

**WATER
CONSERVATION
PLAN FOR THE
CITY OF
BEDFORD**

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ACKNOWLEDGEMENTS

This water conservation plan is based on the model water conservation plan prepared by the Tarrant Regional Water District (TRWD). The TRWD adapted the plan to maintain a consistent and regional approach to water conservation strategies. This plan was prepared pursuant to Texas Commission on Environmental Quality rules. Some material is based on the existing water conservation plans listed in Appendix A.

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Texas Commission on Environmental Quality Rules on Municipal Water Conservation Plans

- Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule §288.1 – Definitions (Page B-1)
- Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule §288.2 – Water Conservation Plans for Municipal Uses by Public Water Suppliers (Page B-4)

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Water Conservation Plan

City of Bedford

July 2014

1. INTRODUCTION AND OBJECTIVES

Having a dependable water supply has always been a key issue in the development of Texas. The growing population and economic expansion occurring in North Central Texas are placing increased demands on our water supplies. The latest population projections predict the number of people residing in Texas to more than double between the years 2000 and 2060, growing from about 21 million to nearly 45 million within that time span. The Texas Water Development Board predicts water demands to increase by 27 percent. In order to meet the challenge of providing for our current and future needs we must learn to use the water we already have more efficiently. By stretching our existing supplies we can delay the need for new supplies, minimize the environmental impacts associated with developing new water resources, and postpone the high cost of building the infrastructure (dams, treatment facilities, and pipelines) necessary to capture, treat, and transport the additional water in to our homes and businesses.

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 plans for public water suppliers¹. TCEQ guidelines and requirements are included in Appendix B.

The objectives of this water conservation plan are as follows:

- To reduce water consumption from the levels that would prevail without conservation efforts.
- To reduce the loss and waste of water.
- To improve efficiency in the use of water.
- To extend the life of current water supplies by reducing the rate of growth in demand.

¹ Superscripted numbers match references listed in Appendix A.

2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES

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

Minimum Conservation Plan Requirements

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

- 288.2(a)(1)(A) – Utility Profile – Section 3 and Appendix C
- 288.2(a)(1)(C) – Specification of Goals – Section 4
- 288.2(a)(1)(D) – Accurate Metering – Sections 5.1 and 5.2
- 288.2(a)(1)(E) – Universal Metering – Section 5.2
- 288.2(a)(1)(F) – Determination and Control of Unaccounted Water – Section 5.4
- 288.2(a)(1)(G) – Public Education and Information Program – Section 6
- 288.2(a)(1)(H) – Non-Promotional Water Rate Structure – Section 7
- 288.2(a)(1)(I) – Reservoir System Operation Plan – Section 8.1
- 288.2(a)(1)(J) – Means of Implementation and Enforcement – Section 9
- 288.2(a)(1)(K) – Coordination with Regional Water Planning Group – Section 8.6 and Appendix E

Conservation Additional Requirements (Population over 5,000)

The Texas Administrative Code includes additional requirements for water conservation plans for cities with a population over 5,000:

- 288.2(a)(2)(A) – Leak Detection, Repair, and Water Loss Accounting – Sections 5.4, 5.5, and 5.6
- 288.2(a)(1)(B) – Record Management System – Section 5.3
- 288.2(a)(2)(B) – Requirement for Water Conservation Plans by Wholesale Customers – Section 8.5

Additional Conservation Strategies

TCEQ rules also list additional optional but not required conservation strategies, which may be adopted by suppliers. The following optional strategies are included in this plan:

- 288.2(a)(3)(A) – Conservation Oriented Water Rates – Section 7
- 288.2(a)(3)(B) – Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures – Section 8.3
- 288.2(a)(3)(D) – Reuse and Recycling of Wastewater – Section 8.2
- 288.2(a)(3)(F) – Considerations for Landscape Water Management Regulations – Section 8.4 and Appendix D
- 288.2(a)(3)(G) – Monitoring Method – Section 5.6

TCEQ rules for landscape irrigation include water conservation requirements in Title 30 Chapter 344:

- 344.6 – 344.65 – Subchapter F Standards for Designing, Installing, and Maintaining Landscape Irrigation Systems – Section 8.4

3. WATER UTILITY PROFILE

Appendix C to this water conservation plan is a modified water utility profile based on the format recommended by the TCEQ. Some additional sections were added in order to gather the information necessary to assess the effectiveness of the City water conservation plan.

4. SPECIFICATION OF WATER CONSERVATION GOALS

Current TCEQ rules require the adoption of specific water conservation goals for a water conservation plan. As part of plan adoption, The City will develop 5-year and 10-year goals for per capita municipal use, following TCEQ procedures described in the water utility profile (Appendix C). The goals for this water conservation plan include the following:

- Keep the per capita municipal water use below the specified amount in gallons per capita per day in a dry year. Municipal use for 2008 was 156 GPCD.

Target Goal Year	2019	2029
Target Goal for Municipal Use GPCD (gallons per capita per day)	153 GPCD	140 GPCD
Target Goal for Residential Use GPCD	141 GPCD	140 GPCD

The goals are based on the recommendations of the Texas Water Conservation Implementation Task Force which suggest a 1% reduction in gallons per capita per day per year. A water consumption level of 140 gallons per person per day is the statewide recommendation of the Task Force. The Task Force was established per Senate Bill 1094 in 2004 to evaluate matters concerning water conservation.

It should be noted that all the performance indicators outlined above are developed assuming a year of average rainfall.

- Keep the level of unaccounted water in the system below 12% annually in 2008 and subsequent years, as discussed in Section 5.4.
- Implement and maintain a program of universal metering and meter replacement and repair, as discussed in Section 5.2.
- Decrease waste in lawn irrigation by implementation and enforcement of landscape water management regulations, as discussed in Section 8.4.
- Raise public awareness of water conservation and encourage responsible public behavior by a public education and information program, as discussed in Section 6.
- Develop a system specific strategy to conserve water during peak demands, thereby reducing the peak use.

5. METERING, WATER USE RECORDS, CONTROL OF UNACCOUNTED WATER, AND LEAK DETECTION AND REPAIR

One of the key elements in water conservation is careful tracking of water use and control of losses through illegal diversions and leaks. Careful metering of water deliveries and water use, detection and repair of leaks in the distribution system and regular monitoring of unaccounted water are important in controlling losses.

5.1 Accurate Metering of Treated Water Deliveries from the Trinity River Authority

Trinity River Authority supplies all of the water used by the City of Bedford. Water deliveries are metered by the Trinity River Authority using meters with accuracy of $\pm 2\%$. These meters are calibrated on a monthly basis by the Trinity River Authority to maintain the required accuracy.

5.2 Metering of Customer and Public Uses and Meter Testing, Repair, and Replacement

All connections to the water system are metered connections. All meters will be maintained with acceptable operating accuracy range as defined by the manufacturer or AWWA Standard for meter accuracy, whichever is more stringent. The City of Bedford changes out 100 residential meters per month. A dead meter list is maintained on a monthly basis to detect stopped meters. The City does not conduct meter testing; instead these meters are replaced on a 10 year replacement cycle.

5.3 Record Management System

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(1)(B), the City record management system allows for the separation of water sales and uses into residential, commercial, public/institutional, and industrial categories. This information is maintained and tracked by the Customer Service Department.

5.4 Determination and Control of Unaccounted Water

Unaccounted water is the difference between water delivered to customers and metered deliveries to customers plus authorized but unmetered uses. (Authorized but unmetered uses would include use for fire fighting, releases for flushing of lines, and uses associated with new construction.) Unaccounted water can include several categories:

- Inaccuracies in customer 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. (Included in Appendix G.)

- Other.

Measures to control unaccounted water are part of the routine operations of the City of Bedford. Maintenance crews and personnel are asked to look for and report evidence of leaks in the water distribution system. The leak detection and repair program is described in Section 5.5 below. Meter readers are asked to watch for and report signs of illegal connections, so they can be addressed quickly.

Unaccounted water is calculated in Appendix C. With the measures described in this plan, the City intends to maintain the unaccounted water below 6% in 2013 and subsequent years. If unaccounted water exceeds this goal, The City will implement a more intensive audit to determine the source(s) of and reduce the unaccounted water. The annual conservation report described below is the primary tool used to monitor unaccounted water.

