

# DROUGHT CONTINGENCY PLAN FOR THE CITY OF BEDFORD

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MAY 2009

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## ACKNOWLEDGEMENTS

This drought contingency plan is based on the model drought contingency plan prepared by the Tarrant Regional Water District (TRWD). The TRWD adapted the plan to maintain a consistent and regional approach to drought contingency strategies. This plan was prepared pursuant to Texas Commission on Environmental Quality rules. Some material is based on the existing emergency water management plans for the City of Fort Worth.

Questions regarding this water conservation plan should be addressed to the following:

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# **Drought Contingency Plan for the**

## **City of Bedford**

MAY 2009

### **1. INTRODUCTION AND OBJECTIVES**

The purpose of this drought contingency plan (subsequently referred to as the Plan) is as follows:

- To conserve the available water supply in times of drought and emergency
- To maintain supplies for domestic water use, sanitation, and fire protection
- To protect and preserve public health, welfare, and safety
- To minimize the adverse impacts of water supply shortages
- To minimize the adverse impacts of emergency water supply conditions.

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

The TCEQ rules governing development of drought contingency plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 of the Texas Administrative Code, which is included in Appendix B.

The TCEQ rule Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.1(4) defines a drought contingency plan as “a strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies”.

### **3. WATER SYSTEM PROFILE**

The city purchases treated water from the Trinity River Authority (TRA) via the Tarrant County Water Supply Project (TCWSP) plant on Trinity Boulevard. TRA obtains surface water to supply the TCWSP through a contract with Tarrant Regional Water District (TRWD) from Lake Arlington. In addition, TRA has an agreement to obtain treated water from the City of Fort Worth, and as conditions and opportunities permit, TRA is able to schedule deliveries to its customers in order to accommodate individual customer needs. Thus, the total capacity referenced herein includes the supply available from the TCWSP and the quantities available from Fort Worth and/or any other sources which may become available. It is understood that TRA will manage the total supply available to meet as much

of the existing needs of all its customers as possible before taking actions to declare emergencies and/or make pro rata allocations.

The TCWSP plant was originally established in 1974 and provides treated water to four Contracting Cities in addition to the City of Bedford. The Project serves a population numbering over 180,000 and operates at a system capacity of 87 million gallons a day (MGD).

Bedford has about 14,170 residential connections and 655 commercial connections. The City maintains 145 miles of water mains.

The water supply triggers defined in Section 4.4 were provided to Bedford by its wholesaler's water supplier, Tarrant Regional Water District. TRWD selected its triggers after hiring an outside consultant to evaluate where the trigger levels should be for the drought plan to achieve meaningful water savings.

#### **4. DROUGHT CONTINGENCY PLAN**

##### **4.1 Provisions to Inform the Public and Opportunity for Public Input**

Bedford will provide opportunity for public input in the development of this drought contingency plan by the following means:

- Providing written notice of the proposed plan and the opportunity to comment on the plan by posted notice and notice on the city Web site.
- Making the draft plan available on the city Web site.
- Providing the draft plan to anyone requesting a copy.
- Holding a public meeting.

##### **4.2 Provisions for Continuing Public Education and Information**

Bedford will inform and educate the public about the drought contingency plan by the following means:

- Preparing a bulletin describing the plan and making it available at city hall and other appropriate locations.
- Making the plan available to the public through the city Web site.
- Including information about the drought contingency plan on the city Web site.
- Notifying local organizations, schools, and civic groups that staff are available to make presentations on the drought contingency plan (usually in conjunction with presentations on water conservation programs).

At any time that the drought contingency plan is activated or the drought stage changes, Bedford will notify local media of the issues, the drought response stage, and the specific

actions required of the public. The information will also be publicized on the city Web site. Billing inserts will also be used as appropriate.

### **4.3 Initiation and Termination of Drought Response Stages**

The provisions of this Plan shall apply to all persons, customers, and property utilizing potable water provided by the City of Bedford. The terms “person” and “customer” as used in this Plan include individuals, corporations, partnerships, associations, and all other legal entities. The Plan does not apply to private wells.

