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## 1. INTRODUCTION AND OBJECTIVES

The purpose of this Drought Contingency and Emergency Water Management 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

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."

TCEQ rules governing development of and minimum requirements for drought contingency plans for municipal water suppliers and wholesale water suppliers are contained in Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 and Rule 288.22, respectively.

## 3. WATER SYSTEM PROFILE

The City purchases water from the Tarrant Regional Water District (TRWD). The supply sources are:

- West Fork of Trinity River: Lake Worth, Eagle Mountain Lake, and Lake Bridgeport; (A pipeline connecting Eagle Mountain Lake to the East Texas supply is under construction.)
- East Texas: Cedar Creek Reservoir, located approximately 75 miles southeast of Fort Worth; and Richland Chambers Reservoir, located approximately 75 miles southeast of Fort Worth; and
- Clear Fork of the Trinity River via Lake Benbrook. (A pipeline connects Lake Benbrook to the East Texas Supply.)

System capacity with regards to the defined triggers in Section 4.4 is the total reliable pumping capacity is found in Appendix A. Therefore, the system capacity baseline for triggers is the reliable delivery capacity of 460 million gallons per day (MGD). See Appendix A for more details of the yields of each of the treatment plants. This trigger number will be evaluated each year to take into consideration improvements that may have been added to the system.

Fort Worth has about 217,000 retail service connections and 29 wholesale water customers. Wholesale customers are Benbrook Water & Sewer Authority, Bethesda Water Supply Corp., Burleson, Crowley, Dallas/Fort Worth International Airport, Dalworthington Gardens, Edgecliff Village, Everman, Forest Hill, Grand Prairie, Haltom City, Haslet, Hurst, Keller, Lake Worth, Northlake, North Richland Hills, Richland Hills, River Oaks, Roanoke, Saginaw, Sansom Park, Southlake, Trinity River Authority - Mosier Valley, Trophy Club Municipal Utility District, Westlake, Westover Hills, Westworth Village and White Settlement. Some of these customers have emergency contracts only and do not take from the Fort Worth system on a regular basis.

In accordance with Section 2.3 of the wholesale water contract, wholesale customers are required to institute and apply the same rationing, conservation measures or restrictions to the use of water by their customers for so long as any part of their total water supply is being furnished by Fort Worth.

Fort Worth maintains about 3,200 miles of distribution pipelines.

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

#### **4. DROUGHT CONTINGENCY/EMERGENCY WATER MANAGEMENT PLAN**

##### **4.1 Public Involvement**

The public had several opportunities to provide input into the plan.

- A public meeting soliciting comments was held on Dec. 10, 2007. The meeting was advertised on the city Web site, on City Page in the Fort Worth Star-Telegram, through news releases to the news media and neighborhood associations, and in handouts at public events.
- The Fort Worth Water Department's Water Conservation Advisory Committee discussed the draft plan's provisions and provided feedback during its June 21, 2007 meeting and was provided a copy for review and comments prior to the public meeting on Dec. 10, 2007.
- The draft plan was posted on the City of Fort Worth Web site ([www.fortworthgov.org/water](http://www.fortworthgov.org/water)) for four months prior to City Council adoption.
- Copies were available to anyone upon request.

## 4.2 Public Education

Fort Worth will inform and educate the public about the Drought Contingency/Emergency Water Management Plan by the following means:

- Preparing fact sheets describing the plan and making these available online and at various city sites, and at events where the water department may have a booth.
- Posting a copy of the Plan on the city's Web site.
- Notifying local organizations, schools, and civic groups that staff are available to make presentations on the plan.

At any time that the Drought Contingency/Emergency Water Management Plan is activated or the stage changes, customers will notify local media of the issues, the current response stage, and the specific actions required of the public. The information will also be publicized on the city's Web site. Bill inserts will also be used as appropriate.

## 4.3 Initiation & Termination of Drought & Emergency Response Stages

The provisions of this Plan shall apply to all persons, customers, and property utilizing potable water provided by the City of Fort Worth. The terms "person" and "customer" as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities. The Plan does not apply to locations using treated wastewater effluent, private wells or possessing their own water rights in the Trinity River.

The Plan may be applied to the entire city or geographic portions of the city as necessary. If the Plan is applied only to a limited sector, the boundaries will be defined in terms of roadways, creeks and other easily distinguishable features, such as city limits.

