



**2019 WATER RESOURCE AND EMERGENCY  
MANAGEMENT PLAN  
CITY OF KAUFMAN**

AUGUST 2019



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## 1. INTRODUCTION AND OBJECTIVES

This document has been prepared as a Model Water Resource and Emergency Management Plan (Model WREMP), intended to be available for use by North Texas Municipal Water District (NTMWD) Member Cities and Customers as they develop their own respective WREMPs. This Model WREMP addresses all of the current TCEQ requirements for a drought contingency plan.<sup>1</sup> This Model WREMP will replace the plans dated August 2004, April 2006, March 2008, and April 2014.

The measures included in this Model WREMP are intended to provide short-term water savings during drought or emergency conditions. Water savings associated with ongoing, long-term strategies are discussed in the document entitled *Model Water Conservation Plan for North Texas Municipal Water District Member Cities and Customers*.<sup>2</sup>

The purpose of this Model WREMP is as follows:

- To conserve the available water supply in times of drought, water supply shortage, 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.

NTMWD supplies treated potable water to its Member Cities and Customers. This Model WREMP was developed by NTMWD in consultation with its Member Cities and Customers. In order to adopt this Model WREMP, each NTMWD Member City and Customer will need to adopt ordinance(s) or regulation(s) implementing the WREMP, including the establishment of fines and enforcement procedures. The Model WREMP calls for each Member City and Customer to adopt Water Resource Management Stages initiated by NTMWD during a drought or water supply emergency. Member Cities and Customers may also adopt more stringent Water Resource Management Stages than NTMWD if conditions so warrant.

In the absence of drought response measures, water demands tend to increase during a drought due to increased outdoor irrigation. The severity of a drought depends on the degree of depletion of supplies



and on the relationship of demand to available supplies. NTMWD considers a drought to end when all of NTMWD's supply reservoirs refill to conservation storage pool levels.

<sup>1</sup> Superscripted numbers match references listed in Appendix A.



## 2. DEFINITIONS AND ABBREVIATIONS

1. **AQUATIC LIFE** means a vertebrate organism dependent upon an aquatic environment to sustain its life.
2. **ATHLETIC FIELD** means a public sports competition field, the essential feature of which is turf grass, used primarily for organized sports practice, competition or exhibition events for schools; professional sports and league play sanctioned by the utility providing retail water supply.
3. **COMMERCIAL FACILITY** means business or industrial buildings and the associated landscaping, but does not include the fairways, greens, or tees of a golf course.
4. **COMMERCIAL VEHICLE WASH FACILITY** means a permanently-located business that washes vehicles or other mobile equipment with water or water-based products, including but not limited to self-service car washes, full service car washes, roll-over/in-bay style car washes, and facilities managing vehicle fleets or vehicle inventory.
5. **CUSTOMERS** include those entities to whom NTMWD provides wholesale water that are not Member Cities of NTMWD.
6. **DESIGNATED OUTDOOR WATER USE DAY** means a day prescribed by rule on which a person is permitted to irrigate outdoors\*\*.
7. **DRIP IRRIGATION** is a type of micro-irrigation system that operates at low pressure and delivers water in slow, small drips to individual plants or groups of plants through a network of plastic conduits and emitters; also called trickle irrigation.
8. **DROUGHT**, for the purposes of this report, means an extended period of time when an area receives insufficient amounts of rainfall to replenish the water supply, causing water supply sources (in this case reservoirs) to be depleted.
9. **EVAPOTRANSPIRATION (ET)** represents the amount of water lost from plant material to evaporation and transpiration. The amount of ET can be estimated based on the temperature, wind, and relative humidity.