5.5 Leak Detection and Repair

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

5.6 Monitoring of Effectiveness and Efficiency - Annual Water Conservation Report

Appendix C is a Water Utility Profile form that will be used in the development of an annual water conservation report for the City. This form will be completed by May 1 of the following year and will be used to monitor the effectiveness and efficiency of the water conservation program and to plan conservation-related activities for the next year. The form records the water use by category, per capita municipal use, and unaccounted water for the current year and compares them to historical values. The Water Utility Profile and annual Water Conservation Report will also be sent to TRWD, which will monitor regional water conservation trends.

6. CONTINUING PUBLIC EDUCATION AND INFORMATION CAMPAIGN

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

- Insert water conservation information with water bills. Inserts will include material developed by City staff and material obtained from TRWD, TWDB, TCEQ, and other sources.
- Encourage local media coverage of water conservation issues and the importance of water conservation.
- Notify local organizations, schools, and civic groups, such as Home Owners' Associations and the Beautification Committee, that City staff and staff of the Tarrant Regional Water District are available to make presentations on the importance of water conservation and ways to save water.
- Make information on *Texas Smartscape* principles, water conservation brochures, and other water conservation materials available to the public at City Hall and other public places.
- Continue to update the information on water conservation available on the City website and include links to the *Texas Smartscape* Web site and to information on water conservation on TRWD, TWDB, and TCEQ Web sites.

7. WATER RATE STRUCTURE

The City will adopt, within five years or in conjunction with any water rate study, an increasing block rate structure. Current water rates can be found in the Schedule of Fees.

8. OTHER WATER CONSERVATION MEASURES

8.1 Reservoir System Operation Plan

The City of Bedford is a customer of the Trinity River Authority, which purchases untreated surface water from the Tarrant Regional Water District. The City of Bedford does not have surface water supplies for which to implement a reservoir system operation plan.

8.2 Reuse and Recycling of Wastewater

The City of Bedford is a customer of the Trinity River Authority, which treats the City's wastewater.

8.3 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. 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.

The City of Bedford will collaborate with the Tarrant Regional Water District and other customer cities in exploring the possibility of a joint purchase effort to establish a regional rebate or incentive program to encourage citizens to retrofit their homes with water-conserving fixtures. The City's participation would be dependent upon available funding.

8.4 Landscape Water Management Regulations

Appendix D is a summary of landscape water management regulations adopted as part of the development of this water conservation plan. These regulations are intended to minimize waste in landscape irrigation. The regulations include the following elements:

- Prohibition of outdoor watering with sprinklers from 10:00 a.m. to 6:00 p.m. every day from June 1 through September 30. (Resetting of watering times in sprinkler systems is recommended to comply with the water schedule. Watering with hand-held hoses, soaker hoses, or dispensers is allowed.)
Requirement that all new irrigation systems include rain and freeze sensors capable of multiple programming. Any irrigation system installed before August 1, 2008 may not be operated after August 1, 2010 without being equipped with rain and freeze sensors. This requirement does not apply to a single family residential or duplex property, or an individual metered townhome or condominium unit. Existing residential irrigation systems are encouraged to be retrofitted with similar rain and freeze sensors.

- Requirement that all new irrigation systems be in compliance with state design and installation regulations (TAC Title 30, Part 1, Chapter 344).
- Prohibition of irrigation systems that spray directly onto impervious surfaces or onto other non-irrigated areas. (Wind driven water drift will be taken into consideration.)
- Prohibition of use of poorly maintained sprinkler systems that waste water.
- Prohibition of outdoor watering during any form of precipitation.
- Enforcement of the regulations by a system of warnings followed by fines for continued or repeat violations.

8.5 Coordination with Regional Water Planning Group and TRWD

Appendix E includes a letter sent to the Chair of the Region C Water Planning Group with this water conservation plan. Each customer (direct and indirect) is required to send a copy of their draft ordinance(s) or regulation(s) implementing the plan and their water utility profile to TRWD for review and comment. The adopted ordinance(s) or regulation(s) and the adopted water utility profile will also be sent to TRWD.

9. IMPLEMENTATION AND ENFORCEMENT OF THE WATER CONSERVATION PLAN

Appendix F contains a copy of the ordinance adopted by the City Council that designates responsible officials to implement and enforce the water conservation plan.

Appendix D contains copies of ordinances currently in place to enforce proper landscape water management, which also includes information about enforcement.

Appendix G contains a copy of an ordinance related to illegal connections and water theft.

APPENDIX A
LIST OF REFERENCES

Appendix A List of References

- (1) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rules 288.1 and 288.5, and Subchapter B, Rule 288.22, downloaded from <http://www.tceq.state.tx.us/assets/public/legal/rules/rules/pdf/lib/288a.pdf>, March 2007.
- (2) Texas Water Development Board: "Report 362 – Water Conservation Best Management Practices," prepared by Water Conservation Implementation Task Force, Austin, November 2004.

The TRWD model water conservation plan used in developing this plan was largely adapted from the following two plans:

- North Texas Municipal Water District: "Model Drought Contingency Plan for North Texas Municipal Water District Member Cities and Customers," prepared by Freese and Nichols, Inc., Fort Worth, August 2004.
- Tarrant Regional Water District: "Water Conservation and Drought Contingency Plan," adopted by the Board of Directors, Fort Worth, May 2005 with revisions in May 2007.

The following conservation and drought contingency plans and related documents were reviewed in the development of this plan. References marked with a * were used heavily in the development of this plan.

- *City of Dallas Water Utilities Department: "City of Dallas Water Management Plan," adopted by the City Council, Dallas, September 1999.
- *City of Dallas Water Utilities Department: "City of Dallas Water Conservation Plan," adopted by the City Council, Dallas, September 1999.
- *City of Fort Worth: "Water Conservation plan for the City of Fort Worth," Fort Worth, August 1999.
- *City of Fort Worth: "Emergency Water Management Plan for the City of Fort Worth," Fort Worth, August 19, 2003.
- *City of Dallas: "City of Dallas Ordinances, Chapter 49, Section 21.1," Dallas, October 1, 2001.

APPENDIX B

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

**Texas Commission on Environmental Quality Rules on Water Conservation Plans for
Municipal Uses by Public Water Suppliers
Texas Administrative Code**

TITLE 30

ENVIRONMENTAL QUALITY

PART 1

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CHAPTER 288

CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS,
GUIDELINES AND REQUIREMENTS

SUBCHAPTER A

WATER CONSERVATION PLANS

RULE §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 seed or for the production of fibers;

(B) the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or non-soil media by a nursery grower

(C) raising, feeding, or keeping animals for breeding purposes or for the production of food or fiber, leather, pelts, or other tangible products having a commercial value;

(D) raising or keeping equine animals;

(E) wildlife management; and

(F) planting cover crops, including cover crops cultivated for transplantation, or leaving land idle for the purpose of participating in any governmental program or normal crop or livestock rotation procedure.

(2) Agricultural use--Any use or activity involving agriculture, including irrigation.

(3) Best management practices--Voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific time frame.

(4) Conservation--Those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made

available for future or alternative uses.

(5) Commercial use--The use of water by a place of business, such as a hotel, restaurant, or office building. This does not include multi-family residences or agricultural, industrial, or institutional users.

(6) Drought contingency plan--A strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies. A drought contingency plan may be a separate document identified as such or may be contained within another water management document(s).

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

(8) Institutional use--The use of water by an establishment dedicated to public service, such as a school, university, church, hospital, nursing home, prison or government facility. All facilities dedicated to public service are considered institutional regardless of ownership.

(9) Irrigation--The agricultural use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water from a public water supplier.

(10) Irrigation water use efficiency--The percentage of that amount of irrigation water which is beneficially used by agriculture crops or other vegetation relative to the amount of water diverted from the source(s) of supply. Beneficial uses of water for irrigation purposes include, but are not limited to, evapotranspiration needs for vegetative maintenance and growth, salinity management, and leaching requirements associated with irrigation.

(11) Mining use--The use of water for mining processes including hydraulic use, drilling, washing sand and gravel, and oil field re-pressuring.

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

(13) Nursery grower--A person engaged in the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or nonsoil media, who grows more than 50% of the products that the person either sells or leases,

regardless of the variety sold, leased, or grown. For the purpose of this definition, grow means the actual cultivation or propagation of the product beyond the mere holding or maintaining of the item prior to sale or lease, and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.

