public Library and other public places
- Make information on water conservation available online at <u>www.cityofsilsbee.com</u> and will include links to information on water conservation on the TWDB and TCEQ websites.

#### 3.7 Non-Promotional Water Rate Structure

#### **Volume Unit Charges**

	Inside City	Outside City
First 500 gallons (minimum)*	\$14.25	\$21.38
Each additional 1,000 gallons**	\$2.50	\$ 3.75
Water Line Maintenance-per	NA	
1,000 gallons (above minimum)		

\*Effective January 2008, where water service is provided to multiple units served by one meter, The minimum rate for the first 1,000 gallons will be charged for each unit based upon ninety percent (90%) occupancy of the total number of units.

\*\*Except as required by provisions of outside City contracts.

#### 3.9 Implementation and Enforcement of the Water Conservation Plan

Appendix B contains a copy of the resolution/ordinance by Silsbee's City Council adopting this water conservation plan. The resolution designates responsible officials to implement and enforce the water conservation plan.

#### 3.10 Coordination with Regional Water Planning Group

Appendix D includes a copy of a letter sent to the Chair of the Region I Water Planning Group with this water conservation plan.

#### 4. ADDITIONAL REQUIRED WATER CONSERVATION PLAN CONTENT

The Texas Administrative Code also includes additional requirements for water conservation plans for public drinking water suppliers that serve a population of 5,000 people or more and/or a projected population of 5,000 people or more within the next ten years:

- $\delta$ 288.2(a)(2)(A)—Leak Detection, Repair, and Water Loss Accounting Sections 3.5 and 4.1
- δ288.2(a)(2)(B) Record Management System –Section 4.2
- δ288.2(a)(2)(C) Requirement for Water Conservation Plans by Wholesale Customers—Section
  4.3

#### 4.1 Leak Detection and Repair; Pressure Control

Measures to control unaccounted water are part of the routine operations of the City of Silsbee. Meter readers watch for and report signs of illegal connections so they can be addressed quickly. Crews and personnel look for and report evidence of leaks in the water distribution system. Maintenance crews respond quickly to repair leaks reported by the public and city personnel. The City of Silsbee spends approximately <u>\$16,000</u> per year to repair and replace water distribution lines and uses two distribution line maintenance crews. Areas of the water distribution system in which numerous leaks and line breaks occur are targeted for replacement as funds are available.

To reduce real water losses, the City of Silsbee will maintain a proactive water loss program. As part of this program, the City will implement the following actions:

- Conduct regular inspections of all water main fittings and connections
- Reduce repair time on leaks by additional repair staff when needed
- Limit surges in pressure

#### 4.2 Record Management System

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), the record management system for the City of Silsbee records water pumped, water delivered, and water sold;

estimates for water losses; and allows for the separation of water sales and uses into residential and commercial categories.

#### 5. OPTIONAL WATER CONSERVATION PLAN CONTENT

TCEQ rules also list optional (not required) conservation strategies, which may be adopted by suppliers to achieve the stated goals of the plan. The following optional strategies are listed in the rules and included in this plan:

- $\delta$ 288.2(a)(3)(A) Conservation Oriented Water Rates Section 3.7
- δ288.2(a)(3)(B) Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures Section 5.1

#### 5.1 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 1.6 gallons per flush for toilets. The City of Silsbee has adopted the 2015 International Plumbing, Building and Residential Codes. These codes assure that all new construction and renovations in the City of Silsbee will use water-conserving fixtures.

In addition, federal rules requiring energy-conserving clothes washers by 2007 are expected to assure that new clothes washers in the City of Silsbee will be water-efficient.

Appendix A

# SUBCHAPTER A: WATER CONSERVATION PLANS $\delta\delta$ 288.1-288.7 Effective January 10, 2008

#### $\delta$ 288.1 Definitions.

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 see 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) 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). (6) Industrial use – The use of water in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, commercial fish production, and the development of power by means other than hydroelectric, but does not include agricultural use.