10. **EXECUTIVE DIRECTOR** means the Executive Director of the NTMWD and includes a person the Executive Director has designated to administer or perform any task, duty, function, role, or action related to this Plan or on behalf of the Executive Director.
11. **FOUNDATION WATERING** means an application of water to the soils directly abutting (within 2 feet) the foundation of a building, structure .
12. **INTERACTIVE WATER FEATURES** means water sprays, dancing water jets, waterfalls, dumping buckets, shooting water cannons, inflatable pools, temporary splash toys or pools, slip-n-slides, or splash pads that are maintained for recreation.
13. **IRRIGATION SYSTEM** means a permanently installed, custom-made, site-specific system of delivering water generally for landscape irrigation via a system of pipes or other conduits installed below ground.
14. **LANDSCAPE** means any plant material on a property, including any tree, shrub, vine, herb, flower, succulent, ground cover, grass or turf species, that is growing or has been planted out of doors.
15. **MEMBER CITIES** include the cities of Allen, Farmersville, Forney, Frisco, Garland, McKinney, Mesquite, Plano, Princeton, Richardson, Rockwall, Royse City, and Wylie, Texas, which are members of NTMWD.
16. **NEW LANDSCAPE** means : (a) vegetation installed at the time of the construction of a residential or commercial facility; (b) installed as part of a governmental entity's capital improvement project; or (c) installed to stabilize an area disturbed by construction.
17. **ORNAMENTAL FOUNTAIN** means an artificially created structure (up to a certain diameter) from which a jet, stream, or flow of treated water emanates and is not typically utilized for the preservation of aquatic life.
18. **RETAIL CUSTOMERS** include those customers to whom the Supplier provides retail water from a water meter.
19. **SOAKER HOSE** means a perforated or permeable garden-type hose or pipe that is laid above ground that provides irrigation at a slow and constant rate.



20. **SPRINKLER** means an above-ground water distribution device that may be attached to a garden hose.

21. **SUPPLIER** means a Member City or Customer that purchases wholesale water from NTMWD and provides water to retail and/or wholesale customers.

22. **SWIMMING POOL** means any structure, basin, chamber, or tank including hot tubs, containing an artificial body of water for swimming, diving, or recreational bathing, and having a depth of two (2) feet or more at any point.

23. **WATER RESOURCE MANAGEMENT PLAN** means a strategy or combination of strategies for temporary supply management and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies required by Texas Administrative Code Title 30, Chapter 288, Subchapter B. This is sometimes called a drought contingency plan.

#### Abbreviations

Abbreviation	Full Nomenclature
ED	NTMWD Executive Director
NTMWD or District	North Texas Municipal Water District
TCEQ	Texas Commission on Environmental Quality
TWDB	Texas Water Development Board
Model WREMP	Model Water Resource and Emergency Management Plan for Member Cities and Customers



### 3. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES

The TCEQ rules governing development of drought contingency plans for public water suppliers are contained in Title 30, Chapter 288, Section 288.20 of the Texas Administrative Code, a current copy of which is included in Appendix B. For the purpose of these rules, a drought contingency plan is defined 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."<sup>1</sup>

#### Minimum Requirements

TCEQ's minimum requirements for drought contingency plans are addressed in the following subsections of this report:

- 288.20(a)(1)(A) – Provisions to Inform the Public and Provide Opportunity for Public Input – Section 4.1
- 288.20(a)(1)(B) – Program for Continuing Public Education and Information – Section 4.2
- 288.20(a)(1)(C) – Coordination with the Regional Water Planning Group – Section 4.6
- 288.20(a)(1)(D) – Description of Information to be Monitored and Criteria for the Initiation and Termination of Water Resource Management Stages – Section 4.3
- 288.20(a)(1)(E) – Water Resource Management Stages – Section 4.3
- 288.20(a)(1)(F) – Specific, Quantified Targets for Water Use Reductions During Water Shortages – Section 4.3
- 288.20(a)(1)(G) – Water Supply and Demand Management Measures for Each Stage – Section 4.3
- 288.20(a)(1)(H) – Procedures for Initiation and Termination of Water Resource Management Stages – Section 4.3
- 288.20(a)(1)(I) - Procedures for Granting Variances – Section 4.4
- 288.20(a)(1)(J) - Procedures for Enforcement of Mandatory Restrictions – Section 4.5
- 288.20(a)(3) – Consultation with Wholesale Water Supplier – Sections 1 and 4.3
- 288.20(b) – TCEQ Notification of Implementation of Mandatory Measures – Section 4.3
- 288.20(c) – Review and Update of WREMP – Section 4.7



## 4. WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN

### 4.1 PROVISIONS TO INFORM THE PUBLIC AND OPPORTUNITY FOR PUBLIC INPUT

Member Cities and Customers will provide opportunity for public input in the development of this WREMP by the following means:

- Providing written notice of the proposed WREMP and the opportunity to comment on the WREMP by newspaper, posted notice, and notice on the utility's web site and social media (if available).
- Making the draft WREMP available on the supplier's web site (if available).
- Providing the draft WREMP to anyone that requests a copy.
- Supplier may hold a public meeting providing advance public notice of such meeting.