(14) Pollution--The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

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

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

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

(18) Regional water planning group--A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, §16.053.

(19) Retail public water supplier--An individual or entity that for compensation supplies water to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants when that water is not resold to or used by others.

(20) Reuse--The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

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

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

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

(24) Wholesale public water supplier--An individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others, or an individual or entity that conveys water to another individual or entity, but does not own the right to the water which is conveyed, whether or not for a delivery fee.

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

Source Note: The provisions of this §288.1 adopted to be effective May 3, 1993, 18 TexReg 2558; amended to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective August 15, 2002, 27 TexReg 7146; amended to be effective October 7, 2004, 29 TexReg 9384; amended to be effective January 10, 2008, 33 TexReg 193; amended to be effective December 6, 2012, 37 TexReg 9515

Texas Administrative Code

TITLE 30

PART 1

CHAPTER 288

SUBCHAPTER A

RULE §288.2

ENVIRONMENTAL QUALITY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS,
GUIDELINES AND REQUIREMENTS

WATER CONSERVATION PLANS

**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 water suppliers must include the following elements:

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

(B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses

(i) - (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph:

- (i) residential;
- (I) single family;
- (II) multi-family;
- (ii) commercial;
- (iii) institutional;
- (iv) industrial;
- (v) agricultural; and,
- (vi) wholesale.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(D) reuse and/or recycling of wastewater and/or 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 practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

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

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

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

APPENDIX C
2014 WATER UTILITY PROFILE



Texas Commission on Environmental Quality

UTILITY PROFILE AND WATER CONSERVATION PLAN REQUIREMENTS FOR MUNICIPAL WATER USE BY RETAIL PUBLIC WATER SUPPLIERS

This form is provided to assist retail public water suppliers in water conservation plan development. If you need assistance in completing this form or in developing your plan, please contact the conservation staff of the Resource Protection Team in the Water Availability Division at (512) 239-4691.

Name: City of Bedford

Address: 1813 Reliance Parkway

Telephone Number: (817) 952-2258 Fax: (817) 952-2240

Water Right No.(s): _____

Regional Water Planning Group: C

Form Completed by: Jerry Laverty

Title: Environmental Supervisor

Person responsible for implementing conservation program: Jerry Laverty Phone: (817) 952-2258

Signature: _____ Date: / /

NOTE: If the plan does not provide information for each requirement, include an explanation of why the requirement is not applicable.

0207062629

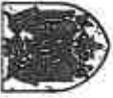
CGN 10078 & 20027 Certification

THE STATE OF TEXAS
COUNTY OF TARRANT

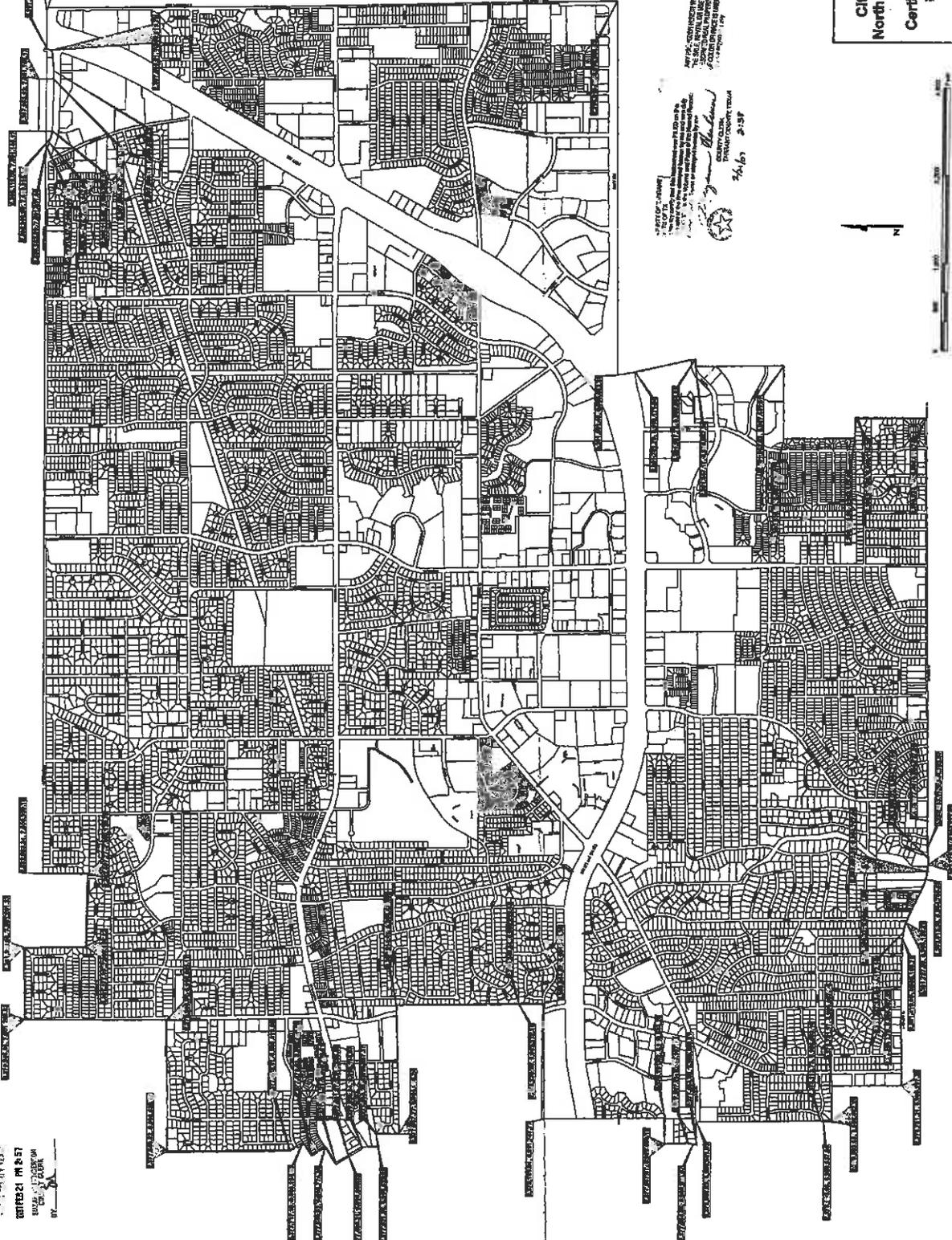
CERTIFICATION

I, *[Signature]*, City Secretary for the City of Bedford, Texas, do hereby certify that I am the author of this map and boundary description of the service area for the water and sewer systems of the City of Bedford, Texas, and that the same have been prepared in accordance with the provisions of the Texas Water Code, Chapter 161, and the Texas Health Code, Chapter 128, and that the same have been approved by the City of Bedford.

[Signature]
City Secretary
City of Bedford



City Limits
City of Bedford, Tarrant County, Texas
North Central Texas State Plane Coordinates
NAD 1983
Certificate of Convenience and Necessity
#10078-Water and #20027 - Sewer
February 2007



NOT TO BE CONSIDERED A GUARANTEE OF THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE CITY OF BEDFORD, TEXAS, IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY OCCUR IN THIS MAP. THE CITY OF BEDFORD, TEXAS, IS NOT RESPONSIBLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, THAT MAY BE SUFFERED BY ANY PARTY AS A RESULT OF THE USE OF THIS MAP.