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

(8) 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 waste limited to, evapotranspiration needs for vegetative maintenance and growth, salinity management, and leaching requirements associated with irrigation.

(9) Mining use—The use of water for mining processes including hydraulic use, drilling, washing sand and gravel, and oil field repressuring.

(10) Municipal per capita water use—The sum total of water diverted into a water supply system for residential, commercial, and public and institutional uses divided by actual population served.

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

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

(13) Nursery grower—A person engaged in the practice of floriculture, viticulture, silviculture, 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) Regional water planning group—A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code,  $\delta$ 16.053.

(17) 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.

(18) 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.

(19) 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).

(20) 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.

Adopted December 19, 2007

Effective January 10, 2008

 $\delta 288.2$  Water Conservation Plans for Municipal Uses by Public Water Suppliers.

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

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

(A) A utility profile including, but not limited to, information regarding population and customer data, water use date, water supply data, and wastewater system data;

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

(c) Beginning May 1, 2005, specific, quantified five-year and tenyear targets for water savings to include goals for water loss programs and goals for municipal use, in gallons per capita per day. The goals established by a public water supplier under this subparagraph are not enforceable;

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

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

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

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

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

(I) A reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies; and (J) A means of implementation and enforcement which shall be evidenced by:

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

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

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

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

(A) A program of leak detection, repair, and water loss accounting for the water transmission, deliver, and distribution system in order to control unaccounted-for uses of water;

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

(i) Residential;

(ii) Commercial;

(iii) Public and institutional; and

(iv) Industrial;

(C) A requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), and including any contract extension, that each successive wholesale customer develop and implement a water conservation plant 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 I paragraph (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 they 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 waterconserving plumbing fixtures in existing structures;

(D) Reuse and/or recycling of wastewater and/or gray water;

(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 practices, 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  $\delta$ 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 applicable requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.

(c) Beginning May 1, 2005, a public water supplier for municipal use shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. The public water supplier for municipal use shall review and update the next revision of its water conservation plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group.

Adopted September 15, 2004

Effective October 7, 2004

#### $\delta\textsc{288.3}$ Water Conservation Plans for Industrial or Mining Use.

(a) A water conservation plan for industrial or mining uses of water must provide information in response to each of the following elements. If the plan does not provide information for each requirement, the industrial or mining water user shall include in the plan an explanation of why the requirement is not applicable.

(1) A description of the use of the water in the production process, including how the water is divided and transported from the source(s) of supply, how the water is utilized in the production process, and the estimated quantity of water consumed in the production process and therefore unavailable for reuse, discharge, or other means of disposal;

(2) Until May 1, 2005, specification of conservation goals, the basis for the development of such goals, and a time frame for achieving the specified goals;

(3) Beginning May 1, 2005, specific, quantified five-year and ten-year targets for water savings and the basis for the development of such goals. The goals established by industrial or mining water users under this paragraph are not enforceable;

(4) A description of the device(s) and/or method(s) within an accuracy of plus or minus 5.0% to be used in order to measure and account for the amount of water diverted from the source of supply;

(5) Leak—detection, repair, and accounting for water loss in the water distribution system;

(6) Application of state-of-the-art equipment and/or process modifications to improve water use efficiency; and

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

(b) Beginning May 1, 2005, an industrial or mining water user 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 industrial or mining water user shall review and update the next revision of its water conservation plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group.

Adopted September 15, 2004

#### $\delta 288.4$ Water Conservation Plans for Agricultural Use.

(a) A water conservation plan for agricultural use of water must provide information in response to the following subsections. If the plan does not provide information for each requirement, the agricultural water user must include in the plan an explanation of why the requirement is not applicable.