### 4.2 PROGRAM FOR CONTINUING PUBLIC EDUCATION AND INFORMATION

Member Cities and Customers will inform and educate the public about the Water Resource and Emergency Management 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 supplier's web site (if available).
- Including information about the Water Resource and Emergency Management Plan on the supplier's web site (if available).
- Notifying local organizations, schools, and civic groups that utility staff are available to make presentations on the Water Resource and Emergency Management Plan (usually in conjunction with presentations on water conservation programs).
- At any time that the Water Resource and Emergency Management Plan is activated or changes, Member Cities and Customers will notify local media of the issues, the Water Resource Management Stage (if applicable), and the specific actions required of the public. The information will also be publicized on the supplier's web site (if available). Billing inserts will also be used as appropriate.



## 4.3 CRITERIA FOR INITIATION AND TERMINATION OF WATER RESOURCE AND EMERGENCY MANAGEMENT STAGES AND TARGETS FOR WATER USE REDUCTIONS

### Initiation of a Water Resource Management Stage

The City Manager, General Manager, Mayor, Chief Executive, or official designee may order the implementation of a Water Resource Management Stage when one or more of the trigger conditions for that stage is met.

- Water Resource and Emergency Management Plan stages imposed by NTMWD action must be initiated by Member Cities and Customers.
- For other trigger conditions internal to a city or water supply entity, the City Manager, General Manager, Mayor, Chief Executive, or official designee may decide not to order the implementation of a Water Resource Management 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.

The following actions will be taken when a water resource management stage is initiated:

- The public will be notified through local media and the supplier's web site (if available) as described in Section 4.2.
- Wholesale customers (if any) and NTMWD will be notified by e-mail with a follow-up letter that provides details of the reasons for initiation of the Water Resource Management Stage.
- If any mandatory provisions of the Water Resource and Emergency Management Plan are activated, Member Cities and Customers will notify the TCEQ Executive Director and the NTMWD Executive Director within 5 business days.

### Termination of a Water Resource Management Stage

WREMP stages initiated by NTMWD may be terminated after NTMWD has terminated the stage. For WREMP stages initiated by the Supplier, the City Manager, General Manager, Mayor, Chief Executive, or



official designee may order the termination of a Water Resource Management Stage when the conditions for termination are met or at their discretion.

The following actions will be taken when a Water Resource Management Stage is terminated:

- The public will be notified through local media and the supplier's web site (if available) as described in Section 4.2.
- Wholesale customers (if any) and NTMWD will be notified by e-mail with a follow-up letter.
- If any mandatory provisions of the Water Resource and Emergency Management Plan that have been activated are terminated, Member Cities and Customers will notify the TCEQ Executive Director and the NTMWD Executive Director within 5 business days.

The City Manager, General Manager, Mayor, Chief Executive, or official designee may decide not to order the termination of a Water Resource Management Stage 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 Water Resource Management Stage. The reason for this decision should be documented.

## **Water Resource and Emergency Management Plan Stages and Corresponding Measures**

### **4.3.1 Stage 1**

#### **Initiation and Termination Conditions for Stage 1**

NTMWD has initiated Stage 1, which may be initiated due to one or more of the following:

- The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the declaration of Stage 1.
- Water demand is projected to approach the limit of NTMWD's permitted supply.
- The storage level in Lavon Lake as published by the Texas Water Development Board (TWDB),<sup>3</sup> is less than 70 percent of the total conservation pool capacity during any of the months of April through October or less than 60 percent of the total conservation pool capacity during any of the months of November through March.



- The Sabine River Authority (SRA) has indicated that its Upper Basin water supplies used by NTMWD (Lake Tawakoni and/or Lake Fork) are in a Stage 1 drought.
- NTMWD has concern that Lake Texoma, Jim Chapman Lake, the East Fork Water Reuse Project, the Main Stem Pump Station, or some other NTMWD water source may be limited in availability within the next six (6) months.
- Water demand exceeds 95 percent of the amount that can be delivered by NTMWD to Customers for three (3) consecutive days.
- Water demand for all or part of the delivery system approaches delivery capacity because delivery capacity is inadequate.
- Supply source is interrupted or unavailable due to contamination, invasive species, equipment failure, or other cause.
- Water supply system is unable to deliver water due to the failure or damage of major water system components.
- Part of the system has a shortage in supply or damage to equipment. NTMWD may implement measures for only that portion of the NTMWD system impacted.