DATE: 02/21/07
BY: [Signature]

1.5 Miles
1.0 Miles
0.5 Miles
0.25 Miles
0.125 Miles

A 11716

UTILITY PROFILE

I. POPULATION AND CUSTOMER DATA

A. Population and Service Area Data

1. Attach a copy of your service-area map and, if applicable, a copy of your Certificate of Convenience and Necessity (CCN).
2. Service area size (in square miles): 10
(Please attach a copy of service-area map)
3. Current population of service area: 48,952
4. Current population served for:
 - a. Water 48,952
 - b. Wastewater 48,952

5. Population served for previous five years:

<i>Year</i>	<i>Population</i>
2013	48,952
2012	47,183
2011	49,645
2010	49,700
2009	49,700

6. Projected population for service area in the following decades:

<i>Year</i>	<i>Population</i>
2020	52,395
2030	54,407
2040	56,098
2050	57,519
2060	58,713

7. List source or method for the calculation of current and projected population size.
2011 Regional Water Plan, Population Projections for 2000 – 2060, for Cities, Utilities, and County – Other by Region by County Dated: 07/22/2010

B. Customers Data

Senate Bill 181 requires that uniform consistent methodologies for calculating water use and conservation be developed and available to retail water providers and certain other water use sectors as a guide for preparation of water use reports, water conservation plans, and reports on water conservation efforts. A water system must provide the most detailed level of customer and water use data available to it, however, any new billing system purchased must be capable of reporting data for each of the sectors listed below. http://www.tceq.texas.gov/assets/public/permitting/watersupply/water_rights/sb181_guidance.pdf

1. Current number of active connections. Check whether multi-family service is counted as Residential or Commercial?

<i>Treated Water Users</i>	<i>Metered</i>	<i>Non-Metered</i>	Totals
Residential	13,903		13,903
Single-Family	13,607		13,607
Multi-Family	296		296
Commercial	796		796
Industrial/Mining	0		0
Institutional	0		0
Agriculture	0		0
Other/Wholesale	519		519

2. List the number of new connections per year for most recent three years.

<i>Year</i>	2013	2012	2011
<i>Treated Water Users</i>			
Residential	1304	1137	1110
Single-Family	1300	1131	1104
Multi-Family	4	6	6
Commercial	43	42	64
Industrial/Mining			
Institutional			
Agriculture			
Other/Wholesale			

3. List of annual water use for the five highest volume customers.

	<i>Customer</i>	<i>Use (1,000 gal/year)</i>	<i>Treated or Raw Water</i>
1.	HEB Hospital	38,645,000	Treated
2.	Parkland Health Care	8,679,000	Treated
3.	The Woods of Bedford Apartments	7,733,000	Treated
4.	The Courts of Bedford Apartments	7,709,000	Treated
5.	Heartland Health Care Center	7,052,000	Treated

II. WATER USE DATA FOR SERVICE AREA

A. Water Accounting Data

1. List the amount of water use for the previous five years (in 1,000 gallons). Indicate whether this is diverted or treated water.

<u>Year</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>
<i>Month</i>					
January	188,084	134,815	169,032	141,369	186,547
February	139,323	117,924	157,005	119,228	176,380
March	142,672	141,259	246,827	131,912	186,161
April	135,807	169,421	264,465	179,642	186,265
May	154,564	271,354	241,250	255,306	197,984
June	188,608	286,119	354,111	335,394	259,453
July	219,999	391,880	454,359	297,740	339,469
August	263,401	396,756	467,537	400,905	314,464
September	289,794	356,293	340,793	253,957	212,805
October	297,242	245,214	237,668	260,051	147,008
November	229,832	215,036	179,709	201,297	150,024
December	176,224	142,548	154,259	184,186	181,547
Totals	2,425,550	2,868,619	3,367,015	2,760,987	2,538,107

Describe how the above figures were determine (e.g, from a master meter located at the point of a diversion from the source, or located at a point where raw water enters the treatment plant, or from water sales).

Master meter located at the point of diversion from the source TRA

2. Amount of water (in 1,000 gallons) delivered/sold as recorded by the following account types for the past five years.

<u>Year</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>
<i>Account Types</i>					
Residential	1,868,630	2,004,042	2,249,963	1,981,263	1,939,223
Single-Family	1,463,478	1,592,525	1,826,388	1,578,306	1,535,491
Multi-Family	405,152	411,517	423,575	402,957	403,732
Commercial	345,649	360,657	363,731	346,558	344,514
Industrial/Mining					
Institutional					
Agriculture					
Other/Wholesale	223,764	266,940	330,436	295,867	266,697

3. List the previous records for water loss for the past five years (the difference between water diverted or treated and water delivered or sold).

<i>Year</i>	<i>Amount (gallons)</i>	<i>Percent %</i>
2013	166,896,102	6
2012	343,092,259	12
2011	256,507,360	8
2010	323,445,650	11
2009	329,235,960	12

B. Projected Water Demands

If applicable, attach or cite projected water supply demands from the applicable Regional Water Planning Group for the next ten years using information such as population trends, historical water use, and economic growth in the service area over the next ten years and any additional water supply requirements from such growth.

III. WATER SUPPLY SYSTEM DATA

A. Water Supply Sources

List all current water supply sources and the amounts authorized (in acre feet) with each.

<i>Water Type</i>	<i>Source</i>	<i>Amount Authorized</i>
Surface Water	N/A	N/A
Groundwater	Trinity Sands	N/A
Contracts	Trinity River Authority	Pay as you go, based on % of usage
Other		

B. Treatment and Distribution System

1. Design daily capacity of system (MGD):16
2. Storage capacity (MGD):
 - a. Elevated 5 MGD
 - b. Ground 1.325 MGD
3. If surface water, do you recycle filter backwash to the head of the plant?

Yes No If yes, approximate amount (MGD): N/A

IV. WASTEWATER SYSTEM DATA

A. Wastewater System Data (if applicable)

1. Design capacity of wastewater treatment plant(s) (MGD):
2. Treated effluent is used for on-site irrigation, off-site irrigation, for plant wash-down, and/or for chlorination/dechlorination.

If yes, approximate amount (in gallons per month):

3. Briefly describe the wastewater system(s) of the area serviced by the water utility. Describe how treated wastewater is disposed. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and the receiving stream if wastewater is discharged.

The City of Bedford contracts with the Trinity River Authority (TRA) for its wastewater system. City wastewater is treated at the TRA's Central Regional Wastewater system.

B. Wastewater Data for Service Area (if applicable)

1. Percent of water service area served by wastewater system: 100 %
2. Monthly volume treated for previous five years (in 1,000 gallons):

<i>Year</i>	2013	2012	2011	2010	2009
<i>Month</i>					
January	133,932	149,602	130,150	139,748	128,935
February	117,840	131,952	121,072	128,620	128,940
March	131,545	153,694	129,790	139,317	137,708
April	130,089	146,952	128,286	131,628	133,128
May	131,192	143,458	138,585	134,840	139,087
June	129,291	141,096	131,100	128,979	131,109
July	133,734	142,550	135,928	135,222	131,461
August	130,702	142,618	136,803	134,682	134,406
September	126,438	136,683	130,935	139,287	145,941
October	130,450	140,535	133,095	143,781	161,361
November	123,924	130,698	124,854	133,707	159,177
December	134,143	132,738	135,755	127,193	136,372
Totals	1,553,280	1,692,576	1,576,353	1,617,004	1,667,625

V. ADDITIONAL REQUIRED INFORMATION

In addition to the utility profile, please attach the following as required by Title 30, Texas Administrative Code, §288.2. Note: If the water conservation plan does not provide information for each requirement, an explanation must be included as to why the requirement is not applicable.

A. Specific, Quantified 5 & 10-Year Targets

The water conservation plan must include specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in gallons per capita per day. Note that the goals established by a public water supplier under this subparagraph are not enforceable

B. Metering Devices

The water conservation plan must include a statement about the water suppliers 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.

C. Universal Metering

The water conservation plan must include and a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement.

D. Unaccounted- For Water Use

The water conservation plan must include 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.).

E. Continuing Public Education & Information

The water conservation plan must include a description of the program of continuing public education and information regarding water conservation by the water supplier.

F. Non-Promotional Water Rate Structure

The water supplier must have 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. This rate structure must be listed in the water conservation plan.

G. Reservoir Systems Operations Plan

The water conservation plan must include 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. The reservoir systems operations plan shall include optimization of water supplies as one of the significant goals of the plan.

H. Enforcement Procedure and Plan Adoption

The water conservation plan must include 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.

I. Coordination with the Regional Water Planning Group(s)

The water conservation plan must include documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

J. Plan Review and Update

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. The revised plan must also include an implementation report.

VI. ADDITIONAL REQUIREMENTS FOR LARGE SUPPLIERS

Required of suppliers serving population of 5,000 or more or a projected population of 5,000 or more within ten years

A. Leak Detection and Repair

The plan must include a description of the program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system in order to control unaccounted for uses of water.