(1) For an individual agricultural user other than irrigation:

(A) A description of the use of the water in the production process, including how the water is diverted and transported from the source(s) of supply, how the water is utilized in the production process, and the estimated quantity of water consumed in the production process and therefore unavailable for reuse, discharge, or other means of disposal;

(B) Until May 1, 2005, specification of conservation goals, the basis for the development of such goals, and a time frame for achieving the specified goals;

(C) Beginning May 1, 2005, specific, quantified five-year and ten-year targets for water savings and the basis for the development of such goals. The goals established by agricultural water users under this subparagraph are not enforceable;

(D) A description of the device(s) and/or method within an accuracy of plus or minus 5.0% to be used in order to measure and account for the amount of water diverted from the source of supply;

(E) Leak-detection, repair, and accounting for water loss in the water distribution system;

(F) Application of state-of-the-art equipment and/or process modifications to improve water use efficiency; and

(G) Any other water conservation practice, method, or technique which the user shows to be appropriate for achieving the stated goal or goals of the water conservation plant.

(2) For an individual irrigation user:

(A) A description of the irrigation production process which shall include, but is not limited to, the type of crops and acreage of each crop to be irrigated, monthly irrigation diversions, any seasonal or annual crop rotation, and soil types of the land to be irrigated; (B) A description of the irrigation method or system and equipment including pumps, flow rates, plans, and/or sketches of the system layout;

(C) A description of the device(s) and/or methods within an accuracy of plus or minus 5.0%, to be used in order to measure and account for the amount of water diverted from the source of supply;

(D) Until May 1, 2005, specification of conservation goals including, where appropriate, quantitative goals for irrigation water use efficiency and a pollution abatement and prevention plan;

(E) Beginning May 1, 2005, specific quantified five-year and ten-year targets for water savings including, where appropriate, quantitative goals for irrigation water use efficiency and a pollution abatement and prevention plan. The goals established by an individual irrigation water user under this subparagraph are not enforceable;

(F) Water-conserving irrigation equipment and application system or method including, but not limited to, surge irrigation, low pressure sprinkler, drip irrigation, and non-leaking pipe;

(G) Leak-detection, repair, and water-loss control;

(H) Scheduling the timing and/or measuring the amount of water applied (for example, soil moisture monitoring);

(I) Land improvements for retaining or reducing runoff, and increasing the infiltration of rain and irrigation water including, but not limited to, land leveling, furrow disking, terracing, and weed control;

(J) Tail water recovery and reuse; and

(K) Any other water conservation practice, method, or technique which the user shows to be appropriate for preventing waste and achieving conservation.

(3) For a system providing agricultural water to more than one user:

(A) A system inventory for the supplier's:

(i) Structural facilities including the supplier's water storage, conveyance, and delivery structures;

(ii) Management practices, including the supplier's operating rules and regulations, water pricing policy, and a description of practices and/or devices used to account for water deliveries; and (iii) A user profile including square miles of the service area, the number of customers taking delivery of water by the system, the types of crops, the types of irrigation systems, the types of drainage systems, and total acreage under irrigation, both historical and projected;

(B) Until May 1, 2005, specification of water conservation goals, including maximum allowable losses for the storage and distribution system;

(C) Beginning May 1, 2005, specific, quantified five-year and ten-year targets for water savings including maximum allowable losses for the storage and distribution system. The goals established by a system providing agricultural water to more than one user under this subparagraph are not enforceable;

(D) A description of the practice(s) and/or device(s) which will be utilized to measure and account for the amount of water diverted from the source(s) of supply;

(E) A monitoring and record management program of water deliveries, sales, and losses;

(F) A leak-detection, repair, and water loss control program;

(G) A program to assist customers in the development of on-farm water conservation and pollution prevention plans and/or measures;

(H) 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 applicable provisions of this chapter;

(I) Official adoption of the water conservation plan and goals, by ordinance, rule, resolution, or tariff, indicating that the plan reflects official policy of the supplier;

(J) Any other water conservation practice, method, or technique which the supplier shows to be appropriate for achieving conservation; and

(K) Documentation of coordination with the regional water planning groups in order to ensure consistency with appropriate approved regional water plans.