### Initiation of a Drought/ Emergency Water Management Stage

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

- The public will be notified through local media and the City of Fort Worth Web site, as described in Section 4.2.
- Fort Worth's wholesale customers and Tarrant Regional Water District will be notified by telephone and with a follow-up letter, e-mail, or fax that provides details of the reasons for initiation of the drought or water emergency stage.
- The Fort Worth Water Department will notify the Executive Director of the TCEQ within 5 business days when mandatory provisions of the Plan are activated.

Stages imposed by TRWD action must be initiated by the City of Fort Worth.

For other trigger conditions, the City Manager or his/her official designee may decide not to order the implementation of a drought response or water emergency stage 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 his/her official designee may order the termination of a drought response or water emergency stage 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 of Fort Worth Web site as described in Section 4.2.
- Wholesale customers and TRWD will be notified by telephone with a follow-up letter, e-mail, or fax.
- If any mandatory provisions of the drought contingency/emergency water management plan that have been activated are terminated, customers will notify the Executive Director of the TCEQ within 5 business days.

The City Manager or his/her 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 Conditions

- Water demand reaches or exceeds 90% of reliable delivery capacity for three consecutive days. The delivery capacity could be citywide or in a specified portion of the system.
- Fort Worth's water treatment or distribution system becomes contaminated.
- Fort Worth's water demand for all or part of the delivery system approaches delivery capacity because delivery capacity is inadequate.
- Fort Worth's water supply system is unable to deliver water due to the failure or damage of major water system components.

- TRWD 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 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 1 drought.

#### **Terminating Conditions for Stage 1**

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 for Stage 1**

The goal for water use reduction under Stage 1, Water Watch, is five percent. If circumstances warrant or if required by TRWD, the City Manager or his/her official designee can set a goal for greater water use reduction.

#### **Actions Available for Stage 1**

The City Manager or his/her official designee may order the implementation of any of the actions listed below, as deemed necessary. The City Manager or his/her official designee must implement any action(s) required by the Tarrant Regional Water District.

#### **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 or surface preparation prior to painting.
  - Prohibit using water in such a manner as to allow runoff or other waste, including:
    - failure to repair a controllable leak, including a broken sprinkler head, a leaking valve, leaking or broken pipes, or a leaking faucet;

- operating a permanently installed irrigation system with: (a) a broken head; (b) a head that is out of adjustment and the arc of the spray head is over a street or parking lot; or (c) a head that is misting because of high water pressure; or
- during irrigation, allowing water to (a) to run off a property and form a stream of water in a street for a distance of 50 feet or greater; or (b) to pond in a street or parking lot to a depth greater than one-quarter of an inch.
- 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 a twice per week schedule as outlined below. This includes landscape watering of parks, golf courses, and sports fields. Wholesale customers may use a different watering schedule than the one below as long as it limits each service address to a twice per week schedule; however, use of the same schedule would simplify the messages passed to customers through the news media.
  - 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 24-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.
- Outdoor watering at service addresses with large multi-station irrigation systems may take place in accordance with a variance granted by the Water Director, if the Water Director determines that a property can not be completely irrigated with an average of three-quarters of an inch of water in a single day, and that the property should be divided into sections to be irrigated on different days.
- Establishing new turf is discouraged. If hydromulch, grass sod, or grass seed is installed for the purpose of establishing a new lawn, there are no watering restrictions for the first 30 days while it is being established. After that, the watering restrictions set forth in this stage apply. (This does not include over seeding with rye since turf already exists.)



- Golf courses may water greens and tee boxes without restrictions, however watering must be done before 10 a.m. and after 6 p.m. Fairways are restricted to twice per week watering as outlined above. Golf course rough is restricted to once per week watering.
- Skinned areas of sports fields may be watered as needed for dust control.
- Professional sports fields (playing fields within a stadium only – not surrounding landscaping) may be watered as needed to maintain league standards.
- All users are encouraged to reduce the frequency of draining and refilling swimming pools.
- All users are encouraged to use native and adapted drought tolerant plants in landscaping.
- 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-pressure 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. Companies with an automated on-site vehicle washing facility may wash its vehicles at anytime. 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.