B. Contract Requirements

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

VII. ADDITIONAL CONSERVATION STRATEGIES

A. Conservation Strategies

Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements of this chapter, if they are necessary in order to achieve the stated water conservation goals of the 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:

1. 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;

2. 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;
3. A program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;
4. A program for reuse and/or recycling of wastewater and/or graywater;
5. A program for pressure control and/or reduction in the distribution system and/or for customer connections;
6. A program and/or ordinance(s) for landscape water management;
7. A method for monitoring the effectiveness and efficiency of the water conservation plan; and
8. Any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

Best Management Practices

The Texas Water Developmental Board's (TWDB) Report 362 is the Water Conservation Best Management Practices (BMP) guide. The BMP Guide is a voluntary list of management practices that water users may implement in addition to the required components of Title 30, Texas Administrative Code, Chapter 288. The Best Management Practices Guide broken out by sector, including Agriculture, Commercial, and Institutional, Industrial, Municipal and Wholesale along with any new or revised BMP's can be found at the following link on the Texas Water Developments Board's website: <http://www.twdb.state.tx.us/conservation/bmps/index.asp>

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

Water Conservation Plan Annual Report

Retail Water Supplier

CONTACT INFORMATION

Name of Entity: City of Bedford

Public Water Supply Identification Number (PWS ID): 2200003

Certificate of Convenience and Necessity (CCN) Number: 10075

Surface Water Rights ID Number: _____

Wastewater ID Number: _____

Check all that apply:

- Retail Water Supplier
- Wholesale Water Supplier
- Wastewater Treatment Utility

Address: 1813 Reliance Parkway City: Bedford Zip Code: 76021

Email: jerry.laverty@bedfordtx.gov Telephone Number: 817-952-2258

Regional Water Planning Group: C [Map](#)

Groundwater Conservation District: 63 [Map](#)

Form Completed By: Jerry Laverty Title: Environmental Specialist

Date: 04/22/2014

Reporting Period (check only one):

- Fiscal Period Begin (mm/yyyy) _____ Period End (mm/yyyy) _____
- Calendar Period Begin (mm/yyyy) 01/2013 Period End (mm/yyyy) 12/2013

Check all of the following that apply to your entity:

- Receive financial assistance of \$500,000 or more from TWDB
- Have 3,300 or more retail connections
- Have a water right with TCEQ

SYSTEM DATA

Retail Customer Categories*

- Residential Single Family
- Residential Multi-family
- Industrial
- Commercial
- Institutional
- Agricultural

**Recommended Customer Categories for classifying your customer water use. For definitions, refer to Guidance and Methodology on Water Conservation and Water Use.*

1. For this reporting period, select the category(s) used to classify customer water use:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Residential Single Family | <input checked="" type="checkbox"/> Commercial |
| <input checked="" type="checkbox"/> Residential Multi-family | <input type="checkbox"/> Institutional |
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Agricultural |

2. For this reporting period, enter the gallons of **metered retail water** used by each customer category. If the Customer Category does not apply, enter zero or leave blank.

Retail Customer Category	Number of Connections	Gallons Metered
Residential Single Family	13,490	2,425,550,000
Residential Multi-family	301	
Industrial		
Commercial	702	
Institutional		
Agricultural		
Total Retail Water Metered ¹	14,493	2,425,550,000

1. Residential + Industrial + Commercial + Institutional + Agricultural = Total Retail Water Metered

Water Use Accounting

	Total Gallons During the Reporting Period
Water Produced: Water from permitted sources such as rivers, lakes, streams, and wells. <i>Same as line 14 of the water loss audit.</i>	230,496,875
Wholesale Water Imported: Purchased wholesale water transferred into the system. <i>Same as line 15 of the water loss audit.</i>	2,394,765,000
Wholesale Water Exported: Wholesale water sold or transferred out of the system. <i>Same as line 16 of the water loss audit.</i>	0
System Input: Total water supplied to system and available for retail use.	2,625,261,875
	Produced + Imported - Exported = System Input
Total Retail Water Metered	2,425,550,000
Other Authorized Consumption: Water that is authorized for other uses such as the following: This water may be metered or unmetered. <i>Same as the total of lines 19, 20, and 21 of the water loss audit.</i> <ul style="list-style-type: none"> - back flushing - storage tank cleaning - fire department use - municipal government offices - line flushing - municipal golf courses/parks 	32,815,773
Total Authorized Use: All water that has been authorized for use.	2,458,365,773
	Total Retail Water + Other Authorized Consumption = Total Authorized Use
Apparent Losses: Water that has been consumed but not properly measured or billed. <i>Same as line 28 of the water loss audit.</i> <i>(Includes losses due to customer meter accuracy, systematic data discrepancy, unauthorized consumption such as theft)</i>	108,148,280
Real Losses: Physical losses from the distribution system prior to reaching the customer destination. <i>Same as line 29 of the water loss audit.</i> <i>(Includes physical losses from system or mains, reported breaks and leaks, or storage overflow)</i>	4,252,508
Unidentified Water Losses: Unreported losses not known or quantified.	54,495,314
	System Input - Total Authorized Use - Apparent Losses - Real Losses = Unidentified Water Losses
Total Water Loss	166,896,102
	Apparent + Real + Unidentified = Total Water Loss

Targets and Goals

Provide the **specific and quantified five and ten-year targets** as listed in your current Water Conservation Plan. Target dates and numbers should match your current Water Conservation Plan.

Achieve Date	Target for Total GPCD	Target for Water Loss (expressed in GPCD)	Target for Water Loss Percentage (expressed in percentage)
Five-year target date: 2015	148	17	11%
Ten-year target date: 2020	140	16	11%

Gallons Per Capita per Day (GPCD) and Water Loss

Provide current GPCD and water loss totals. To see if you are making progress towards your stated goals, compare these totals to the above targets and goals. Provide the population and residential water use of your service area.

Total System Input in Gallons	Permanent Population ¹	Total GPCD
2,625,261,875 Water Produced + Wholesale Imported - Wholesale Exported	47,001	153 (System Input ÷ Permanent Population) ÷ 365

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

Residential Use in Gallons (Single Family + Multi-family)	Residential Population ¹	Residential GPCD
2,425,550,000	47,001	141 (Residential Use ÷ Residential Population) ÷ 365

1. Residential Population is the total residential population of the service area, including only single family and multi-family populations.

Total Water Loss	Permanent Population	Water Loss	
		GPCD ¹	Percent ²
166,896,102 Apparent + Real + Unidentified = Total Water Loss	47,001	10	6%

1. (Total Water Loss ÷ Permanent Population) ÷ 365 = Water Loss GPCD
 2. (Total Water Loss ÷ Total System Input) x 100 = Water Loss Percentage

Water Conservation Programs and Activities

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

1. What year did your entity adopt or revise the most recent Water Conservation Plan? 2011
2. Does The Plan incorporate Best Management Practices? Yes No
3. Using the table below select the types of Best Management Practices or water conservation strategies actively administered during this reporting period and estimate the savings incurred in implementing water conservation activities and programs. Leave fields blank if unknown.

Methods and techniques for determining gallons saved are unique to each utility as they conduct internal effective cost analyses and long-term financial planning. Texas Best Management Practices can be found at TWDB's Water Conservation Best Management Practices [webpage](#). The [Alliance for Water Efficiency Water Conservation Tracking Tool](#) may offer guidance on determining and calculating savings for individual BMPs.

