

# **2024 Water Resource and Emergency Management Plan**

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*Under Texas Water Code Chapter 11 and Title 30 Texas Administrative Code Chapter 288, Retail, Irrigation and Wholesale Public Water Suppliers are required to develop, implement and submit updated Drought Contingency Plans to TCEQ every five years.*

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## 1.00 INTRODUCTION

**City of Mesquite** is a Member City of the North Texas Municipal Water District (NTMWD). This Plan was developed following TCEQ guidelines and requirements governing the development of drought contingency plans.

The goal of the water resource and emergency management plan is to prepare for potential water shortages and to preserve water for essential uses and the protection of public health. The objectives to achieve this goal are as follows:

- **To save water during droughts, water shortages, and emergencies.**
- **To save water for domestic use, sanitation, and fire protection.**
- **To protect and preserve public health, welfare, and safety.**
- **To reduce the adverse impacts of shortages.**
- **To reduce the adverse impacts of emergency water supply conditions.**

Note: NTMWD refers to their drought contingency plan (DCP) as the water resource and emergency management plan (WREMP) and should be considered synonymous with a DCP.

### 1.01 MINIMUM REGULATORY REQUIREMENTS

**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”. Recognizing the need for efficient use of existing water supplies, TCEQ has developed guidelines and requirements governing the development of water conservation and drought contingency plans.**

The minimum TCEQ requirements and where they are addressed within this document are described in Appendix B.

## 2.00 IMPLEMENTATION AND ENFORCEMENT

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

City of Mesquite provided opportunity for public input in the development of this Plan by the following means:

- **Providing written notice of the proposed Plan and the opportunity to comment on the Plan by newspaper and posted notice.**
- **Posting the draft Plan on the community website and/or social media.**
- **Providing the draft Plan to anyone requesting a copy.**

- **Holding a public meeting regarding the Plan on April 15, 2024. Public notice of this meeting was provided on the community website and in local newspapers.**
- **Approving the Plan at a public Board meeting on May 6, 2024. Public notices of this meeting were provided on the community website and live audio was available during the meeting.**

## **2.02 PROGRAM FOR CONTINUING PUBLIC EDUCATION AND INFORMATION**

**The City of Mesquite informs and educates the public about the Plan by the following means:**

- **Preparing a bulletin describing the plan and making it available at City Hall and/or other appropriate locations.**
- **Including information and making the Plan available to the public through the community website and/or social media.**
- **Notifying local organizations, schools, and civic groups that utility staff are available to make presentations on the Plan (usually in conjunction with presentations on water conservation programs).**
- **At any time that the Plan is activated or changes, the City of Mesquite 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 community website and/or social media. Billing inserts will also be used as appropriate.**

## **2.03 COORDINATION WITH THE REGIONAL WATER PLANNING GROUPS AND NTMWD**

**Appendix F of this Plan includes copies of letters sent to the Chairs of the appropriate regional water planning groups as well as NTMWD.**

## **2.04 INITIATION AND TERMINATION OF WATER RESOURCE MANAGEMENT STATGES**

### **A. INITITATION OF A WATER RESOURCE MANAGEMENT STAGE**

**The City Manager may order the implementation of a water resource management stage when one or more of the trigger conditions for that stage is met.**

- **NTMWD has initiated a water resource management stage. (Stages imposed by NTMWD action *must* be initiated by Member Cities and Customers.)**

- **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 website.**
- **Wholesale customers and NTMWD will be notified by email that provides details of the reasons for initiation of the water resource management stage.**
- **If any mandatory provisions of the Plan are activated, the City of Mesquite will notify TCEQ and the NTMWD Executive Director within five business days. Instructions to report drought contingency plan water use restrictions to TCEQ is available online at [https://www.tceq.texas.gov/drinkingwater/homeland\\_security/security\\_pws](https://www.tceq.texas.gov/drinkingwater/homeland_security/security_pws).**
- **The City Manager may decide not to order the implementation of a management stage even though one or more of the trigger criteria for the stage is met. Factors which could influence such a decision include, but are not limited to, the time of year, weather conditions, the anticipation of replenished water supplies, or the anticipation that additional facilities will become available to meet needs.**
- **In the event of a citywide emergency, the order shall be made by public announcement in the City within twenty-four hours of implementation. In the event of an emergency of limited geographical extent, door-to-door notification shall be made by door hangers and/or in person, at which time the City Manager authorized state of emergency shall become immediately effective. Once an emergency has been declared, the City Manager may utilize supplemental public notifications including notices posted at City Hall, libraries, fire stations, post offices, major supermarkets, schools, major corporate centers, Chamber of Commerce, direct mail, television, radio, internet website announcement, social media, local television news, newspaper, and other news media to notify the public.**

#### **B. TERMINATION OF A WATER RESOURCE MANAGEMENT STAGE**

**Water resource management stages initiated by NTMWD may be terminated after NTMWD has terminated the stage. For stages initiated by the City Manager, they 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 website.**
- **Wholesale customers and NTMWD will be notified by email.**
- **If any mandatory provisions of the Plan that have been activated are terminated, the City of Mesquite will notify TCEQ Executive Director and the NTMWD Executive**

**Director within five business days. Instructions to report drought contingency plan water use restrictions to TCEQ is available online at [https://www.tceq.texas.gov/drinkingwater/homeland\\_security/security\\_pws](https://www.tceq.texas.gov/drinkingwater/homeland_security/security_pws).**

- **The City may order termination of a city-initiated management stage at their discretion when it is determined the emergency has ceased to exist.**

**The City Manager 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 potentially changed conditions that warrant the continuation of the water resource management stage. The reason for this decision should be documented.**

## **2.05 PROCEDURE FOR GRANTING VARIANCES TO THE PLAN**

**The City Manager may grant temporary variances for existing water uses otherwise prohibited under this 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.**

**Variations shall be granted or denied at the discretion of the City Manager. 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 and the level of water use reduction.**
- **Other pertinent information.**

## 2.06 PROCEDURES FOR ENFORCING MANDATORY WATER USE RESTRICTIONS

Mandatory water use restrictions may be imposed in Stage 1, Stage 2 and Stage 3.