### City and Local Governments

In addition to the actions listed above:

- Review conditions and problems that caused Stage 1. Take corrective action.
- Increase public education efforts on ways to reduce water use.
- Increase enforcement efforts.
- Intensify leak detection and repair efforts.
- Audit all city and local government irrigation systems to ensure proper condition, settings, and operation.
- Identify and encourage voluntary reduction measures by high-volume water users through water use audits.
- 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.
- The Water Director or his/her designee will notify wholesale customers of actions being taken and require them to implement the same stage and measures. Such action is in accordance with Section 2.3 of the uniform wholesale water contract. Per the contract, wholesale customers are required to institute and apply the same rationing,

conservation measures or restrictions to the use of water by their customers for so long as any part of their total water supply is being furnished by Fort Worth.

### Commercial or Industrial

- All actions listed above for all water users apply to commercial and industrial users.
- Stock at commercial plant nurseries is exempt from Stage 1 watering restrictions.
- Hotels, restaurants, and bars are encouraged 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 Conditions for Stage 2

- Water demand reaches or exceeds 95% of reliable delivery capacity for three consecutive days. The delivery capacity could be citywide or in a specified portion of the system.
- Contamination of the water supply source(s) or water supply system.
- Demand for all or part of the delivery system equals or exceeds delivery capacity because delivery capacity is inadequate.
- Water supply system is unable to deliver water due to the failure or damage of major water system components.
- TRWD 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'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.

## Terminating Conditions for Stage 2

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 for Stage 2

The goal for water use reduction under Stage 2 – Water Warning is to decrease use by 10 percent. If circumstances warrant or if required by TRWD, the City Manager or his/her official designee can set a goal for greater water use reduction.

## Actions Available for Stage 2

The City Manager or his/her official designee may order the implementation of any of the actions listed below, as deemed necessary. The City Manager or his/her official designee must implement any action(s) required by the Tarrant Regional Water District.

- Continue or initiate any actions available under Stage 1.

## All Water Users

- Limit landscape watering with sprinklers or irrigation systems to a once per week schedule at each service address as determined by the Water Director. This includes landscape watering at parks, golf courses, and sports fields. Wholesale customers may use a different watering schedule than the one used for Fort Worth retail customers as long as it limits each service address to once per week schedule; however, use of the same schedule would simplify the messages passed to customers through the news media.

### Exceptions:

- Foundations may be watered up to two hours on any day by handheld hose; or using a soaker hose or drip irrigation system placed within 24-inches of the foundation that does not produce a spray of water above the ground.
- Newly installed shrubs (first year) and 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.
- Outdoor watering at service addresses with large multi-station irrigation systems may take place in accordance with a variance granted by the director of utilities, if the director determines that a property can not be completely irrigated with an average of three-quarters of an inch of water in a single day, and that the property should be divided into sections to be irrigated on different days.

- Golf courses may water greens and tee boxes as needed to keep them alive, however watering must be done before 10 a.m. and after 6 p.m. Fairways are restricted to once per week watering as outlined above. Golf course rough cannot be watered.
- Watering for dust control on skinned areas of sport fields is not allowed.
- Professional sports fields (playing fields within a stadium only – not surrounding landscaping) may be watered as needed to maintain league standards.
  - All users are encouraged to wait until the current drought or emergency situation has passed before establishing new landscaping and turf. If hydromulch, grass sod, or grass seed is installed for the purpose of establishing a new lawn, there are no watering restrictions for the first 30 days while it is being established. After that, the watering restrictions set forth in this stage apply. (This does not include over seeding with rye since turf already exists.)
- Prohibit use of water for dust control, except as required to protect public health.
- 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 filling of swimming pools with automatic valves.

#### City and Local Governments

- Review conditions or problems that caused Stage 2. Take corrective action.
- Increase frequency of media releases on water supply conditions.
- Further accelerate public education efforts on ways to reduce water use.
- Eliminate 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.
- The Water Director or his/her designee will notify wholesale customers of actions being taken and require them to implement the same stage and measures. Such action is in accordance with Section 2.3 of the uniform wholesale water contract. Per the contract, wholesale customers are required to institute and apply the same rationing, conservation measures or restrictions to the use of water by their customers for so long as any part of their total water supply is being furnished by Fort Worth.