#### Initiation of a Drought Response Stage

The City Manager or official designee may order the implementation of a drought response stage or water emergency when one or more of the trigger conditions for that stage is met. The following actions will be taken when a drought stage is initiated:

- The public will be notified through local media and the City of Bedford Web site, as described in Section 4.2.
- TRWD will be notified by telephone with a follow-up letter, e-mail, or fax that provides details of the reasons for initiation of the drought stage.
- If any mandatory provisions of the drought contingency plan are activated, the Bedford Public Works Department shall notify the Executive Director of the TCEQ within 5 business days.

Drought stages imposed by TRWD action will be initiated by customers (including indirect customers).

For other trigger conditions, the City Manager or official designee may decide not to order the implementation of a drought response stage or water emergency even though one or more of the trigger criteria for the stage are met. Factors which could influence such a decision include, but are not limited to, the time of the year, weather conditions, the anticipation of replenished water supplies, or the anticipation that additional facilities will become available to meet needs. The reason for this decision should be documented.

#### Termination of a Drought Stage

The City Manager or official designee may order the termination of a drought response stage or water emergency when the conditions for termination are met or at their discretion. The following actions will be taken when a drought stage is terminated:

- The public will be notified through local media and the city Web site as described in Section 4.2.
- TRWD will be notified by telephone with a follow-up letter, e-mail, or fax.

- If any mandatory provisions of the drought contingency plan that have been activated are terminated, Bedford will notify the Executive Director of the TCEQ within 5 business days.

The City Manager or official designee may decide not to order the termination of a drought response stage or water emergency even though the conditions for termination of the stage are met. Factors which could influence such a decision include, but are not limited to, the time of the year, weather conditions, or the anticipation of potential changed conditions that warrant the continuation of the drought stage. The reason for this decision should be documented.

#### **4.4 Drought and Emergency Response Stages**

##### **Stage 1, Water Watch**

###### Triggering and Terminating Conditions for Stage 1, Water Watch

- Water demand exceeds 90% of the amount that can be delivered to customers for three consecutive days.
- Supply source becomes contaminated.
- TCWSP water demand for all or part of the delivery system approaches delivery capacity because delivery capacity is inadequate.
- TCWSP water supply system is unable to deliver water due to the failure or damage of major water system components.

TRWD has initiated Stage 1, Water Watch, for one or more of the following reasons:

- Total raw water supply in TRWD western and eastern division reservoirs drops below 75% (25% depleted) of conservation storage.
- Water demand for all or part of the TRWD delivery system exceeds delivery capacity because delivery capacity is inadequate.
- Water demand is projected to approach the limit of TRWD's permitted supply.
- TRWD's water supply system is unable to deliver water due to the failure or damage of major water system components.
- The TRWD General Manager, with the concurrence of the TRWD Board of Directors, finds that conditions warrant the declaration of a Stage 1 drought.

Stage 1 may terminate when TRWD terminates its Stage 1 condition or when the circumstances that caused the initiation of Stage 1 no longer prevail.

###### Goal for Use Reduction

The goal for water use reduction under Stage 1, Emergency Water Use, is to decrease use by five percent. If circumstances warrant or if requested by TRWD, the City Manager or official designee can set a goal for greater water use reduction.

#### Actions Available under Stage 1, Water Watch

The City Manager or official designee will implement any action(s) required by the Tarrant Regional Water District. In addition, the City Manager or official designee may order the implementation of any of the other actions listed below, as deemed necessary.

#### All Water Users

- Initiate mandatory restrictions to prohibit non-essential water use as follows:
  - Prohibit hosing of paved areas, such as sidewalks, driveways, parking lots, tennis courts, patios, or other impervious surfaces, except to alleviate an immediate health or safety hazard.
  - Prohibit hosing of buildings or other structures for purposes other than fire protection.
  - Prohibit using water in such a manner as to allow runoff or other waste, including failure to repair a controllable leak within a reasonable period of time after having been given notice to repair such leak. Types of leaks include a broken sprinkler head, a leaking valve, leaking or broken pipes, or a leaking faucet.
- Prohibit outdoor watering with sprinklers or irrigation systems between 10 a.m. and 6 p.m.
- Limit landscape watering with sprinklers or irrigation systems at each service address to twice per week.
  - Residential addresses ending in an even number (0, 2, 4, 6, or 8) may water on Wednesdays and Saturdays.
  - Residential addresses ending in an odd number (1, 3, 5, 7, or 9) may water on Thursdays and Sundays.
  - All non-residential locations (apartment complexes, businesses, industries, parks, medians, etc.) may water on Tuesdays and Fridays.