Best Management Practice	Check if Implemented	Estimated Gallons Saved
Conservation Analysis and Planning		
Conservation Coordinator	<input type="checkbox"/>	
Cost Effective Analysis	<input checked="" type="checkbox"/>	25,000
Water Survey for Single Family and Multi-family Customers	<input type="checkbox"/>	
Financial		
Wholesale Agency Assistance Programs	<input type="checkbox"/>	
Water Conservation Pricing	<input type="checkbox"/>	
System Operations		
Metering New Connections and Retrofitting Existing Connections	<input type="checkbox"/>	
System Water Audit and Loss Control	<input type="checkbox"/>	
Landscaping		
Landscape Irrigation Conservation and Incentives	<input checked="" type="checkbox"/>	5,487,500
Athletic Fields Conservation	<input type="checkbox"/>	
Golf Course Conservation	<input type="checkbox"/>	
Park Conservation	<input type="checkbox"/>	
Education and Public Awareness		
School Education	<input checked="" type="checkbox"/>	18,000,000
Public Information	<input checked="" type="checkbox"/>	18,000,000
Rebate, Retrofit, and Incentive Programs		
Conservation Programs for ICI Accounts	<input type="checkbox"/>	
Residential Clothes Washer Incentive Program	<input type="checkbox"/>	
Water Wise Landscape Design and Conversion Programs	<input checked="" type="checkbox"/>	5,487,500

Showerhead, Aerator, and Toilet Flapper Retrofit	<input type="checkbox"/>	
Residential Toilet Replacement Programs	<input type="checkbox"/>	
ICI Incentive Programs	<input type="checkbox"/>	
Conservation Technology		
Water Reuse	<input type="checkbox"/>	
New Construction Graywater	<input type="checkbox"/>	
Rainwater Harvesting and Condensate Reuse	<input type="checkbox"/>	
Regulatory and Enforcement		
Prohibition on Wasting Water	<input checked="" type="checkbox"/>	25,000,000
Other, please describe:		
Total Gallons of Water Saved		72,000,000

4. For this reporting period, provide the estimated gallons of direct or indirect reuse activities.

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

5. For this reporting period, estimate the savings from water conservation activities and programs.

Gallons Saved/Conserved	Gallons Recycled/Reused	Total Volume of Water Saved ¹	Dollar Value of Water Saved ²
73,000,000	0	73,000,000	\$ 227,030

1. Estimated Gallons Saved/Conserved + Estimated Gallons Recycled/Reused = Total Volume Saved

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

6. During this reporting period, did your rates or rate structure change? Yes No

Select the type of rate pricing structures used. Check all that apply.

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

7. For this reporting period, select the public awareness or educational activities used.

	Implemented	Number/Unit
<i>Example: Brochures Distributed</i>	√	10,000/year
<i>Example: Educational School Programs</i>	√	50 students/month
Brochures Distributed	<input checked="" type="checkbox"/>	300
Messages Provided on Utility Bills	<input checked="" type="checkbox"/>	Quarterly Magazine
Press Releases	<input type="checkbox"/>	
TV Public Service Announcements	<input type="checkbox"/>	
Radio Public Service Announcements	<input type="checkbox"/>	
Educational School Programs	<input checked="" type="checkbox"/>	Waterwise379
Displays, Exhibits, and Presentations	<input checked="" type="checkbox"/>	School/HOA 500
Community Events	<input checked="" type="checkbox"/>	TCC Showcase
Social Media campaigns	<input type="checkbox"/>	
Facility Tours	<input type="checkbox"/>	
Other :	<input type="checkbox"/>	

Leak Detection and Water Loss

1. During this reporting period, how many leaks were repaired in the system or at service connections? 62

Select the main cause(s) of water loss in your system.

- Leaks and breaks
- Un-metered utility or city uses
- Master meter problems
- Customer meter problems
- Record and data problems
- Other: _____
- Other: _____

2. For this reporting period, provide the following information regarding meter repair:

Type of Meter	Total Number	Total Tested	Total Repaired	Total Replaced
Production Meters	1			
Meters larger than 1 1/2"	8			8
Meters 1 1/2 or smaller	258			258

3. Does your system have automated meter reading? Yes No

Program Effectiveness and Drought

1. In your opinion, how would you rank the effectiveness of your conservation activities?

Customer Classification	Less Than Effective	Somewhat Effective	Highly Effective	Does Not Apply
Residential Customers	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Industrial Customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Institutional Customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Commercial Customers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural Customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

2. During the reporting period, did you implement your Drought Contingency Plan?

Yes No

If yes, how many days were water use restrictions in effect? 326

If yes, check the reason(s) for implementing your Drought Contingency Plan.

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

3. Select the areas for which you would like to receive more technical assistance:

- | | |
|---|--|
| <input type="checkbox"/> Best Management Practices
<input checked="" type="checkbox"/> Drought Contingency Plans
<input checked="" type="checkbox"/> Landscape Irrigation
<input type="checkbox"/> Leak Detection and Equipment
<input type="checkbox"/> Rainwater Harvesting
<input type="checkbox"/> Rate Structures | <input checked="" type="checkbox"/> Educational Resources
<input type="checkbox"/> Water Conservation Annual Reports
<input checked="" type="checkbox"/> Water Conservation Plans
<input type="checkbox"/> Water IQ: Know Your Water
<input type="checkbox"/> Water Loss Audits
<input checked="" type="checkbox"/> Recycling and Reuse |
|---|--|

SUBMIT

APPENDIX D

LANDSCAPE WATER MANAGEMENT REGULATIONS

ORDINANCE NO. 08-2912

ORDINANCE NO. 08-2913

ORDINANCE NO. 08-2912

2000 International Plumbing Code Amendment

AN ORDINANCE AMENDING CHAPTER 22 OF THE CITY OF BEDFORD CODE OF ORDINANCES ENTITLED "ARTICLE IV PLUMBING; IRRIGATION", AS PREVIOUSLY ADOPTED, IN ORDER TO ESTABLISH THE MINIMUM STANDARDS FOR INSTALLATION OF IRRIGATION SYSTEMS WITHIN THE CORPORATE LIMITS OF THE CITY OF BEDFORD AND PERMIT FEES THEREFOR; PROVIDING FOR RECORDING OF SUCH CODE AS A PUBLIC RECORD PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE OF ALL ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING FOR A PENALTY FOR VIOLATIONS HEREOF; PROVIDING A SAVINGS CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Bedford is a home rule city acting under its charter adopted by the electorate pursuant to Article XI, Section 5 of the Texas Constitution and Chapter 9 of the Local Government Code; and,

WHEREAS, the City Council of the City of Bedford, Texas has determined that water conservation and environmental protection are important issues and concerns affecting the City; and,

WHEREAS, properly-installed irrigation systems will conserve water, help avoid wasteful use, and improve the overall quality of life for the citizens of Bedford, Texas; and,

WHEREAS, during the 2007 legislative session, the Texas Legislature adopted House Bill 1656; and,

WHEREAS, House Bill 1656 amended Chapter 401 of the Texas Local Government Code to require a city with a population of 20,000 or more to regulate the installation of irrigation systems within the corporate limits of the city as well as the city's extrajurisdiction; and,

WHEREAS, the provisions herein are necessary to promote and protect the health, safety, and welfare of the public by creating an urban environment that is protective of the city's water supply and provides an enhanced quality of life for the citizens of the City of Bedford.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL, OF THE CITY OF BEDFORD, TEXAS:

SECTION 1. That the International Plumbing Code, 2000 Edition, published by the International Code Council, is hereby amended by adding section 315 as follows:

315. Landscape Irrigation. Minimum Standards for Landscape Irrigation Systems.

The landscape irrigation rules promulgated by the Texas Commission on Environmental Quality and contained in Chapter 344, Subchapters E and F, §§344.50-344.65 TEXAS ADMINISTRATIVE CODE, as the same may be from time to time amended, are hereby adopted by reference as the landscape irrigation rules of the City.

SECTION 2. That this ordinance shall be cumulative of all provisions of ordinances of the City of Bedford, Texas, except where the provisions of this ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

SECTION 3. That it is hereby declared to be the intention of the City Council that the phrases, clauses, sentences, paragraphs, and sections of this ordinance are, severable, and if any phrase, clause sentence, paragraph or section of this ordinance shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the

remaining phrases, clauses, sentences, paragraphs and sections of this ordinance, since the same would have been enacted by the City Council without the incorporation in this ordinance of any such unconstitutional phrase, clause, sentence, paragraph or section.

SECTION 4. That any person, firm or corporation who violates, disobeys, omits, neglects or refuses to comply with or who resists the enforcement of any of the provisions of this ordinance shall be fined not more than five hundred dollars (\$500) for each day that a violation is permitted to exist. Each day that a violation is permitted to exist shall constitute a separate offense.

SECTION 5. That all rights and remedies of the City of Bedford are expressly saved as to any and all violations of the provisions of any ordinances affecting the regulation and control of the use, occupancy, maintenance, repair, design, construction and quality of materials for buildings and structures within the City which have accrued at the time of the effective date of this ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such ordinances, same shall not be affected by this ordinance but may be prosecuted until final disposition by the courts.

SECTION 6. That this ordinance shall be in full force and effect from and after its passage as required by law but not before January 1, 2009, and is so ordained.