#### 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 a special permit issued by the Water Director. Fire hydrant use may be limited to only designated hydrants.

### Stage 3 – Emergency Water Use

#### Triggering Conditions for Stage 3

- Water demand has reaches or exceeds 98% of reliable delivery capacity for one day. The delivery capacity could be citywide or in a specified portion of the system.
- Contamination of the water supply source(s) or water supply system.
- Demand for all or part of the delivery system exceeds delivery capacity because delivery capacity is inadequate.
- Water supply system is unable to deliver water due to the failure or damage of major water system components.
- TRWD has initiated Stage 3 – Emergency Water Use, which may also be initiated by one or more of the following:
  - 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.
  - 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.

#### Terminating Conditions for Stage 3

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 for Stage 3

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 his/her official designee can set a goal for a greater water use reduction.

### Actions Available for Stage 3

The City Manager or his/her official designee may order the implementation of any of the actions listed below, as deemed necessary. The City Manager or his/her official designee must implement any action(s) required by the Tarrant Regional Water District.

- Continue or initiate any actions available under Stages 1 and 2.

### All Water Users

- Prohibit landscape watering, including at parks, golf courses, and sports fields.

#### Exceptions:

- Foundations may be watered up to two hours on any day by handheld hose; or using a soaker hose or drip irrigation system placed within 24-inches of the foundation that does not produce a spray of water above the ground.
- 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.
- Golf course greens only may be watered by hand-held hose as needed to keep them alive, however watering must be done before 10 a.m. and after 6 p.m.
- Professional sports fields (playing fields with a stadium only – not surrounding landscaping) may be watered as needed to maintain league standards.
- Prohibit establishment of new landscaping.
- Vehicle washing restricted to commercial car wash, commercial service station or a private on-site vehicle washing facility 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.
- 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; however they may not be refilled using automatic fill valves.

### City and Local Governments

In addition to actions listed above:

- Continue or initiate any actions available under Stages 1 and 2.
- Review conditions or problems that caused Stage 3. Take corrective action.
- Implement viable alternative water supply strategies.
- Increase frequency of media releases explaining emergency situation.
- Reduce city and local government 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 wholesale 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.
- The Water Director will notify wholesale customers of actions being taken and require them to implement the same stage and measures. Such action is in accordance with Section 2.3 of the uniform wholesale water contract. Per the contract, wholesale customers are required to institute and apply the same rationing, conservation measures or restrictions to the use of water by their customers for so long as any part of their total water supply is being furnished by Fort Worth.

#### **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.
- Stock at commercial plant nursery may be watered only with a hand-held hose, hand-held watering can, or drip irrigation system.
- Commercial and industrial water users required to reduce water use by a set percentage determined by the Water Director.
- Use of water from hydrants for any purpose other than firefighting related activities or other activities necessary to maintain public health, safety and welfare requires a special permit issued by the Water Director. Fire hydrant use may be limited to only designated hydrants.

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

The Water Director or his/her 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.

Variances shall be granted or denied at the discretion of the Water Director or his/her official designee. All petitions for variances 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 Measures

Mandatory water use restrictions may be imposed in Stages 1, 2, and 3. 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 three violations have occurred, the utility may cut off water service to the customer.

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Appendix B contains a copy of the City of Fort Worth City ordinance adopting this Plan and the enforcement actions and penalties.



#### 4.7 Coordination with the Other Entities

Appendix C includes a copy of a letters sent to the chair of the Region C Water Planning Group, General Manager of TRWD and the Executive Director of TCEQ upon adoption of this Plan.

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

As required by TCEQ rules, Fort Worth will review this drought contingency plan in 2009 and at least every five years thereafter. The plan will be updated as appropriate based on new or updated information.

# Fort Worth Water Department Drought Plan Matrix of Actions by Stage and Customer Type

All actions apply to the use of City of Fort Worth raw and potable water, and to potable water supplied by City of Fort Worth wholesale customers. Restrictions do not apply to locations which own their water rights or are using treated wastewater effluent or well water for irrigation.

