

**2019 WATER RESOURCE AND EMERGENCY
MANAGEMENT PLAN
CASH SPECIAL UTILITY DISTRICT**

APRIL 2019



FOREWORD

This 2019 Model Water Resource and Emergency Management Plan (which is an update to 2014 Model Water Resource and Emergency Management Plan) was prepared by Freese and Nichols for the North Texas Municipal Water District (NTMWD). It is intended to be used by NTMWD Member Cities and Customers as a guide as they develop their own Water Resource and Emergency Management Plans. This plan was prepared pursuant to Texas Commission on Environmental Quality (TCEQ) rules. Some material is based on the existing drought contingency plans listed in Appendix A.

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This Water Resource and Emergency Management plan is based on the Texas Administrative Code in effect on July 24, 2018.

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1. INTRODUCTION AND OBJECTIVES

This document has been prepared as a Model Water Resource and Emergency Management Plan, intended to be available for use by North Texas Municipal Water District (NTMWD) Member Cities and Customers as they develop their own plans. This model plan addresses all of the current TCEQ requirements for a drought contingency plan¹. This model plan will replace the plans dated August 2004, April 2006, March 2008, and April 2014.

The measures included in this Model Water Resource and Emergency Management Plan 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 *Model Water Conservation Plan for North Texas Municipal Water District Member Cities and Customers*².

The purpose of this model Water Resource and Emergency Management 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.

The NTMWD supplies treated potable water to its Member Cities and Customers. This model plan was developed by NTMWD in consultation with its Member Cities and Customers. In order to adopt this model plan, each NTMWD Member City and Customer will need to adopt ordinance(s) or regulation(s) implementing the plan, including the determination of fines and enforcement procedures. The model plan calls for Member Cities and Customers 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 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. The NTMWD considers a drought to end when all of its supply reservoirs refill to the conservation storage pool.

* Superscripted numbers match references listed in Appendix A.

2. DEFINITIONS

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, or sanctioned league play^{††}.
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. COOL SEASON GRASSES are varieties of turf grass that grow best in cool climates primarily in northern and central regions of the U.S. Cool season grasses include perennial and annual rye grass, Kentucky blue grass and fescues^{††}.
6. CUSTOMERS include those entities to whom NTMWD provides wholesale water on a customer basis that are not Member Cities of NTMWD.
7. DESIGNATED OUTDOOR WATER USE DAY means a day prescribed by rule on which a person is permitted to irrigate outdoors**.

** Definitions from City of Austin Water Conservation and Drought Contingency Ordinance adopted August 16, 2012.

^{††} Definition from City of San Antonio Water Conservation Ordinance adopted 2005.
http://saws.org/conservation/ordinance/docs/Ch34_Ordinance_2009.pdf

^{††} Definition developed by Freese and Nichols, Inc.

8. 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. ^{§§}
9. 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^{***}.
10. EVAPOTRANSPIRATION (abbreviated as 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^{**}.
11. ET/SMART CONTROLLERS are irrigation controllers that adjust their schedule and run times based on weather (ET) data. These controllers are designed to replace the amount of water lost to evapotranspiration^{**}.
12. EXECUTIVE DIRECTOR means the Executive Director of the North Texas Municipal Water District and includes a person the 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^{**}.
13. FOUNDATION WATERING means an application of water to the soils directly abutting the foundation of a building, structure^{**}.
14. MEMBER CITIES include the cities of Allen, Farmersville, Forney, Frisco, Garland, McKinney, Mesquite, Plano, Princeton, Richardson, Rockwall, Royse City, and Wylie, Texas.
15. NEW LANDSCAPE means vegetation: installed at the time of the construction of a residential or commercial facility; installed as part of a governmental entity's capital improvement project; or installed to stabilize an area disturbed by construction^{**}.

^{§§} Amy Vickers: Handbook of Water Use and Conservation, Amherst Massachusetts, June 2002

^{***} Freese and Nichols, Inc.: Water Conservation and Drought Contingency and Water Emergency Response Plan, prepared for North Texas Municipal Water District, Fort Worth, March 2008.