**Supplier has initiated Stage 1 due to one or more of the following reasons:**

- Supplier's water demand exceeds 95 percent of the amount that can be delivered to customers for three consecutive days.
- Supplier's water demand for all or part of the delivery system equals delivery capacity because delivery capacity is inadequate.
- Supply source becomes contaminated.
- Supplier's water system is unable to deliver water due to the failure or damage of major water system components.
- Supplier's individual plan may be implemented if other criteria dictate.

**NTMWD has terminated Stage 1, which may be terminated due to one or more of the following:**

- The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the termination of Stage 1.



- The storage level in Lavon Lake, as published by the TWDB,<sup>3</sup> is greater than 75 percent of the total conservation pool capacity during any of the months of April through October or greater than 65 percent of the total conservation pool capacity during any of the months of November through March.
- Other circumstances that caused NTMWD initiation of Stage 1 no longer prevail.

**The circumstances that caused the Supplier's initiation of Stage 1 no longer prevail.**

**Goal for Use Reduction and Actions Available under Stage 1**

The goal for water use reduction under Stage 1 is a two percent (2%) reduction in the amount of water produced by NTMWD from the previous corresponding annual payment period prior to institution of drought restrictions. If circumstances warrant, or if required by NTMWD, the City Manager, General Manager, Mayor, Chief Executive, or official designee can set a goal for greater or lesser water use reduction under Stage 1. The City Manager, General Manager, Mayor, Chief Executive, or official designee may order the implementation of any or all of the actions listed below, as deemed necessary, to achieve a two-percent reduction. Measures described as "requires notification to TCEQ" are those that impose mandatory requirements on customers. The supplier must notify TCEQ and NTMWD within five (5) business days if such mandatory measures are implemented.

- Continue actions established by the Water Conservation Plan.
- Notify any wholesale customers of actions being taken and request that they implement similar procedures.
- Initiate engineering studies to evaluate alternative water sources and/or alternative delivery mechanisms should conditions worsen.
- Further accelerate public education efforts on ways to reduce water use.
- Halt non-essential city government water use. Examples include street cleaning, vehicle washing, operation of ornamental fountains, etc.
- Encourage the public to wait until the current drought or emergency situation has passed before establishing New Landscape.
- Encourage all users to reduce the frequency of draining and refilling swimming pools.



- **Requires Notification to TCEQ** – Increase enforcement of the following landscape watering restrictions established by the Water Conservation Plan: (1) limit landscape watering with sprinklers or irrigation systems at each service address to no more than two (2) days per week, on designated days, between April 1 and October 31; and (2) limit landscape watering with sprinklers or irrigation systems at each service address to once every week, on designated days, between November 1 and March 31. Exceptions are as follows:
  - An exception is allowed for New Landscape associated with new construction that may be watered as necessary for 30 days from the date of installation of new landscape features.
  - An exception for additional watering of landscape may be provided by hand-held hose with shutoff nozzle, and/or use of dedicated irrigation drip zones provided no runoff occurs.
  - Foundation (within 2 feet), New Landscape Watering, watering of new plantings (first year) of shrubs, and watering of trees (within a ten foot radius of its trunk) may occur by a hand-held hose, a soaker hose, or a dedicated zone using a Drip Irrigation system provided no runoff occurs.
  - Locations using alternative sources of water supply only for irrigation may irrigate without day of the week restrictions provided proper signage is employed. However, irrigation using alternative sources of supply is subject all other restrictions applicable to this stage. If the alternative supply source is a well, proper proof of well registration with the North Texas Groundwater Conservation District or Red River Ground Water Conservation District is required. Other sources of water supply may not include imported treated water.
- **Requires Notification to TCEQ** – Initiate a rate surcharge for all water use over a certain level.
- **Requires Notification to TCEQ** – Parks, golf courses and Athletic Fields using potable water for landscape watering are required to meet the same reduction goals and measures outlined in this stage. Exception for golf course greens and tee boxes that may be hand-watered as needed.