Use Reduction Goal:		5%	10%	20%
Water User	Water Use or Action Category	Stage 1 – Water Watch	Stage 2 – Water Warning	Stage 3 – Water Emergency
All Water Users	Hosing/Washing	<ul style="list-style-type: none"> <li>Prohibited: 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.</li> <li>Prohibited: hosing of buildings or other structures for purposes other than fire protection or surface preparation prior to painting.</li> </ul>	Same as Stage 1.	Same as Stage 1.
	Runoff/Waste/Leaks	<ul style="list-style-type: none"> <li>Prohibited: using water in such a manner as to allow runoff or other waste, including:                             <ul style="list-style-type: none"> <li>(1) failure to repair a controllable leak, including a broken sprinkler head, a leaking valve, leaking or broken pipes, or a leaking faucet;</li> <li>(2) operating a permanently installed irrigation system with: (a) a broken head; (b) a head that is out of adjustment and the arc of the spray head is over a street or parking lot; or (c) a head that is misting because of high water pressure; or</li> <li>(3) during irrigation, allowing water to (a) run off a property and form a stream of water in a street for a distance of 50 feet or greater; or (b) to pond in a street or parking lot to a depth greater than one-quarter of an inch.</li> </ul> </li> </ul>	Same as Stage 1.	Same as Stage 1.

# **Fort Worth Water Department** **Drought Plan Matrix of Actions by Stage and Customer Type**

Water User	Water Use or Action Category	Stage 1 – Water Watch	Stage 2 – Water Warning	Stage 3 – Water Emergency
All Water Users (continued)	Outdoor Watering	<ul style="list-style-type: none"> <li>Prohibited: outdoor watering with sprinklers or irrigation systems between 10 a.m. and 6 p.m.</li> <li>Limited to twice per week: landscape watering with sprinklers or irrigation systems at each service address is limited to a twice per week schedule. This includes landscape watering of parks, golf courses, and sports fields.               <ul style="list-style-type: none"> <li>Residential addresses ending in an even number (0, 2, 4, 6, or 8) may water on Wednesdays and Saturdays.</li> <li>Residential addresses ending in an odd number (1, 3, 5, 7 or 9) may water on Thursdays and Sundays.</li> <li>All non-residential locations (apartment complexes, businesses, industries, parks, medians, etc.) may water on Tuesdays and Fridays.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Prohibited: outdoor watering with sprinklers or irrigation systems between 10 a.m. and 6 p.m.</li> <li>Restricted to once every seven days: outdoor watering with sprinklers or irrigation systems at each service address is limited to a once per week schedule as determined by the director of utilities</li> <li>Dust control not allowed on skinned areas of sports fields.</li> </ul>	<ul style="list-style-type: none"> <li>Prohibited: all outdoor watering</li> <li>Dust control not allowed on skinned areas of sports fields.</li> </ul>
	Exceptions to Outdoor Watering Restrictions	<ul style="list-style-type: none"> <li>Foundations: foundations may be watered up to two hours on any day by handheld hose, or using a soaker hose or drip system placed within 24 inches of the foundation that does not produce a spray of water above the ground.</li> <li>Selected Landscaping Plants: 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.</li> </ul>	<ul style="list-style-type: none"> <li>Foundations: selected landscaping plants, large multi-station irrigation, and turf establishment rules: same as Stage 1.</li> <li>Golf course greens and tee boxes may be watered only as needed to keep them alive; however, watering must be done before 10 a.m. and after 6 p.m.</li> <li>Professional sports fields (playing fields with a stadium only – not surrounding landscaping) may be watered as needed to maintain league standards.</li> </ul>	<ul style="list-style-type: none"> <li>Foundations: foundations may be watered up to two hours on any day by handheld hose, or using a soaker hose or drip system placed within 24 inches of the foundation that does not produce a spray of water above the ground.</li> <li>Trees 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.</li> </ul>