16. ORNAMENTAL FOUNTAIN means an artificially created structure (up to six feet in diameter) from which a jet, stream, or flow of water emanates and is not typically utilized for the preservation of aquatic life**.
17. PERMANANTLY INSTALLED IRRIGATION SYSTEM means a custom-made, site-specific system of delivering water generally for landscape irrigation via a system of pipes or other conduits installed below ground**.
18. RAIN/FREEZE SENSOR means a device designed to stop the flow of water to an automatic irrigation system when rainfall or a freeze event has been detected^{tt}.
19. RECLAIMED WATER means reclaimed municipal wastewater that has been treated to a quality that meets or exceeds the minimum standards of the 30 Texas Administrative Code, Chapter 210 and is used for lawn irrigation, industry, or other non-potable purposes**.
20. RETAIL CUSTOMERS include those customers to whom NTMWD provides retail water from a residential meter.
21. 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**.
22. SPRINKLER means an above-ground water distribution device that may be attached to a garden hose**.
23. 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^{tt}.
24. 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**.

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, Part 1, Chapter 288, Subchapter B, Rule 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.”¹

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) – Provisions 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) – Criteria for 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 – 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 Supplier – Sections 1, 4.2, and 4.3
- 288.20(b) – Notification of Implementation of Mandatory Measures – Section 4.3
- 288.20(c) – Review and Update of Plan – 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 Water Resource and Emergency Management Plan by the following means:

- Providing written notice of the proposed plan and the opportunity to comment on the plan by newspaper, posted notice, and notice on the supplier's web site (if available).
- Making the draft plan available on the supplier's web site (if available).
- Providing the draft plan to anyone requesting a copy.
- Holding a public meeting.

4.2 PROVISIONS 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 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 the Water Resource and Emergency Management Plan 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 INITIATION AND TERMINATION OF WATER RESOURCE AND EMERGENCY MANAGEMENT STAGES

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. 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 the 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 Executive Director of the TCEQ and the Executive Director of the NTMWD within 5 business days.
- 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.

Termination of a Water Resource Management Stage

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 the 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 Executive Director of the TCEQ and the Executive Director of the NTMWD 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 Measures

Stage 1

Initiation and Termination Conditions for Stage 1

- **The 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 the permitted supply.
 - The storage level, as published by the Texas Water Development Board³, in Lavon Lake is less than 70 percent of the total conservation pool capacity during the months of April through October or less than 60 percent of the total conservation pool capacity during the months of November through March.
 - The Sabine River Authority has indicated that its Upper Basin water supplies used by NTMWD (Lake Tawakoni and/or Lake Fork) are in a Mild drought.
 - NTMWD has concern that Lake Texoma, Jim Chapman Lake, the East Fork Reuse Project, Main Stem Pump Station, or some other NTMWD source may be limited in availability within the next 6 months.

- ✓ ○ Water demand exceeds 95 percent of the amount that can be delivered to Customers for three 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. The District may implement measures for only that portion of the system impacted.
- 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 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.
- **The NTMWD has terminated Stage 1, which may be terminated due to one or more of the following:**
 - The Executive Director finds that conditions warrant the termination of Stage 1.
 - The storage level, as published by the Texas Water Development Board³, in Lavon Lake is greater than 75 percent of the total conservation pool capacity during the months of April through October or greater than 65 percent of the total conservation pool capacity during the months of November through March.
 - Other circumstances that caused the initiation of Stage 1 no longer prevail.
- When the circumstances that caused the 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 annual payment period prior to 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 two percent reduction. Measures described as “requires notification to TCEQ” impose mandatory requirements on customers. The supplier must notify TCEQ and NTMWD within five business days if these measures are implemented:

- Continue actions in the Water Conservation Plan.
- Notify wholesale customers of actions being taken and request them to implement similar procedures.
- Initiate engineering studies to evaluate alternatives 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 landscaping.
- All users are encouraged to reduce the frequency of draining and refilling swimming pools.
- **Requires Notification to TCEQ** – Increase enforcement of the following landscape watering restrictions from the Water Conservation Plan. Limit landscape watering with sprinklers or irrigation systems at each service address to no more than two days per week on designated days between April 1 – October 31. Limit landscape watering with sprinklers or irrigation systems at each service address to once every week on designated days between November 1 – March 31. Exceptions are as follows:
 - An exception is allowed for landscape associated with new construction that may be watered as necessary for 30 days from the installation of new landscape features.
 - An exemption is also allowed for registered and properly functioning ET/Smart irrigation systems and drip irrigation systems from the designated outdoor water use days limited to no more than two days per week. ET/Smart irrigation and drip irrigation systems are however subject to all other restrictions applicable under this stage.

- An exception for additional watering of landscape may be provided by hand held hose with shutoff nozzle, use of dedicated irrigation drip zones, and/or soaker hose provided no runoff occurs.
- Foundations, new landscaping, new plantings (first year) of shrubs, and trees (within a ten foot radius of its trunk) may be watered by a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system provided no runoff occurs.
- **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 which may be hand watered as needed.

Stage 2

Initiation and Termination Conditions for Stage 2

- **The 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 the permitted supply.
 - The storage level, as published by the Texas Water Development Board³, in Lavon Lake is less than 55 percent of the total conservation pool capacity during the months of April through October or less than 45 percent of the total conservation pool capacity during the months of November through March.
 - The Sabine River Authority has indicated that its Upper Basin water supplies used by NTMWD (Lake Tawakoni and/or Lake Fork) are in a Moderate drought.
 - NTMWD has concern that Lake Texoma, Jim Chapman Lake, the East Fork Reuse Project, Main Stem Pump Station, or some other NTMWD source may be limited in availability within the next 3 months.
 - Water demand exceeds 98 percent of the amount that can be delivered to Customers for three 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. The District may implement measures for only that portion of the system impacted.
- 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.
- **The NTMWD has terminated Stage 2, which may be terminated due to one or more of the following:**
 - The Executive Director finds that conditions warrant the termination of Stage 2.
 - The storage level, as published by the Texas Water Development Board³, in Lavon Lake is greater than 70 percent of the total conservation pool capacity during the months of April through October or greater than 60 percent of the total conservation pool capacity during the months of November through March.
 - Other circumstances that caused the initiation of Stage 2 no longer prevail.
- When other circumstances that caused the 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 annual payment period prior to 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” impose mandatory requirements on customers. The supplier must notify TCEQ and NTMWD within five business days if these measures are implemented:

- Continue or initiate any actions available under Stage 1.
- Notify wholesale customers of actions being taken and request them to implement similar procedures.
- Implement viable alternative water supply strategies.
- All users are encouraged 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 – 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 – March 31. Exceptions are as follows:
 - New construction may be watered as necessary for 30 days from the date of the installation of new landscape features. .
 - Foundations, new plantings (first year) of shrubs, and trees (within a ten foot radius of its trunk) may be watered 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.
 - Public athletic fields used for competition 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. 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.

- An exemption is allowed for registered and properly functioning ET/Smart irrigation systems and drip irrigation systems from the designated outdoor water use day limited to no more than one day per week. ET/Smart irrigation and drip irrigation systems are however subject to all other restrictions applicable under this stage.
- Hand watering with shutoff nozzle, drip lines, and soaker hoses is 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 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.

Stage 3

Initiation and Termination Conditions for Stage 3

- **The 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, as published by the Texas Water Development Board³, in Lavon Lake is less than 30 percent of the total conservation pool capacity during the months of April through October or less than 20 percent of the total conservation pool capacity during the months of November through March.
 - The Sabine River Authority has indicated that its Upper Basin water supplies used by NTMWD (Lake Tawakoni and/or Lake Fork) are in a Severe drought. (Measures required by SRA under a Severe drought designation are similar to those under NTMWD’s Stage 3.)