#### 4.3.2 Stage 2

##### Initiation and Termination Conditions for Stage 2



NTMWD has initiated Stage 2, which may be initiated due to one or more of the following:

- The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the declaration of Stage 2.
- Water demand is projected to approach the limit of NTMWD's permitted supply.
- The storage level in Lavon Lake, as published by the TWDB,<sup>3</sup> is less than 55 percent of the total conservation pool capacity during any of the months of April through October or less than 45 percent of the total conservation pool capacity during any of the months of November through March.
- SRA has indicated that its Upper Basin water supplies used by NTMWD (Lake Tawakoni and/or Lake Fork) are in a Stage 2 drought.
- NTMWD has concern that Lake Texoma, Jim Chapman Lake, the East Fork Water Reuse Project, the Main Stem Pump Station, or some other NTMWD water source may be limited in availability within the next three (3) months.
- Water demand exceeds 98 percent of the amount that can be delivered to Customers for three (3) consecutive days.
- Water demand for all or part of the delivery system equals delivery capacity, because delivery capacity is inadequate.
- Supply source is interrupted or unavailable due to contamination, invasive species, equipment failure, or other cause.
- Water supply system is unable to deliver water due to the failure or damage of major water system components.
- Part of the system has a shortage in supply or damage to equipment. NTMWD may implement measures for only that portion of the system impacted.

Supplier has initiated Stage 2 due to one or more of the following reasons:

- Supplier's water demand exceeds 98 percent of the amount that can be delivered to customers for three consecutive days.



- Supplier's water demand for all or part of the delivery system exceeds delivery capacity because delivery capacity is inadequate.
- Supply source becomes contaminated.
- Supply source is interrupted or unavailable due to invasive species.
- Supplier's water supply system is unable to deliver water due to the failure or damage of major water system components.
- Supplier's individual plan may be implemented if other criteria dictate.

**NTMWD has terminated Stage 2, which may be terminated due to one or more of the following:**

- The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the termination of Stage 2.
- The storage level in Lavon Lake, as published by the TWDB,<sup>3</sup> is greater than 70 percent of the total conservation pool capacity during any of the months of April through October or greater than 60 percent of the total conservation pool capacity during any of the months of November through March.
- Other circumstances that caused the NTMWD's initiation of Stage 2 no longer prevail.

**The circumstances that caused the Supplier's initiation of Stage 2 no longer prevail.**

#### Goals for Use Reduction and Actions Available under Stage 2

The goal for water use reduction under Stage 2 is a reduction of ten percent (10%) in the amount of water obtained from NTMWD from the previous corresponding annual payment period prior to the institution of drought restrictions. If circumstances warrant, or if required by NTMWD, the City Manager, General Manager, Mayor, Chief Executive, or official designee can set a goal for greater or lesser water use reduction. The City Manager, General Manager, Mayor, Chief Executive, or official designee may order the implementation of any or all of the actions listed below, as deemed necessary to achieve a ten percent reduction. Measures described as "requires notification to TCEQ" are those that impose mandatory requirements on customers. The supplier must notify TCEQ and NTMWD within five (5) business days if such mandatory measures are implemented.



- Continue or initiate any actions available under the Water Conservation Plan and Stage 1.
- Notify any wholesale customers of actions being taken and request that they implement similar procedures.
- Implement viable alternative water supply strategies.
- Encourage all users to reduce the frequency of draining and refilling swimming pools.
- **Requires Notification to TCEQ** – Limit landscape watering with sprinklers or irrigation systems at each service address to once per week on designated days between April 1 and October 31. Limit landscape watering with sprinklers or irrigation systems at each service address to once every other week on designated days between November 1 and March 31. Exceptions are as follows:
  - New Landscape may be watered as necessary for 30 days from the date of the installation of new landscape features.
  - Foundation Watering (within 2 feet), New Landscape Watering, watering of new plantings (first year) of shrubs, and watering of trees (within a ten foot radius of its trunk) may occur for up to two hours on any day by a hand-held hose, a dedicated zone using a Drip Irrigation system and/or Soaker Hose, provided no runoff occurs.
  - Athletic Fields may be watered twice per week.
  - Locations using alternative sources of water supply only for irrigation may irrigate without day-of-the-week restrictions, provided proper signage is employed to notify the public of alternative water source(s) being used. However, irrigation using alternative sources of supply is subject all other restrictions applicable to this stage. If the alternative supply source is a well, proper proof of well registration with the North Texas Groundwater Conservation District or Red River Groundwater Conservation District is required. Alternative sources of water supply may not include imported treated water.
  - An exemption is allowed for Drip Irrigation systems from the designated outdoor water use day limited to no more than one day per week. Drip Irrigation systems are however subject to all other restrictions applicable under this stage.
  - Hand watering with shutoff nozzle, drip lines, and Soaker Hoses are allowed before 10 am and after 6 pm, provided no runoff occurs.