#### Exceptions:

Foundations may be watered up to two hours on any day using a handheld hose, soaker hose or drip irrigation system placed within 240 inches of the foundation that does not produce a spray of water above the ground.

Newly installed shrubs (first year) and trees (two years) may be watered up to two hours on any day by handheld hose, drip irrigation, a soaker hose or tree bubbler. Tree watering is limited to an area not to exceed the drip line of a tree.

Skinned areas of sports fields may be watered as needed for dust control.

- Washing of any motor vehicle, motorbike, boat, trailer, airplane, or other vehicle shall be limited to the use of a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rinses. Vehicle washing may be done at any time on the premises of a commercial car wash or commercial service station. Further, such washing may be exempt from these requirements if the health, safety, and welfare of the public are contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.
- Encourage reduction in frequency of draining and refilling swimming pools.
- Encourage use of Texas native and drought tolerant plants in landscaping.

### City and Local Governments

In addition to actions listed above:

- Review conditions and problems that caused Stage 1.
- Inspect treatment facilities and distribution system; make repairs where necessary.
- Increase public education efforts on ways to reduce water use.
- Intensify leak detection and repair efforts.
- Increase enforcement efforts.
- Municipal parks and golf courses using potable water restricted to twice per week landscape watering schedule. (Exceptions: Golf courses may water greens and tee boxes without restrictions; foundations, new plantings (first year) of shrubs, and trees may be watered on any day by handheld hose, drip irrigation, or a soaker hose. Restrictions do not apply to locations using treated wastewater effluent for irrigation).
- Reduce non-essential water use. As used herein, non-essential water uses are those that do not have any health or safety impact and are not needed to meet the core function of the agency.

### Commercial or Industrial

- All actions listed above for all water users apply to commercial and industrial users.
- Limit landscape watering of parks, golf courses, and sports fields using TRWD raw water or potable water to twice per week. (Exceptions: Golf courses may water greens and tee boxes without restrictions; foundations, new plantings (first year) of shrubs, and trees may be watered up to two hours on any day by handheld hose, drip irrigation, or a soaker hose. Restrictions do not apply to locations using treated wastewater effluent for irrigation).

- Identify and encourage voluntary reduction measures by high-volume water users through water use audits.
- Encourage hotels and restaurants to serve drinking water to patrons on an “on demand” basis.
- Hotels are encouraged to implement laundry conservation measures by encouraging patrons to reuse linens and towels.

## **Stage 2, Water Warning**

### Triggering and Terminating Conditions for Stage 2, Water Warning

- TCWSP demand exceeds 95% of the amount that can be delivered to customers for three consecutive days.
- Supply source becomes contaminated.
- TCWSP demand for all or part of the delivery system equals or exceeds delivery capacity because delivery capacity is inadequate.
- TCWSP water supply system is unable to deliver water due to the failure or damage of major water system components.

The TRWD has initiated Stage 2, Water Warning, for one or more of the following reasons:

- Total raw water supply in TRWD western and eastern division reservoirs drops below 60% (40% depleted) of conservation storage.
- Water demand for all or part of the TRWD delivery system exceeds delivery capacity because delivery capacity is inadequate.
- Water demand is projected to approach the limit of TRWD’s permitted supply.
- TRWD has concern that one or more of its water supply sources may be limited in availability in the next three months.
- TRWD’s supply source becomes contaminated.
- TRWD’s water supply system is unable to deliver water due to the failure or damage of major water system components.
- The TRWD General Manager, with the concurrence of the TRWD Board of Directors, finds that conditions warrant the declaration of a Stage 2 drought.

Stage 2 may terminate when TRWD terminates its Stage 2 condition or when the circumstances that caused the initiation of Stage 2 no longer prevail.