- The supply from Lake Texoma, Jim Chapman Lake, the East Fork Reuse Project, Main Stem Pump Station, or some other NTMWD 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. The District may implement measures for only that portion of the system impacted.
- 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.
- **The NTMWD has terminated Stage 3, which may be terminated due to one or more of the following:**
 - The Executive Director finds that conditions warrant the termination of Stage 3.
 - The storage level, as published by the Texas Water Development Board³, in Lavon Lake is greater than 55 percent of the total conservation pool capacity during the months of April through October or greater than 45 percent of the total conservation pool capacity during the months of November through March.
 - Other circumstances that caused the initiation of Stage 3 no longer prevail.
- When other circumstances that caused the 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 previous annual payment period prior to 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” impose mandatory requirements on member cities and customers. The supplier must notify TCEQ and NTMWD within five business days if these measures are implemented.

- Continue or initiate any actions available under Stages 1, and 2.
- Notify 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 landscaping.
- **Requires Notification to TCEQ** – Prohibit all commercial and residential landscape watering, except that foundations and trees (within a ten foot radius of its trunk) may be watered for two hours one day per week with a hand-held hose, a dedicated zone using a drip irrigation system and/or soaker hose provided no runoff occurs. ET/Smart irrigation systems and drip irrigation systems are not exempt from this requirement.
- **Requires Notification to TCEQ** – Prohibit washing of vehicles except at commercial vehicle wash facilities.

- **Requires Notification to TCEQ** – Landscape watering of parks, golf courses, and athletic fields with potable water is prohibited. Exception for golf course greens and tee boxes which may be hand watered as needed. Variances may be granted by the water provider under special circumstances.
- **Requires Notification to TCEQ** – Prohibit the filling, draining and refilling of existing swimming pools, wading pools, Jacuzzi and hot tubs except to maintain structural integrity, proper operation and maintenance or to alleviate a public safety risk. Existing pools may add water to replace losses from normal use and evaporation. Permitting of new swimming pools, wading pools, Jacuzzi and hot tubs is prohibited.
- **Requires Notification to TCEQ** – Prohibit the operation of interactive water features such as water sprays, dancing water jets, waterfalls, dumping buckets, shooting water cannons, or splash pads that are maintained for public recreation.
- **Requires Notification to TCEQ** – Require all commercial water users to reduce water use by a percentage established by the City Manager, General Manager, Mayor, Chief Executive, or official designee.
- **Requires Notification to TCEQ** – If NTMWD has imposed a reduction in water available to Member Cities and Customers, impose the same percent reduction on wholesale customers.
- **Requires Notification to TCEQ** - Initiate a rate surcharge over normal rates for all water use or for water use over a certain level.

4.4 PROCEDURES FOR GRANTING VARIANCES TO THE PLAN

The City Manager, General Manager, Mayor, Chief Executive, or official designee may grant temporary variances for existing water uses otherwise prohibited under this Water Resource and Emergency Management 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 or entity 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 City Manager, General Manager, Mayor, Chief Executive, or official designee. All petitions for variances should be in writing and should include the following information:
 - Name and address of the petitioners
 - 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.

4.5 PROCEDURES FOR ENFORCING MANDATORY WATER USE RESTRICTIONS

Mandatory water use restrictions may be imposed in Stage 1, Stage 2 and Stage 3 Water Resource and Emergency Management Plan stages. The penalties associated with the mandatory water use restrictions will be determined by each entity.

Appendix D contains potential ordinances, resolutions, and orders that may be adopted by the city council, board, or governing body approving the Water Resource and Emergency Management plan and water response plan, including enforcement of same.

4.6 COORDINATION WITH THE REGIONAL WATER PLANNING GROUP AND NTMWD

Appendix C includes a copy of a letter sent to the Chairs of the Region C Water Planning Group and the North East Texas Water Planning Group with this model Water Resource and Emergency Management Plan.

The suppliers will send a draft of its ordinance(s) or other regulation(s) implementing this plan to NTMWD for their review and comment. The supplier will also send the final ordinance(s) or other regulation(s) to NTMWD.

4.7 REVIEW AND UPDATE OF WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN

As required by TCEQ rules, Member Cities and Customers must review the Water Resource and Emergency Management plan every five years. The plan will be updated as appropriate based on new or updated information.