- **Requires Notification to TCEQ – Prohibit hydro seeding, hydro mulching, and sprigging.**
- **Requires Notification to TCEQ – Initiate a rate surcharge as requested by NTMWD.**
- **Requires Notification to TCEQ – Initiate a rate surcharge for all water use over a certain level.**
- **Requires Notification to TCEQ – If NTMWD has imposed a reduction in water available to Member Cities and Customers, impose the same percent reduction on any wholesale customers.**
- **Requires Notification to TCEQ – Parks and golf courses using potable water for landscape watering are required to meet the same reduction goals and measures outlined in this stage. Exception for golf course greens and tee boxes which may be hand watered as needed.**

#### 4.3.3 Stage 3

##### Initiation and Termination Conditions for Stage 3

NTMWD has initiated Stage 3, which may be initiated due to one or more of the following:

- The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the declaration of Stage 3.
- Water demand is projected to approach or exceed the limit of the permitted supply.
- The storage level in Lavon Lake, as published by the TWDB,<sup>3</sup> is less than 30 percent of the total conservation pool capacity during any of the months of April through October or less than 20 percent of the total conservation pool capacity during any of the months of November through March.
- SRA has indicated that its Upper Basin water supplies used by NTMWD (Lake Tawakoni and/or Lake Fork) are in a Stage 3 drought.
- The water supply from Lake Texoma, Jim Chapman Lake, the East Fork Water Reuse Project, Main Stem Pump Station, or some other NTMWD water source has become limited in availability.
- Water demand exceeds the amount that can be delivered to Customers.
- Water demand for all or part of the delivery system exceeds delivery capacity because delivery capacity is inadequate.



- Supply source is interrupted or unavailable due to contamination, invasive species, equipment failure or other cause.
- Water supply system is unable to deliver water due to the failure or damage of major water system components.
- Part of the system has a shortage in supply or damage to equipment. NTMWD may implement measures for only that portion of the system impacted.

**Supplier has initiated Stage 3 due to one or more of the following reasons:**

- Supplier's water demand exceeds the amount that can be delivered to customers.
- Supplier's water demand for all or part of the delivery system seriously exceeds delivery capacity because the delivery capacity is inadequate.
- Supply source becomes contaminated.
- Supplier's water supply system is unable to deliver water due to the failure or damage of major water system components.
- Supplier's individual plan may be implemented if other criteria dictate.

**NTMWD has terminated Stage 3, which may be terminated due to one or more of the following:**

- The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the termination of Stage 3.
- The storage level in Lavon Lake, as published by the TWDB,<sup>3</sup> in Lavon Lake is greater than 55 percent of the total conservation pool capacity during any of the months of April through October or greater than 45 percent of the total conservation pool capacity during any of the months of November through March.
- Other circumstances that caused the NTMWD's initiation of Stage 3 no longer prevail.

**When other circumstances that caused the Supplier's initiation of Stage 3 no longer prevail.**

#### Goals for Use Reduction and Actions Available under Stage 3

The goal for water use reduction under Stage 3 is a reduction of whatever amount is designated by NTMWD in the amount of water obtained from NTMWD from the corresponding previous annual



payment period prior to institution of drought restrictions. If circumstances warrant or if required by NTMWD, the City Manager, General Manager, Mayor, Chief Executive, or official designee can set a goal for greater or lesser water use reduction. The City Manager, General Manager, Mayor, Chief Executive, or official designee may order the implementation of any or all of the actions listed below, as deemed necessary. Measures described as "requires notification to TCEQ" are those that impose mandatory requirements on Member Cities and Customers. The supplier must notify TCEQ and NTMWD within five (5) business days if such mandatory measures are implemented.

- Continue or initiate any actions available under the Water Conservation Plan and Stages 1 and 2.
- Notify any wholesale customers of actions being taken and request them to implement similar procedures.
- Implement viable alternative water supply strategies.
- **Requires Notification to TCEQ** – Initiate mandatory water use restrictions as follows:
  - Hosing and washing of paved areas, buildings, structures, windows or other surfaces is prohibited except by variance and performed by a professional service using high efficiency equipment.
  - Prohibit operation of ornamental fountains or ponds that use potable water except where supporting aquatic life or water quality.
- **Requires Notification to TCEQ** – Prohibit new sod, hydro-seeding, hydro-mulching, and sprigging.
- **Requires Notification to TCEQ** – Prohibit the use of potable water for the irrigation of New Landscape.
- **Requires Notification to TCEQ** – Prohibit all commercial and residential landscape watering, except that Foundation Watering (within 2 feet) and watering of trees (within a ten foot radius of its trunk) may occur for two hours one day per week with a hand-held hose or with a dedicated zone using a Drip Irrigation system and/or Soaker Hose, provided no runoff occurs. Drip Irrigation systems are not exempt from this requirement.
- **Requires Notification to TCEQ** – Prohibit washing of vehicles except at a Commercial Vehicle Wash Facility.