# **Fort Worth Water Department Drought Plan Matrix of Actions by Stage and Customer Type**

Water User	Water Use or Action Category	Stage 1 – Water Watch	Stage 2 – Water Warning	Stage 3 – Water Emergency
All Water Users (continued)	Exceptions to Outdoor Watering Restrictions (continued)	<ul style="list-style-type: none"> <li>New Turf: Establishing new turf is discouraged. If hydromulch, grass seed, or grass seed is installed for the purpose of establishing a new lawn, there are no watering restrictions for the first 30 days while it is being established. After that, the watering restrictions set forth in this stage apply. (This does not include over seeding with rye since turf already exists.)</li> <li>Large Multi-station Irrigation: outdoor watering may take place in accordance with a variance granted by the director, if the director determines that a property cannot be completely watered with an average of three-quarters of an inch of water in a single day, and that the property should be divided into sections to be watered on different days.</li> <li>Golf courses may water greens and tee boxes without restrictions, however, watering must be done before 10 a.m. and after 6 p.m. Fairways are restricted to twice per week watering as outlined above. Golf course rough is restricted to once per week watering.</li> <li>Skinned areas of sports fields may be watered as needed for dust control.</li> <li>Professional sports fields (playing fields with a stadium only – not surrounding landscaping) may be watered as needed to maintain league standards.</li> </ul>		<ul style="list-style-type: none"> <li>Landscape watering prohibited; however golf course greens may be watered by hand before 10 a.m. and after 6 p.m. as needed to keep them alive.</li> <li>Professional sports fields (playing fields with a stadium only – not surrounding landscaping) may be watered as needed to maintain league standards.</li> </ul>

# Fort Worth Water Department Drought Plan Matrix of Actions by Stage and Customer Type

Water User	Water Use or Action Category	Stage 1 – Water Watch	Stage 2 – Water Warning	Stage 3 – Water Emergency
All Water Users (continued)	Landscaping	<ul style="list-style-type: none"> <li>All users are encouraged to use native and drought tolerant plants in landscaping.</li> </ul>	<ul style="list-style-type: none"> <li>All users are encouraged to wait until the current drought or emergency situation has passed before installing and establishing new landscape plants and turf.</li> </ul>	<ul style="list-style-type: none"> <li><u>Prohibited</u>: installing and establishing new landscape plants and turf.</li> </ul>
	Vehicle Washing	<ul style="list-style-type: none"> <li>Washing of any motor vehicle, motorcycle, 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-pressure shutoff nozzle for quick rinses.</li> <li>Vehicle washing may be done at any time on the premises of a commercial car wash or automated on-site vehicle washing facility may wash its vehicles at anytime.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 1.</li> </ul>	<ul style="list-style-type: none"> <li>Vehicle washing restricted to commercial car wash, commercial service station or a private on-site vehicle washing facility 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.</li> </ul>
	Swimming Pools	<ul style="list-style-type: none"> <li>All users are encouraged to reduce the frequency of draining and refilling swimming pools.</li> </ul>	<ul style="list-style-type: none"> <li><u>Prohibited</u>: Swimming pools may not be filled with automatic fill valves.</li> </ul>	<ul style="list-style-type: none"> <li><u>Prohibited</u>: 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. Swimming pools may not be refilled with automatic fill valves.</li> </ul>
	Dust Control	<ul style="list-style-type: none"> <li>No restriction.</li> </ul>	<ul style="list-style-type: none"> <li><u>Prohibited</u>: use of water for dust control, except as required to protect public health.</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 2.</li> </ul>
	Ornamental Fountains/Ponds	<ul style="list-style-type: none"> <li>No restriction.</li> </ul>	<ul style="list-style-type: none"> <li><u>Prohibited</u>: the operation of ornamental fountains or ponds that use potable water, except where necessary to support aquatic life.</li> </ul>	<ul style="list-style-type: none"> <li><u>Prohibited</u>: the operation of ornamental fountains or ponds that use potable water except where necessary to support aquatic life.</li> </ul>