PASSED AND APPROVED this 9th day of December 2008, by a vote of 6 ayes, 0 nays and 0 abstentions, at a regular meeting of the City Council of the City of Bedford, Texas.

Jim Story, Mayor

ATTEST:

Shanzel Jennings, City Secretary

APPROVED AS TO FORM:

Stan Lowry, City Attorney

ORDINANCE NO. 08-2913

2000 International Residential Code Amendment

AN ORDINANCE AMENDING CHAPTER 22 OF THE CITY OF BEDFORD CODE OF ORDINANCES ENTITLED "ARTICLE IIIa INTERNATIONAL RESIDENTIAL CODE FOR ONE AND TWO FAMILY DWELLINGS", AS PREVIOUSLY ADOPTED, IN ORDER TO ESTABLISH THE MINIMUM STANDARDS FOR INSTALLATION OF IRRIGATION SYSTEMS WITHIN THE CORPORATE LIMITS OF THE CITY OF BEDFORD AND PERMIT FEES THEREFOR; PROVIDING FOR RECORDING OF SUCH CODE AS A PUBLIC RECORD; PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE OF ALL ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING FOR A PENALTY FOR VIOLATIONS HEREOF; PROVIDING A SAVINGS CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Bedford is a home rule city acting under its charter adopted by the electorate pursuant to Article XI, Section 5 of the Texas Constitution and Chapter 9 of the Local Government Code; and,

WHEREAS, the City Council of the City of Bedford, Texas has determined that water conservation and environmental protection are important issues and concerns affecting the City; and,

WHEREAS, properly-installed irrigation systems will conserve water, help avoid wasteful use, and improve the overall quality of life for the citizens of Bedford, Texas; and,

WHEREAS, during the 2007 legislative session the Texas Legislature adopted House Bill 1656; and,

WHEREAS, House Bill 1656 amended Chapter 401 of the Texas Local Government Code to require a city with a population of 20,000 or more to regulate the installation of irrigation systems within the corporate limits of the city as well as the city's extraterritorial jurisdiction; and,

WHEREAS, the provisions herein are necessary to promote and protect the health, safety, and welfare of the public by creating an urban environment that is protective of the City's water supply and provide an enhanced quality of life for the citizens of the City of Bedford.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BEDFORD, TEXAS:

SECTION 1. That the International Plumbing Code, 2000 Edition, published by the International Code Council, is hereby amended by adding section 315 as follows:

P2209. Landscape Irrigation. Minimum Standards for Landscape Irrigation Systems.

The landscape irrigation rules promulgated by the Texas Commission on Environmental Quality and contained in Chapter 344, Subchapters E and F, §§344.50-344.65 TEXAS ADMINISTRATIVE CODE, as the same may be from time to time amended, are hereby adopted by reference as the landscape irrigation rules of the City.

SECTION 2. That this ordinance shall be cumulative of all provisions of ordinances of the City of Bedford, Texas, except where the provisions of this ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

SECTION 3. That it is hereby declared to be the intention of the City Council that the phrases, clauses, sentences, paragraphs, and sections of this ordinance are, severable, and if any phrase, clause sentence, paragraph or section of this ordinance shall be

declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this ordinance, since the same would have been enacted by the City Council without the incorporation in this ordinance of any such unconstitutional phrase, clause, sentence, paragraph or section.

- SECTION 4.** That any person, firm or corporation who violates, disobeys, omits, neglects or refuses to comply with or who resists the enforcement of any of the provisions of this ordinance shall be fined not more than five hundred dollars (\$500) for each day that a violation is permitted to exist. Each day that a violation is permitted to exist shall constitute a separate offense.
- SECTION 5.** That all rights and remedies of the City of Bedford are expressly saved as to any and all violations of the provisions of any ordinances affecting the regulation and control of the use, occupancy, maintenance, repair, design, construction and quality of materials for buildings and structures within the City which have accrued at the time of the effective date of this ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such ordinances, same shall not be affected by this ordinance but may be prosecuted until final disposition by the courts.
- SECTION 6.** That this ordinance shall be in full force and effect from and after its passage as required by law but not before January 1, 2009, and is so ordained.

PASSED AND APPROVED this 9th day of December 2008, by a vote of 5 ayes, 0 nays and 0 abstentions, at a regular meeting of the City Council of the City of Bedford, Texas.

Jim Story, Mayor

ATTEST:

Shanee Jennings, City Secretary

APPROVED AS TO FORM:

Evan Lowry, City Attorney

APPENDIX E
LETTER TO REGION C
WATER PLANNING GROUP

APPENDIX F

ORDINANCE NO. 09-2925

ADOPTION OF WATER CONSERVATION PLAN

ORDINANCE NO. 09-2925

AN ORDINANCE AMENDING CHAPTER 118 "UTILITIES", ARTICLE IV "RESTRICTIONS ON OUTDOOR USE OF WATER" OF THE CITY OF BEDFORD CODE OF ORDINANCES, AS AMENDED IN ITS ENTIRETY BY THE ADOPTION OF THE REVISED WATER RESOURCE MANAGEMENT ORDINANCE TO PROMOTE RESPONSIBLE USE OF WATER; PROVIDING FOR A FINE OF UP TO \$500 FOR EACH OFFENSE IN VIOLATION OF THE ORDINANCE AND/OR DISCONNECTION OF WATER SERVICE FOR NONCOMPLIANCE WITH THE PROVISIONS OF THE WATER RESOURCE MANAGEMENT ORDINANCE; PROVIDING A REPEALING CLAUSE; PROVIDING A SEVERABILITY CLAUSE; AND DECLARING AN EFFECTIVE DATE.

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

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

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

WHEREAS, the City has determined an urgent need in the best interest of the public to adopt a Drought Contingency Plan and Water Conservation Plan; and,

WHEREAS, pursuant to Chapter 54 of the Local Government Code, the City is authorized to adopt such Ordinances necessary to preserve and conserve its water resources.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BEDFORD TEXAS:

SECTION 1. That all matters stated hereinabove are found to be true and correct and are incorporated herein by reference.

SECTION 2. That the City of Bedford Code of Ordinances Chapter 118 "Utilities", Article IV "Restrictions on Outdoor Use of Water", is hereby amended in its entirety to read as follows:

ARTICLE IV. WATER RESOURCE MANAGEMENT

DIVISION 1. GENERAL PROVISIONS

Section 118-111. Definitions

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning. When not inconsistent with the context, words used in the present tense include the future, words in the plural number include the singular number, and words in the singular number include the plural number. The word "shall" is always mandatory and not merely directory.

City is the City of Bedford.

Person is any person, firm, partnership, association, corporation, company, or organization of any kind.

TCWSP is the Tarrant County Water Supply Project.

TRA is the Trinity River Authority.

TRWD is the Tarrant Regional Water District.

Water is water from the City water system.

Section 118-112. Application of Regulations

The provisions of this article shall apply to all persons using water from the water system of the city. The provisions of this article shall not apply to those functions necessary for the public health, safety and welfare, such as emergency fire protection.

Section 118-113. General Restrictions on Water Use

- (a) **All new irrigation systems must be in compliance with ordinances 08-2912 and 08-2913 of the City Code of Ordinances, as the same may be from time to time amended, including but not limited to system design and installation requirements and the prohibition of irrigation systems that spray directly onto impervious surfaces or other non-irrigated areas.**
- (b) **Except for hand watering and the use of soaker hoses, it shall be unlawful for any person to irrigate, water, or cause or permit the irrigation or watering of any lawn or landscape located on premises owned, leased, or managed by that person between the hours of 10:00 a.m. and 6:00 p.m. It is an affirmative defense to prosecution that the irrigation or watering of any lawn or landscape during the prohibited time was done for the purpose of establishing hydromulch, grass sod, grass seed, dust control for sport fields, or for the maintenance, repair, or testing of an irrigation system. The escape of water through defective plumbing, which shall mean the knowing permission for defective plumbing to remain out of repair, is hereby prohibited.**

DIVISION 2. DROUGHT CONTINGENCY PLAN

Section 118-114. Emergency Water Restrictions

- (a) **Purpose and scope. The purpose of this section is to establish the city's policy in the event of shortages or delivery limitations in the city's water supply and to establish water restrictions to be enforced in case of drought or emergency conditions.**
- (b) **Drought contingency plan. The drought contingency plan, as the same may be from time to time amended, is attached hereto as Exhibit A and is incorporated herein by reference.**
- (c) **Authority. The City Manager or official designee is authorized to implement measures prescribed when required by this section and by the drought contingency plan approved by the city council. The Public Works Director is authorized to enforce the measures implemented and to promulgate regulations, not in conflict with this section or state and federal laws, in aid of enforcement.**
- (d) **Initiation of plan stages. When a trigger condition has been reached, the city will notify the public through publication of articles in the Fort Worth Star Telegram and announcements on local radio and television. Signs will also be posted at public places throughout the city such as the library, post office, city hall, etc. Notices will also be posted on the city website.**

- (e) **Duration of stage; change.** A stage will remain in effect until the conditions that triggered initiation of the stage have been eliminated. If the stage is initiated because of excessive demands, all initiated actions will remain in effect through September 30 of the year in which they were triggered unless the City Manager or official designee determines that conditions exist that will allow termination of the stage before September 30. Upon recommendation of the Public Works Director, the City Manager or official designee may terminate, upgrade or downgrade the stage. Any such change must be made in the same manner prescribed in subsection (d).