## APPENDIX A

### LIST OF REFERENCES

1. Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter B, Rules 288.20 and 288.22, downloaded from  
[http://texreg.sos.state.tx.us/public/readtac\\$ext.ViewTAC?tac\\_view=5&ti=30&pt=1&ch=288&sc\\_h=B&rl=Y](http://texreg.sos.state.tx.us/public/readtac$ext.ViewTAC?tac_view=5&ti=30&pt=1&ch=288&sc_h=B&rl=Y), July 2018.
2. Freese and Nichols, Inc.: 2019 Model Water Resource Management Plan for NTMWD Member Cities and Customers, prepared for the North Texas Municipal Water District, Fort Worth, February 2019.
3. Texas Water Development Board, Water Data for Texas, Lavon Lake,  
<https://waterdatafortexas.org/reservoirs/individual/lavon>.



## APPENDIX B

### TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES ON DROUGHT CONTINGENCY PLANS

<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>

(a) A drought contingency plan for a retail public water supplier, where applicable, must include the following minimum elements.

- (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 ensure consistency with the appropriate approved regional water plans.
  - (D) The drought contingency plan must 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 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**

### **LETTERS TO REGION C AND REGION D WATER PLANNING GROUPS**





August 27, 2019

Mr. Richard LeTourneau  
Chair, Region D Water Planning Group  
P.O. Box 12071  
Longview, TX 75607

Dear Mr. LeTourneau:

Enclosed please find a copy of the recently updated City of Kaufman Water Resource and Emergency Management Plan through the North Texas Municipal Water District. I am submitting a copy of this plan to the Region C Water Planning Group in accordance with the Texas Water Development Board and Texas Commission on Environmental Quality rules. The City of Kaufman adopted the updated model plan on August 26, 2019.

Sincerely,

A handwritten signature in blue ink, appearing to read "Richard A. Underwood".

Richard A. Underwood  
Director of Public Works  
City of Kaufman





August 27, 2019

**Region C Water Planning Group**  
c/o Trinity River Authority  
P.O. Box 60  
Arlington, TX 76004

Dear Sir:

Enclosed please find a copy of the City of Kaufman Water Resource and Emergency Management Plan through the North Texas Municipal Water District. I am submitting a copy of this plan to the Region C Water Planning Group in accordance with the Texas Water Development Board and Texas Commission on Environmental Quality rules. The City of Kaufman adopted the updated model plan on August 26, 2019.

Sincerely,

A handwritten signature in blue ink, appearing to read "Richard A. Underwood".

Richard A. Underwood  
Director of Public Works  
City of Kaufman



## APPENDIX D

### **ADOPTION OF WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN**



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**ORDINANCE NO. O-19-19**

**AN ORDINANCE OF THE CITY OF KAUFMAN, TEXAS REPEALING ORDINANCE O-26-14 "WATER CONSERVATION PLAN AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN" IN ITS ENTIRETY AND ADOPTING THE 2019 NORTH TEXAS MUNICIPAL WATER DISTRICT MODEL WATER CONSERVATION PLAN AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN FOR THE CITY OF KAUFMAN TO PROMOTE RESPONSIBLE USE OF WATER; PROVIDING FOR THE INCORPORATION OF PREMISES; PROVIDING FOR PENALTIES AND/OR THE DISCONNECTION OF WATER SERVICE FOR NONCOMPLIANCE WITH THE PROVISIONS OF THE WATER CONSERVATION PLAN OR WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN; PROVIDING A SAVINGS AND REPEALER CLAUSE; PROVIDING A SEVERABILITY CLAUSE, PROVIDING FOR FILING OF THE PLAN, AND AN EFFECTIVE DATE.**

**WHEREAS**, the City of Kaufman, Texas, 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 Water Resource and Emergency Management 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 Water Resource and Emergency Management 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; and