### Goal for Use Reduction

The goal for water use reduction under Stage 2, Emergency Water Use, is to decrease use by ten percent. If circumstances warrant or if required by TRWD, the City Manager or official designee can set a goal for greater water use reduction.

#### Actions Available under Stage 2, Water Warning

The City Manager or official designee shall implement any action(s) required by the Tarrant Regional Water District. In addition, the City Manager or official designee may order the implementation of any of the other actions listed below, as deemed necessary. Measures imposing mandatory requirements on customers require notification to TCEQ. The supplier must notify TCEQ within five business days if any mandatory measures are implemented:

- Continue or initiate any actions available under Stage 1.
- Require customers to initiate Stage 2 in their drought contingency plans.

#### All Water Users

- Limit landscape watering with sprinklers or irrigation systems at each service address to once every seven days. (Exceptions: Foundations, new plantings (first year) of shrubs, and trees may be watered on any day by handheld hose, drip irrigation, or a soaker hose. Restrictions do not apply to locations using treated wastewater effluent for irrigation).
- Prohibit use of water for dust control, except as required to protect public health.
- Restrict the operation of ornamental fountains or ponds that use potable water except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- Encourage the public to wait until the current drought or emergency situation has passed before establishing new landscaping.

#### City and Local Governments

In addition to actions listed above:

- Increase frequency of media releases on water supply conditions.
- Further accelerate public education efforts on ways to reduce water use.
- Limit landscape watering at municipal parks and golf courses to once every seven days. Greens and tee boxes may be watered as needed to keep them alive, however watering must be done during off-peak hours, before 10 a.m. and after 6 p.m. (Exceptions: Foundations, new plantings (first year) of shrubs, and trees may be watered on any day by handheld hose, drip irrigation, or a soaker hose. Restrictions do not apply to locations using treated wastewater effluent for irrigation).

- Halt non-essential water use. As used herein, non-essential water uses are those that do not have any health or safety impact and are not needed to meet the core function of the agency.
- Prohibit wet street sweeping.
- Notify wholesale customers of actions being taken and request them to implement similar procedures.

Commercial or Industrial

- All actions listed above for all water users apply to commercial and industrial users.
- Use of water from fire hydrants for any purpose other than firefighting related activities or other activities necessary to maintain public health, safety and welfare requires written permission from the Public Works Director. Fire hydrant use may be limited to only designated hydrants.
- Limit landscape watering of parks, golf courses, and sports fields using TRWD raw water or potable water to once every seven days. Greens and tee boxes may be watered as needed to keep them alive, however watering must be done during off-peak hours, before 10 a.m. and after 6 p.m. (Exceptions: Foundations, new plantings (first year) of shrubs, and trees may be watered any day by handheld hose or a soaker hose. Restrictions do not apply to locations using treated wastewater effluent for irrigation).

**Stage 3, Emergency Water Use**

Triggering and Terminating Conditions

- TCWSP’s demand exceeds 98% of the amount that can be delivered to customers for one day.
- Supply source becomes contaminated.
- TCWSP’s demand for all or part of the delivery system exceeds delivery capacity because delivery capacity is inadequate.
- TCWSP’s water supply system is unable to deliver water due to the failure or damage of major water system components.

The TRWD has initiated Stage 3, Emergency Water Use, for one or more of the following reasons:

- Total raw water supply in TRWD western and eastern division reservoirs drops below 45% (55% depleted) of conservation storage.
- Water demand for all or part of the TRWD delivery system exceeds delivery capacity because delivery capacity is inadequate.

- Water demand is projected to approach or exceed the limit of TRWD’s permitted supply.
- One or more of TRWD’s water supply sources has become limited in availability.
- TRWD’s supply source becomes contaminated.
- TRWD’s water supply system is unable to deliver water due to the failure or damage of major water system components.
- The TRWD General Manager, with the concurrence of the TRWD Board of Directors, finds that conditions warrant the declaration of a Stage 3 drought.

Stage 3 may terminate when TRWD terminates its Stage 3 condition or when the circumstances that caused the initiation of Stage 3 no longer prevail.