4.8 CONTRACT PROVISIONS

The Cash Special Utility District will include a provision in every wholesale water contract entered into or renewed after adoption of the plan, including contract extensions, that in case of a shortage of water resulting from a drought, the water to be distributed shall be divided in accordance with Texas Water Code, chapter 11.039.

APPENDIX A
LIST OF REFERENCES

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 Members 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>.
4. Definitions from City of Austin Water Conservation and Drought Contingency Ordinance adopted August 16, 2012.
5. Definition from City of San Antonio Water Conservation Ordinance adopted 2005.
http://saws.org/conservation/ordinance/docs/Ch34_Ordinance_2009.pdf.
6. Definition developed by Freese and Nichols, Inc.
7. Amy Vickers: Handbook of Water Use and Conservation, Amherst Massachusetts, June 2002.
8. Freese and Nichols, Inc.: Water Conservation and Drought Contingency and Water Emergency Response Plan, prepared for North Texas Municipal Water District, Fort Worth, March 2008.

APPENDIX B

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

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
RULE §288.20	Drought Contingency Plans for Municipal Uses by Public Water Suppliers

(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.

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



CASH SPECIAL UTILITY DISTRICT

172 FM 1564 EAST
P.O. BOX 8129
GREENVILLE, TEXAS 75404-8129
PHONE (903) 883-2695 FAX (903) 883-4045

April 25, 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 Model Water Resource and Emergency Management Plan for Member Cities and Customers of 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 Board of Directors of the Cash Special Utility District adopted the updated model plan on April 22, 2019.

Sincerely,

A handwritten signature in cursive script, appearing to read "Clay Hodges".

Clay Hodges, General Manager
Cash Special Utility District



CASH SPECIAL UTILITY DISTRICT

172 FM 1564 EAST
P.O. BOX 8129
GREENVILLE, TEXAS 75404-8129
PHONE (903) 883-2695 FAX (903) 883-4045

April 25, 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 Model Water Resource and Emergency Management Plan for Member Cities and Customers of 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 Board of Directors of the Cash Special Utility District adopted the updated model plan on April 22, 2019.

Sincerely,

A handwritten signature in black ink, appearing to read "Clay Hodges", is written over the printed name.

Clay Hodges, General Manager
Cash Special Utility District

APPENDIX D

ADOPTION OF WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN

Cash Special Utility District Order

Adopting Water Resource and Emergency Management Plan

Order No. 04222019C

AN ORDER ADOPTING A WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN FOR THE CASH SPECIAL UTILITY DISTRICT TO PROMOTE THE RESPONSIBLE USE OF WATER AND TO PROVIDE FOR PENALTIES AND/OR THE DISCONNECTION OF WATER SERVICE FOR NONCOMPLIANCE WITH THE PROVISIONS OF THE WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN.

WHEREAS, the Cash Special Utility District (the "District"), recognizes that the amount of water available to its water customers is limited; and

WHEREAS, the District recognizes that due to natural limitations, drought conditions, system failures and other acts of God which may occur, the District 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 District adopt a Water Resource and Emergency Management Plan; and

WHEREAS, the District 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 65 of the Water Code, the District is authorized to adopt such policies necessary to accomplish the purposes for which it was created, including but not limited to the preservation and conservation of water resources; and

WHEREAS, the Board of Directors of the District desires to adopt the North Texas Municipal Water District (the "NTMWD") Model Water Resource and Emergency Management Plan as official District policy for the conservation of water.

NOW THEREFORE, BE IT ORDERED BY THE BOARD OF DIRECTORS OF THE CASH SPECIAL UTILITY DISTRICT THAT:

Section 1. The Board of Directors hereby approves and adopts the NTMWD Model Water Resource and Emergency Management Plan (the "Plan"), attached hereto as Addendum A, as if recited verbatim herein. The District commits to implement the requirements and procedures set forth in the adopted Plan.

Section 2. Any customer, defined pursuant to 30 Tex. Admin. Code Chapter 291, failing to comply with the provisions of the Plan shall be subject to a monetary fine as allowed by law, and/or discontinuance of water service by the District. Proof of a culpable mental state is not required for a conviction of an offense under this section. Each day a customer fails to comply with the Plan is a separate violation. The District's authority to seek injunctive or other civil relief available under the law is not limited by this section.