# Fort Worth Water Department Drought Plan Matrix of Actions by Stage and Customer Type

Water User	Water Use or Action Category	Stage 1 – Water Watch	Stage 2 – Water Warning or where such fountains or ponds are equipped with a recirculation system.	Stage 3 – Water Emergency
All actions listed for All Users apply to City and Local Governments.				
City and Local Governments	Administrative	<ul style="list-style-type: none"> <li>Review conditions and problems that caused Stage 1 and take corrective action</li> <li>Notify wholesale customers of actions being taken and request them to implement similar procedures.</li> </ul>	<ul style="list-style-type: none"> <li>Review conditions and problems that caused Stage 2 and take corrective action.</li> <li>Notify wholesale customers of actions being taken and request them to implement similar procedures.</li> </ul>	<ul style="list-style-type: none"> <li>Review conditions and problems that caused Stage 3 and take corrective action.</li> <li>Implement viable alternative water supply strategies</li> <li>Reduce city and local government water use to maximum extent possible.</li> <li>Notify wholesale customers of actions being taken and request them to implement similar procedures.</li> <li>Institute a mandated reduction in deliveries to all wholesale customers. Such a reduction will be distributed as required by Texas Water Code §11.039.</li> <li>If TRWD has imposed a reduction in water available to customers, impose the same percent reduction on wholesale customers.</li> </ul>
	Public Education	<ul style="list-style-type: none"> <li>Increase public education efforts on ways to reduce water use.</li> </ul>	<ul style="list-style-type: none"> <li>Increase frequency of media releases on water supply conditions.</li> <li>Further accelerate public education efforts on ways to reduce water use.</li> </ul>	<ul style="list-style-type: none"> <li>Increase frequency of media releases explaining emergency situation.</li> <li>Further accelerate public education efforts on ways to reduce water use.</li> </ul>
	Enforcement	<ul style="list-style-type: none"> <li>Increase enforcement efforts.</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 1.</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 1.</li> </ul>
	Runoff/Waste/Leaks	<ul style="list-style-type: none"> <li>Intensify leak detection and repair efforts.</li> <li>Audit all City and local government irrigation systems to ensure proper condition, settings,</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 1.</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 1.</li> </ul>

**Fort Worth Water Department  
Drought Plan Matrix of Actions by Stage and Customer Type**

Water User	Water Use or Action Category	Stage 1 – Water Watch	Stage 2 – Water Warning	Stage 3 – Water Emergency
City and Local Governments (continued)	High Volume Users	<ul style="list-style-type: none"> <li>Identify and encourage voluntary reduction measures by high-volume water users through water use audits.</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 1.</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 1.</li> </ul>
	Wet Street Sweeping	<ul style="list-style-type: none"> <li>No restrictions.</li> </ul>	<ul style="list-style-type: none"> <li>Prohibited: wet street sweeping.</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 2.</li> </ul>
	Swimming Pool permitting			<ul style="list-style-type: none"> <li>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.</li> </ul>
	Non-essential water use (those uses that do not have any health or safety impact, and are not needed to meet the core function of the agency).	<ul style="list-style-type: none"> <li>Reduce non-essential water use.</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate non-essential water use.</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 2.</li> </ul>
All actions listed for All Users apply to Commercial and Industrial users.				
Commercial and Industrial users	Commercial Plant Nursery Stock	<ul style="list-style-type: none"> <li>Stock at a commercial plant nursery is exempt from Stage 1 watering restrictions.</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 1.</li> </ul>	<ul style="list-style-type: none"> <li>Stock at a commercial plant nursery may be watered only with a hand-held hose, hand-held watering can, or drip irrigation system.</li> </ul>
	Hotels, Restaurants, and Bars	<ul style="list-style-type: none"> <li>Hotels, restaurants, and bars are encouraged to serve drinking water to patrons on an "on demand" basis.</li> <li>Hotels are encouraged to implement laundry conservation measures by encouraging patrons to reuse linens and towels.</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 1.</li> </ul>	<ul style="list-style-type: none"> <li>Hotels and restaurants are required to serve drinking water to patrons on an "on demand" basis.</li> <li>Hotels are required to implement laundry conservation measures by encouraging patrons to reuse linens and towels.</li> </ul>

**Fort Worth Water Department**  
**Drought Plan Matrix of Actions by Stage and Customer Type**

Water User	Water Use or Action Category	Stage 1 – Water Watch	Stage 2 – Water Warning	Stage 3 – Water Emergency
Commercial and Industrial users (continued)	Commercial and Industrial Users			<ul style="list-style-type: none"> <li>Commercial and industrial users may be required to reduce water use by a set percentage.</li> </ul>
	Contract (Hydrant) Meters		<ul style="list-style-type: none"> <li>Use of water from hydrants for any purpose other than firefighting related activities or other activities necessary to maintain public health, safety and welfare requires a special permit issued by the Water Director. Fire hydrant use may be limited to only designated hydrants (excluding firefighting).</li> </ul>	<ul style="list-style-type: none"> <li>Same as Stage 2</li> </ul>