Goals for Use Reduction

The goal for water use reduction under Stage 3, Emergency Water Use, is to decrease use by 20 percent. If circumstances warrant or if required by TRWD, the City Manager or official designee can set a goal for a greater water use reduction.

Actions Available under Stage 3, Emergency Water Use

The City Manager or official designee will implement any action(s) required by the Tarrant Regional Water District. In addition, the City Manager or official designee may order the implementation of any of the other actions listed below, as deemed necessary. Measures imposing mandatory requirements on customers require notification to TCEQ. The supplier must notify TCEQ within five business days if any mandatory measures are implemented:

- Continue or initiate any actions available under Stages 1 and 2.
- Require customers to initiate Stage 3 in their drought contingency plans.

All Water Users

- Prohibit residential landscape watering, except foundations and trees may be watered for two hours on any day with a hand-held hose, drip irrigation, or a soaker hose. Trees may be watered up to two hours on any day by handheld hose, drip irrigation, or a soaker hose. Tree watering is limited to an area not to exceed the drip line of a tree.
- Prohibit establishment of new landscaping.
- Vehicle washing restricted to commercial car wash or commercial service station and can only be done as necessary for health, sanitation, or safety reasons, including but not limited to the washing of garbage trucks and vehicles used to transport food and other perishables. All other vehicle washing is prohibited.

- Prohibit the operation of ornamental fountains or ponds that use potable water except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- Prohibit the draining, filling, or refilling of swimming pools, wading pools and Jacuzzi type pools. Existing private and public pools may add water to maintain pool levels.

#### City and Local Governments

In addition to actions listed above:

- Implement viable alternative water supply strategies.
- Increase frequency of media releases explaining emergency situation.
- Reduce municipal water use to maximum extent possible.
- Prohibit the permitting of new swimming pools, Jacuzzi type pools, spas, ornamental ponds and fountain construction. Pools already permitted and under construction may be completely filled with water.
- Institute a mandated reduction in deliveries to all customers. Such a reduction will be distributed as required by Texas Water Code §11.039.
- If TRWD has imposed a reduction in water available to customers, impose the same percent reduction on wholesale customers.

#### Commercial or Industrial

- All actions listed above for all water users apply to commercial and industrial users.
- Hotels, restaurants, and bars required to serve drinking water to patrons on an “on demand” basis.
- Hotels are required to implement laundry conservation measures by encouraging patrons to reuse linens and towels.
- Prohibit commercial landscape watering, except foundations and trees may be watered for two hours on any day (or once per week schedule as set by city government) with a hand-held hose, drip irrigation, or a soaker hose.
- Prohibit establishment of new landscaping at commercial locations.
- Commercial water users required to reduce water use by a set percentage determined by the Public Works Director.

#### **4.5 Procedures for Granting Variances to the Plan**

The City Manager or official designee may grant temporary variances for existing water uses otherwise prohibited under this drought contingency plan if one or more of the following conditions are met:

- Failure to grant such a variance would cause an emergency condition adversely affecting health, sanitation, or fire safety for the public or the person requesting the variance.
- Compliance with this plan cannot be accomplished due to technical or other limitations.
- Alternative methods that achieve the same level of reduction in water use can be implemented.

Variations shall be granted or denied at the discretion of the City Manager or official designee. All petitions for variations should be in writing and should include the following information:

- Name and address of the petitioner(s)
- Purpose of water use
- Specific provisions from which relief is requested
- Detailed statement of the adverse effect of the provision from which relief is requested
- Description of the relief requested
- Period of time for which the variance is sought
- Alternative measures that will be taken to reduce water use
- Other pertinent information.

#### **4.6 Procedures for Enforcing Mandatory Water Use Restrictions**

Mandatory water use restrictions may be imposed in Stages 1, 2, and 3 drought stages. These mandatory water use restrictions will be enforced by warnings and penalties as follows:

- On the first violation, customers will be given a written warning that they have violated the mandatory water use restriction.
- On the second and subsequent violations, citations may be issued to customers, with minimum and maximum fines established by ordinance.
- After two violations have occurred, the City of Bedford may install a flow restrictor in the line to limit the amount of water that may pass through the meter in a 24-hour period.
- After three violations have occurred, the utility may cut off water service to the customer.