(b) A water conservation plan prepared in accordance with the rules of the United States Department of Agriculture Natural Resource Conservation Service, the Texas State Soil and Water Conservation Board, or other federal or state agency 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 that agency.

(c) Beginning May 1, 2005, an agricultural water user shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-years and ten-year targets and any other new or updated information. An agricultural water user shall review and update the next revision of its water conservation plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group.

Adopted September 15, 2004

Effective October 7, 2004

#### $\delta 288.5$ Water Conservation Plans for Wholesale Water Suppliers.

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

(1) Minimum requirements. All water conservation plans for wholesale water suppliers must include the following elements:

 (A) A description of the wholesaler's service area, including population and customer data, water use data, water supply data, and wastewater data;

(B) Unit May 1, 2005, specification of conservation goals including, where appropriate, target per capita water use goals for the wholesaler's service area, maximum acceptable unaccounted-for water, the basis for the development of these goals, and a time frame for achieving these goals;

(C) Beginning May 1, 2005, specific, quantified five-year and tenyear targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable unaccounted-for water, and the basis for the development of these goals. The goals established by wholesale water suppliers under this subparagraph are not enforceable;

(D) A description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply;

(E) A monitoring and record management program for determining water deliveries, sales, and losses;

(F) A program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system;

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

(H) A reservoir systems operation plan, if applicable, providing for the coordination operation of reservoirs owned by the applicant within a common watershed or river basin. The reservoir systems operations plans shall include optimization of water suppliers as one of the significant goals of the plan;

(I) A means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(J) Documentation of coordination with the regional water planning group for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional conservation strategies. Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of paragraph (1) of this section, if they are necessary in order to achieve the stated water conservation goals of this plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

2. 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;

3. A program to assist agricultural customers in the development of conservation pollution prevention and abatement plans;

4. A program for reuse and/or recycling of wastewater and/or gray water; and

5. Any other water conservation practices, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(3) Review and update requirements. Beginning May 1, 2005, the wholesale water supplier shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group.

Adopted September 15, 2004

Effective October 7, 2004

#### $\delta 288.6.$ Water Conservation Plans for Any Other Purpose or Use.

A water conservation plan for any other purpose or use not covered in this subchapter shall provide information where applicable about those practices, techniques, and technologies that will be used to reduce the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water.

Adopted April 5, 2000

Effective April 27, 2000

# $\delta\textsc{288.7. Plans}$ Submitted With a Water Right Application for New or Additional State Water.

(a) A water conservation plan submitted with an application for new or additional appropriation of water must include data and information which:

(1) Supports the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;

(2) Evaluates conservation as an alternative to the proposed appropriation; and

(3) Evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.

(b) It shall be the burden of proof of the applicant to demonstrate that no feasible alternative to the proposed appropriation exists and that the requested amount of appropriation is necessary and reasonable for the proposed use.

Appendix B

# ORDINANCE NO. 19-09

AN ORDINANCE OF THE CITY OF SILSBEE, TEXAS ADOPTING A WATER CONSERVATION PLAN; ESTABLISHING THE OBJECTIVES OF THE PLAN; IDENTIFYING WATER CONSERVATION GOALS; ESTABLISHING ENFORCEMENT OF THE PLAN; ESTABLISHING A PUBLIC EDUCATION AND INFORMATION CAMPAIGN; AND PROVIDING SEVERABILITY AND EFFECTIVE DATE.

WHEREAS, the City of Silsbee, Texas (the "City") recognizes that the amount of water available to the City and its water utility customers is limited due to the increasing population and economic development; and

WHEREAS, the City recognizes that it is necessary to make efficient use of the existing water supply; and

WHEREAS, Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code defines the parameters of a Water Conservation Plan; and

WHEREAS, as authorized by law, and in the best interest of the citizens of the City, the City Council deems it expedient and necessary to establish certain rules and policies to conserve water.

# NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SILSBEE, TEXAS THAT:

Section 1. Ordinance No. 11-08 of the City of Silsbee, Texas is hereby abrogated.

Section 2. The City of Silsbee, Texas hereby approves and adopts the Water Conservation Plan attached hereto as Exhibit A. The City shall implement and enforce the Water Conservation Plan and submit all necessary documents to the Texas Commission of Environmental Quality.

Section 3. The above-referenced Water Conservation Plan shall be made available for public inspection at the City Clerk's office on a permanent basis and shall be plainly labeled as being the plan adopted by the City.

Section 4. All ordinances that are in conflict with the provisions of this ordinance and the same are hereby replaced and all other ordinances of the City not in conflict with the provisions of this ordinance shall remain in full effect. Section 5. Should any paragraph, sentence, subdivision, clause, or provision of this ordinance be adjusted or held to be unconstitutional, illegal, or invalid, the same shall not affect the validity of this ordinance as a whole or any provision thereof, other than the part so declared to be invalid, illegal, or unconstitutional.

Section 6. This ordinance shall take effect immediately from and after its passage and publication of the caption, as the law in such cases provides.

Section 7. Pursuant to Section 3.11 of the Charter of the City of Silsbee, Texas, a second reading of this ordinance is dispensed by unanimous vote of all councilmembers present.

PASSED, APPROVED, AND ADOPTED at a special meeting of the City Council of the City of Silsbee, Texas on April 22, 2019.

Jim C. Wellis, Mayor

AT' DeeAnn Zimmerman City Secretary

APPROVED AS TO FORM: Solomon Freimuth, City Attorney

Appendix C





https://www.google.com/maps/place/140+Woodward+Ln,+Silsbee...

# Google Maps 140 Woodward Ln



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#### UTILITY PROFILE HAS ALREADY BEEN E-MAILED

Appendix D

Jim C. Willis Mayor

Dee Ann Zimmerman City Manager DeeAnn@cityofsilsbee.com

Susan Kay Bard Councilmember 105 S 3rd St Silsbee, Texas 77656



(409) 385-3535 (409) 385-0333 Fax Thomas Tyler Councilmember

Adalaide Cash Balaban Councilmember

> Christopher Barnes Mayor Pro-Tem

> > Gary Strahan Councilmember

April 24, 2019

Stacy Corley Region I Water Planning Group

City of Silsbee 105 S 3<sup>rd</sup> St Silsbee, Texas 77656

Ms. Corley:

The City of Silsbee is forwarding a copy of our Water Conservation Plan as required by Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code. Under this rule we are required to send a copy of our plan to the Region I Water Planning Group. This letter will serve as documentation that we have met this requirement.

incerely, Junel Huto

Russell Hutto City of Silsbee Water/Wastewater Supervisor (409) 385-3535 rhutto@cityofsilsbee.com Jim C. Willis Mayor

Dee Ann Zimmerman City Manager DeeAnn@cityofsilsbee.com

Susan Kay Bard Councilmember 105 S 3rd St Silsbee, Texas 77656



(409) 385-3535 (409) 385-0333 Fax

April 24, 2019

Thomas Tyler Councilmember

Adalaide Cash Balaban Councilmember

> Christopher Barnes Mayor Pro-Tem

> > Gary Strahan Councilmember

Region I Water Planning Group

City of Silsbee 105 S 3<sup>rd</sup> St Silsbee, Texas 77656

Re: City of Silsbee Drought Contingency Plan

Ms. Corley:

Stacy Corley

The City of Silsbee is forwarding a copy of the Drought Contingency Plan as required by Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.2 of the Texas Administrative Code. Under this rule we are required to send a copy of our plan to the Region I Water Planning Group. This letter will serve as documentation that we have met this requirement.

Sincerely, Kumell Huto

Russell Hutto City of Silsbee Water/Wastewater Supervisor (409) 385-3535 rhutto@cityofsilsbee.com