**WHEREAS**, the City Council of the City of Kaufman has reviewed the 2019 North Texas Municipal Water District (the "NTMWD") Model Water Conservation Plan and Model Water Resource and Emergency Management Plan and has determined such plans to be necessary in order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergencies and therefore, the City Council finds it necessary to adopt such plans as official City policy for the conservation of water (the "Plans"); and

**WHEREAS**, water uses regulated or prohibited under the Plans are considered to be nonessential and continuation of such uses during times of water shortage or other emergency water supply conditions are deemed to constitute a waste of water which subjects the offender(s) to penalties as set forth herein;



**WHEREAS**, as required by the Plans, the City has provided written notice of the proposed Plans and an opportunity to comment by newspaper, posted notice, and on the City's website and social media, as applicable, has made the Plans available on the City's website and provided a copy of the Plans, and City has held a public meeting providing advance notice of such meeting at which the City Council has considered the adoption of the Plans.

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

**Section 1. Incorporation of Premises.** The foregoing recitals are the findings of the City Council and are incorporated into this Ordinance as if set forth fully herein.

**Section 2. Water Conservation Plan Adopted.** The City Council hereby approves and adopts the 2019 NTMWD Model Water Conservation Plan, attached hereto as **Exhibit A** as if recited verbatim herein. The City commits to implement the requirements and procedures set forth in the adopted Plan.

**Section 3. Water Resource and Emergency Management Plan Adopted.** The City Council hereby approves and adopts the 2019 NTMWD Model Water Resource and Emergency Management Plan, attached herein as **Exhibit B**, as if recited verbatim herein. The City commits to implement the requirements and procedures set forth in the adopted Plan.

**Section 4. Public Notice.** The City Council does hereby finds and declares that sufficient written notice of the date, hour, place and subject of the meeting adopting this Ordinance was posted at a designated place convenient to the public for the time required by law preceding the meeting, that such place of posting was readily accessible at all times to the general public, and that all of the foregoing was done as required by law at all times during which this Ordinance and the subject matter thereof has been discussed, considered and formally acted upon. The City Council further ratifies, approves and confirms such written notice and the posting thereof.

**Section 5. Savings and Repealer.** That this Ordinance shall be cumulative of all other ordinances of the City of Kaufman and shall not repeal any of the provisions of such ordinances, except in those instances where provisions of such ordinances are in direct conflict with the provisions of this ordinance. Provided however, that any complaint, action, claim or lawsuit which has been initiated or has arisen under or pursuant to any such ordinance and for that purpose the ordinance shall remain in full force and effect.

**Section 6. Penalties.** Any customer, defined pursuant to 30 Tex. Admin. Code Chapter 291, failing to comply with the provisions of the Plans shall be subject to a fine of up to two thousand dollars (\$2,000.00) and/or discontinuance of water service by the City. Proof of a culpable mental state is not required for a conviction of an offense under these sections. Each day a customer fails to comply with the Plans is a separate violation. The City's authority to seek injunctive or other civil relief available under the law is not limited by this section.

**Section 7. Severability.** That is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses and phrases of this ordinance, including Exhibits "A" and "B" hereto, are severable, and if any phrase, clause, sentence, paragraph or section of this Ordinance shall be declared void, ineffective or unconstitutional by the valid judgment or decree of any court of competent jurisdiction,



such voidness, ineffectiveness or unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs or sections of this Ordinance, since the same would have been enacted by the City Council without the incorporation herein of any such void, ineffective or unconstitutional phrase, clause, sentence, paragraph or section.

**Section 8. Filing of Plan.** The City Manager or his designee is hereby directed to file a copy of the Plan and this Ordinance with the Commission in accordance with Title 30, Chapter 288 of the Texas Administrative Code.

**Section 9. Publication.** The City Secretary is hereby authorized and directed to cause publication of the descriptive caption of this ordinance as an alternative method of publication provided by law.

**Section 10. Effective Date.** The ordinance shall become effective immediately upon its passage and approval.

PASSED AND ADOPTED this 26<sup>th</sup> day of August, 2019.

Jeff Jordan  
JEFF JORDAN  
MAYOR

ATTEST:

Jessie Hanks  
JESSIE HANKS  
CITY SECRETARY

APPROVED AS TO FORM:

Patricia Adams  
PATRICIA A. ADAMS  
CITY ATTORNEY