Section 3. The Board of Directors does hereby find and declare that sufficient written notice of the date, hour, place and subject of the meeting adopting this Order 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 Order and the subject matter thereof has been discussed, considered and formally acted upon. The Board of Directors further ratifies, approves and confirms such written notice and the posting thereof.

Section 4. The General 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 5. Should any paragraph, sentence, clause, phrase or word of this Order be declared unconstitutional or invalid for any reason, the remainder of this Order shall not be affected.

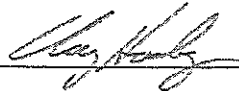
Section 6. {If Applicable} Order No. _____, adopted on _____, is hereby repealed.

Approved and adopted by the Board of Directors on this 22 day of April, 2019.



Vice-President, Board of Directors

Attest:



Deputy Secretary

APPENDIX E

Pro Rata Water Allocation for Wholesale Customers

In the event that the triggering criteria specified in Stage 3 of the Plan for or water rationing conditions have been met, the General Manager is hereby authorized to initiate allocation of water supplies on a pro rata basis in accordance with Texas Water Code Section 11.039 and according to the following water allocation policies and procedures:

1. A wholesale customer's monthly allocation shall be a percentage of the customer's water usage baseline. The percentage will be set by resolution of the Board of Directors based on the General Manager's assessment of the severity of the water shortage condition and the need to curtail water deliveries and may be adjusted periodically by resolution of the Board of Directors as conditions warrant. Once pro rata allocation is in effect, water deliveries to each wholesale customer shall be limited to the allocation established for each month.
2. A monthly water usage allocation shall be established by the General Manager, or his/her designee, for each wholesale customer. The wholesale customer's water usage baseline will be computed on the average water usage by month for the three most recent calendar years as shown in the example included in this Appendix. If the wholesale water customer's billing history is less than 3 years, the monthly average for the period for which there is a record shall be used for any monthly period for which no billing history exists.
3. The General Manager shall provide notice, by certified mail, to each wholesale customer informing them of their monthly water usage allocations and shall notify the news media and the executive director of the TECQ upon initiation of pro rata water allocation.
4. Upon request of the wholesale customer or at the initiative of the General Manager, the allocation may be reduced or increased if, (a) the designated period does not accurately reflect the wholesale customer's normal water usage; (b) the customer agrees to transfer part of its allocation to another wholesale customer; or (c) other objective evidence demonstrates that the designated allocation is inaccurate under present conditions. A wholesale customer may appeal an allocation established hereunder to the Board of Directors of Cash SUD.

During any period when pro rata allocation of available water supplies is in effect, wholesale customers shall pay the following surcharges on excess water diversions and/or deliveries:

- a. 1.5 times the normal water charge per 1000 gallons for water deliveries in excess of the monthly allocation up through 5 percent above the monthly allocation.
- b. 2.0 times the normal water charge per 1000 gallons for water deliveries in excess of the monthly allocation from 5 percent through 10 percent above the monthly allocation.
- c. 2.5 times the normal water charge per 1000 gallons for water deliveries in excess of the monthly allocation from 10 percent through 15 percent above the monthly allocation.
- d. 3.0 times the normal water charge per 1000 gallons for water diversions and/or deliveries more than 15 percent above the monthly allocation.
- e. The above surcharges shall be cumulative.

Drought Rate for Retail Customers

In times of drought the District, by resolution of the Board of Directors, may implement the following drought rate for retail customers to reduce the demand of water.

0 – 5,000 gallons	= \$3.75 per 1000 gallons
5,001 – 10,000 gallons	= \$8.00 per 1000 gallons
10,001 – 15,000 gallons	= \$9.00 per 1000 gallons
15,001 – 20,000 gallons	= \$10.00 per 1000 gallons
20,001 – 25,000 gallons	= \$10.50 per 1000 gallons
Over 25,000 gallons	= \$12.50 per 1000 gallons