DIVISION 3. WATER CONSERVATION PLAN

Section 118-115 Adoption of Water Conservation Plan

- (a) **Purpose and scope.** The purpose of this section is to establish the city's policy on water conservation measures.
- (b) **Water conservation plan.** The water conservation plan, as the same may be from time to time amended, is attached hereto as Exhibit B and is incorporated herein by reference.
- (c) **Authority.** The City Manager or official designee is authorized to implement measures prescribed when required by this section and by the water conservation plan approved by the city council. The Public Works Director is authorized to enforce the measures implemented and to promulgate regulations, not in conflict with this section or state and federal laws, in aid of enforcement.

DIVISION 4. RAIN AND FREEZE SENSORS

Section 118-116. Irrigation system: Rain and Freeze Sensors.

- (a) **Any irrigation system installed within the City on or after August 1, 2008 must be equipped with rain and freeze sensors.**
- (b) **Any irrigation system installed before August 1, 2008 may not be operated after August 1, 2010 without being equipped with rain and freeze sensors. This requirement does not apply to a single family residential or duplex property, or an individual metered townhome or condominium unit.**
- (c) **It shall be unlawful for any person to knowingly install, or cause or permit the installation of an irrigation system that does not comply with this section.**
- (d) **It shall be unlawful for any person on premises owned, leased, or managed by that person to knowingly or recklessly operate, or cause or permit the operation of an irrigation system that does not comply with this section.**
- (e) **It shall be unlawful for any person to operate an irrigation system with broken or missing heads after receiving notification from the building official and such representative as they may designate.**
- (f) **It shall be unlawful for any person to operate an irrigation system which causes significant runoff.**

DIVISION 5. ENFORCEMENT

Section 118-117. Criminal responsibility.

A person commits an offense of inappropriate use of water by any of the following actions:

- (a) A person may not knowingly make, cause or permit a use of an irrigation system contrary to the requirements of this article.**
- (b) A person may not knowingly make, cause or permit a use of water contrary to the measures implemented by the city manager or official designee as prescribed in the water conservation plan.**
- (c) A person may not knowingly make, cause or permit a use of water contrary to the measures implemented by the city manager or official designee as prescribed in the drought contingency plan. It is presumed that a person has knowingly made, caused or permitted a use of water contrary to the measures implemented if the mandatory measures have been formally ordered consistent with the terms of section 118-114(d) and:
 - (1) The manner of use has been prohibited by the drought contingency plan;**
 - (2) The amount of water used exceeds that allowed by the drought contingency plan; or**
 - (3) The manner or amount used violates the terms and conditions of a compliance agreement made pursuant to a variance granted by the Public Works Director pursuant to section 118-118.****

Section 118-118. Variances.

Variances will be considered only under extreme circumstances for health or public safety reasons. The City Manager or official designee will be responsible for making this determination.

Sections 118-117—118-145 Reserved.

SECTION 2. That any person violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined up to \$500.00 and/or discontinuance of water service by the City. A separate offense shall be deemed committed upon each day during or on which a violation occurs or continues.

SECTION 3. That all ordinances or any parts thereof in conflict with the terms of this ordinance shall be and hereby are deemed repealed and of no force or effect; provided, however, that the ordinance or ordinances under which the cases currently filed and pending in the Municipal Court of the City of Bedford, Texas, shall be deemed repealed only when all such cases filed and pending under such ordinance or ordinances have been disposed of by a final conviction or a finding not guilty or nolo contendere, or dismissal.

SECTION 4. That if any section, article, paragraph, sentence, clause, phrase or word in this ordinance, or application thereto any person or circumstance is held invalid or unconstitutional by a Court of competent jurisdiction, such holding shall not affect the validity of the remaining portions of this ordinance; and the City Council hereby declares it would have passed such remaining portions of the ordinance despite such invalidity, which remaining portions shall remain in full force and effect.

SECTION 5. That this ordinance shall be in full force and effect after its passage and publication as required by law, and it is so ordained.

PRESENTED AND PASSED on this 14th day of April 2009, by a vote of 7 ayes, 0 nays and 0 abstentions, at a regular meeting of the City Council of the City of Bedford, Texas.

Jim Story, Mayor

ATTEST:

Shanae Jennings, City Secretary

APPROVED AS TO FORM:

Alan Lowry, City Attorney

APPENDIX G

**ORDINANCE NO. 05-2812
ILLEGAL WATER CONNECTIONS
AND THEFT OF WATER**

ORDINANCE NO. 05-2812

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF BEDFORD, TEXAS, PERTAINING TO ILLEGAL WATER CONNECTIONS AND/OR THE THEFT OF WATER FROM THE WATER SUPPLY OF THE CITY OF BEDFORD; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY; AUTHORIZING PUBLICATION; AND ESTABLISHING AN EFFECTIVE DATE.

WHEREAS, The City of Bedford recognizes that the amount of water available to its water customers is limited; and

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

WHEREAS, the City of Bedford seeks to minimize water losses to its supply of water from illegal connections and theft through the adoption of an ordinance pertaining to illegal water connections and theft of water.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BEDFORD, TEXAS:

Section 1: THAT, the above findings are hereby found to be true and correct and are incorporated herein in their entirety.

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

- (a) A person may not knowingly tamper, connect to, or alter any component of the City's water system including valves, meters, meter boxes, meter box lids, hydrants, lines, pump stations, ground storage tanks, and elevated storage tanks. This shall include direct or indirect efforts to initiate or restore water service without the approval of the City.
- (b) If, without the written consent of the City Manager or the City Manager's designee, the person knowingly causes, suffers or allows the initiation or restoration of water service to the property after termination of service(s). For purposes of this section, it shall be assumed that the owner, occupant, or person in control of the property caused, suffered, or allowed the unlawful initiation or restoration of service(s).
- (c) A person may not knowingly make or cause a false report to be made to the City of a reading of a water meter installed for metered billing.
- (d) A person commits a separate offense each day that the person performs an act prohibited by this section or fails to perform an act required by this section.

Section 3: THAT, any person, firm or corporation violating any provision of this article shall be deemed guilty of a Class C misdemeanor and shall, upon final conviction thereof, be fined in an amount not to exceed \$2,000.00 (Two Thousand Dollars) and any subsequent offense shall be a minimum of \$500. and not to exceed \$2,000. and/or discontinuance of water service by the City.

Section 4: THAT, if any section, paragraph, clause or provision of this Ordinance shall for any reason be held to be invalid or unenforceable, the invalidity or

unenforceability of such section, paragraph, clause or provision shall not effect any of the remaining provisions of this Ordinance.

Section 5: THAT, the City Secretary is hereby authorized and directed to cause publication of the descriptive caption and penalty clause of this Ordinance as an alternative method of publication provided by law.

Section 7: THAT, this Ordinance shall become effective upon its adoption and publication provided by law.

PASSED AND APPROVED this 8th day of November, 2005, by a vote of 6 ayes, 0 nays and 0 abstentions, at a regular meeting of the City Council of the City of Bedford, Texas.

Jim Story, Mayor

ATTEST:

Rita Frick, City Secretary

APPROVED AS TO FORM:

Stan Lowry, City Attorney