Appendix D contains a copy of the City of Bedford ordinance adopting this Plan and the enforcement actions and penalties.

#### **4.7 Coordination with the Regional Water Planning Group and TRWD**

Appendix C includes a copy of a letter sent to the Chair of the Region C Planning Group, General Manager of TRWD and the TCEQ upon adoption of this Plan.

#### **4.8 Review and Update of Drought Contingency Plan**

As required by TCEQ rules, Bedford will review this drought contingency plan in 2014 and every five years thereafter. The plan will be updated as appropriate based on new or updated information.

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

## **Appendix A**

### **List of References**

- (1) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter 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/pdflib/288a.pdf>, March 2007.

The TRWD model drought contingency 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 with revisions in April 2006.
- 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 Austin Water Conservation Division: “City of Austin Water Drought Contingency Plan, Developed to Meet Senate Bill 1 Regulatory Requirements,” Austin, August 1999.
- City of Austin Water Conservation Division: “City of Austin Water Conservation Plan, Developed to Meet Senate Bill 1 Regulatory Requirements,” Austin, August 1999.
- Upper Trinity Regional Water District: “Water Conservation Plan and Emergency Water Demand Management Plan,” adopted by the Board of Directors, Lewisville, August 5, 1999.
- Upper Trinity Regional Water District: “Water Conservation Plan and Emergency Water Demand Management Plan (2002 Amended),” adopted by the Board of Directors, Lewisville, February 2002.
- \*City of Dallas Water Utilities Department: “City of Dallas Water Management Plan,” adopted by the City Council, Dallas, September 1999.
- Updates to City of Dallas Water Management Plan found at <http://www.dallascityhall.com> in September 2003.
- \*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.

- Updates to the City of Fort Worth water conservation plan found at <http://ci.fort-worth.tx.us> in September 2003.
- \*City of Fort Worth: "Emergency Water Management Plan for the City of Fort Worth," Fort Worth, August 19, 2003.
- HDR Engineering, Inc.: "Water Conservation and Emergency Demand Management Plan," prepared for the Tarrant Regional Water District, Austin, February 2000.
- Freese and Nichols, Inc.: "Water Conservation and Drought Contingency Plan," prepared for Brown County Water Improvement District No. 1, Fort Worth, August 1999.
- HDR Engineering, Inc.: "Water Conservation and Emergency Demand Management Plan," prepared for the Tarrant Regional Water District, Austin, June 1998.
- HDR Engineering, Inc.: "Water Conservation Plan for the City of Corpus Christi," adopted by the City of Corpus Christi City Council, August 24, 1999.
- City of Houston's water conservation plan downloaded September 2003 from <http://www.cityofhouston.gov>
- City of Houston: "Ordinance N. 2001-753, Amending Chapter 47 of the Code of Ordinances Relating to Water Emergencies," Houston, August 2001.
- City of Houston: "Ordinance No. 98-764, Relating to Water Conservation," Houston, September 1998.
- City of Houston: "Water Conservation Plan," 1998.
- City of Houston: "Water Emergency Response Plan," Houston, July 15, 1998.
- City of Lubbock: "Water Conservation Plan," ordinance number 10177 adopted by the City Council in August 1999.
- City of El Paso Water Conservation Ordinance downloaded August 14, 2003 from <http://www.epwu.org/ordinance.html>
- North Texas Municipal Water District: "District Policy No. 24 Water Conservation Plan Containing Drought Contingency Plan," adopted August 1999.
- GDS Associates, Inc.: "Water Conservation Study," prepared for the Texas Water Development Board, Fort Worth, 2002.
- A & N Technical Services, Inc.: "BMP Costs & Savings Study: A Guide to Data and Methods for Cost-Effectiveness Analysis of Urban Water Conservation Best Management Practices," prepared for The California Urban Water Conservation Council, Santa Monica, California, July 2000.
- \*City of Dallas: "City of Dallas Ordinances, Chapter 49, Section 21.1," Dallas, October 1, 2001

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## **APPENDIX B**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES ON DROUGHT  
CONTINGENCY PLANS FOR MUNICIPAL USES BY PUBLIC WATER SUPPLIERS**

## APPENDIX B

### Texas Commission on Environmental Quality Rules on Drought Contingency Plans

#### Texas Administrative Code

<u>TITLE 30</u>	ENVIRONMENTAL QUALITY
<u>PART 1</u>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<u>CHAPTER 288</u>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
<u>SUBCHAPTER B</u>	DROUGHT CONTINGENCY PLANS
<b>RULE §288.20</b>	<b>Drought Contingency Plans for Municipal Uses by Public Water Suppliers</b>

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- (a) A drought contingency plan for a retail public water supplier, where applicable, must provide information in response to each of the following.
- (1) Minimum requirements. Drought contingency plans must include the following minimum elements.
- (A) Preparation of the plan shall include provisions to actively inform the public and affirmatively provide opportunity for public input. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the public and providing written notice to the public concerning the proposed plan and meeting.
- (B) Provisions shall be made for a program of continuing public education and information regarding the drought contingency plan.
- (C) The drought contingency plan must document coordination with the Regional Water Planning Groups for the service area of the retail public water supplier to insure consistency with the appropriate approved regional water plans.
- (D) The drought contingency plan shall include a description of the information to be monitored by the water supplier, and specific criteria for the initiation and termination of drought response stages, accompanied by an explanation of the rationale or basis for such triggering criteria.
- (E) The drought contingency plan must include drought or emergency response stages providing for the implementation of measures in response to at least the following situations:
- (i) reduction in available water supply up to a repeat of the drought of record;
  - (ii) water production or distribution system limitations;
  - (iii) supply source contamination; or
  - (iv) system outage due to the failure or damage of major water system

components (e.g., pumps).

- (F) The drought contingency plan must include specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought. The entity preparing the plan shall establish the targets. The goals established by the entity under this subparagraph are not enforceable.
  - (G) The drought contingency plan must include the specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following:
    - (i) curtailment of non-essential water uses; and
    - (ii) utilization of alternative water sources and/or alternative delivery mechanisms with the prior approval of the executive director as appropriate (e.g., interconnection with another water system, temporary use of a non-municipal water supply, use of reclaimed water for non-potable purposes, etc.).
  - (H) The drought contingency plan must include the procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public.
  - (I) The drought contingency plan must include procedures for granting variances to the plan.
  - (J) The drought contingency plan must include procedures for the enforcement of any mandatory water use restrictions, including specification of penalties (e.g., fines, water rate surcharges, discontinuation of service) for violations of such restrictions.
- (2) Privately-owned water utilities. Privately-owned water utilities shall prepare a drought contingency plan in accordance with this section and incorporate such plan into their tariff.
- (3) Wholesale water customers. Any water supplier that receives all or a portion of its water supply from another water supplier shall consult with that supplier and shall include in the drought contingency plan appropriate provisions for responding to reductions in that water supply.
- (b) A wholesale or retail water supplier shall notify the executive director within five business days of the implementation of any mandatory provisions of the drought contingency plan.
- (c) The retail public water supplier shall review and update, as appropriate, the drought contingency plan, at least every five years, based on new or updated information, such as the adoption or revision of the regional water plan.

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**Source Note:** The provisions of this §288.20 adopted 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

**APPENDIX C**  
**LETTER TO REGION C WATER PLANNING GROUP**



# CITY of BEDFORD

SERVICE CENTER • 1813 RELIANCE PARKWAY • BEDFORD TEXAS 76021 • (817) 952-2200 • FAX (817) 952-2240

April 27, 2009

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

Dear Mr. Parks:

Enclosed please find a copy of the City of Bedford Water Conservation and Drought Contingency Plans. I am submitting a copy of these plans to the Region C Water Planning Group in accordance with the Texas Water Development Board and Texas Commission on Environmental Quality rules.

Sincerely,

John F. Kubala, P.E.  
Public Works Director

**APPENDIX D**  
**ORDINANCE ADOPTING DROUGHT CONTINGENCY 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:**

\_\_\_\_\_  
Stan Lowry, City Attorney