Procedures for granting variances to the Plan are outlined in [Section 16-13, Chapter 16](#) of the Code of the City of Mesquite, Texas. The City Manager is authorized to implement the applicable provisions of this Plan to protect public health, safety, and welfare. The City Manager shall have the authority to implement and enforce this Plan is established in [Chapter 16](#) of the Code of the City of Mesquite, Texas.

## 2.07 REVIEW AND UPDATE OF WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN

As required by TCEQ rules, the City of Mesquite must review their respective Plan every five years. The plan will be updated as appropriate based on new or updated information.

## 3.00 WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN

Initiation and termination criteria for water management stages include general, demand, supply, and emergency criteria. One of the major indicators of approaching or ongoing drought conditions is NTMWD's combined reservoir storage, defined as storage at Lavon Lake plus storage in Bois d'Arc Lake. Percent storage is determined by dividing the current storage by the total conservation storage when the lakes are full. Table 1 summarizes the water management stages by triggers based on percent combined storage and associated demand reduction goals and outdoor watering restrictions. The following sections go into more detail on the three water management stages.

TCEQ requires notification when mandatory restrictions are placed on a customer. NTMWD must notify TCEQ when they impose mandatory restrictions on Member Cities and Customers. Member Cities and Customers must likewise notify TCEQ when they impose mandatory restrictions on their customers (wholesale or retail). Measures that impose mandatory requirements on customers are denoted with "requires notification to TCEQ".

NTMWD and the utilities must notify TCEQ within five business days if these measures are implemented (<https://www.tceq.texas.gov/response/drought/drought-and-public-water-systems>).

Table 2: Water Management Plan Stages Summary

			Outdoor Watering Restrictions
	Percent Combined	Goal	

		Storage			
Stage 1	Initiation	70%	60%	2%	2X per week (Apr-Oct) 1X per week (Nov-Mar)
	Termination	75%	65%		
Stage 2	Initiation	55%	45%	5%	1X per week (Apr-Oct) 1X every other week (Nov-Mar)
	Termination	70%	60%		
Stage 3	Initiation	30%	20%	30%	No outdoor watering
	Termination	55%	45%		

### 3.01 WATER RESOURCE MANAGEMENT – STAGE 1

#### A. INITIATION AND TERMINATION CRITERIA FOR STAGE 1

NTMWD has initiated Stage 1, which may be initiated when one or more of the following criteria is met:

- General Criteria
  - The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the declaration of Stage 1.
  - One or more source(s) is interrupted, unavailable, or limited due to contamination, invasive species, equipment failure or other cause.
  - The water supply system is unable to deliver needed supplies due to the failure or damage of major water system components.
  - Part of the system has a shortage of supply or damage to equipment. (NTMWD may implement measures for only that portion of the system impacted.)
  - A portion of the service area is experiencing an extreme weather event or power grid/supply disruptions.
- Demand Criteria
  - Water demand has exceeded or is expected to exceed 90% of maximum sustainable production or delivery capacity for an extended period.
- Supply Criteria
  - The combined storage in Lavon and Bois d'Arc Lake, as published by the TWDB, is less than:
    - 70% of the combined conservation pool capacity during any of the months of April through October

- **60% of the combined 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 is concerned that Lake Texoma, Jim Chapman Lake, the East Fork Water Reuse Project, Main Stem Pump Station, and/or some other NTMWD water source may be limited in availability within the next six months.**

Stage 1 may terminate when one or more of the following criteria is met:

- **General Criteria**
  - **The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the termination of Stage 1.**
  - **The circumstances that caused the initiation of Stage 1 no longer prevail.**
- **Supply Criteria**
  - **The combined storage in Lavon and Bois d'Arc Lakes, as published by the TWDB, is greater than:**
    - **75% of the combined conservation pool capacity during any of the months of April through October**
    - **65% of the combined conservation pool capacity during any of the months of November through March**

## **B. GOAL FOR USE REDUCTION UNDER STAGE 1**

**The goal for water use reduction under Stage 1 is an annual reduction of 2% in the use that would have occurred in the absence of water management measures. Because discretionary water use is highly concentrated in the summer months, savings should be higher than 5% in summer to achieve an annual savings goal of 2%. If circumstances warrant, the Executive Director can set a goal for greater or less water use reduction.**

## **C. WATER MANAGEMENT MEASURES AVAILABLE UNDER STAGE 1**

**The actions listed below are provided as potential measures to reduce water demand. NTMWD may choose to implement any or all of the available restrictions in Stage 1.**

- **Requires notification to TCEQ by NTMWD. Require Member Cities and Customers (including indirect Customers) to initiate Stage 1 restrictions in their respective, independently adopted water resource management plans.**
- **Continue actions described in the water conservation plan.**

- **Increase enforcement of landscape watering restrictions from the water conservation plan.**
- **Initiate engineering studies to evaluate alternative actions that can be implemented if conditions worsen.**
- **Accelerate public education efforts on ways to reduce water use.**
- **Halt non-essential NTMWD water use.**
- **Encourage the public to wait until the current drought or water emergency situation has passed before establishing new landscaping.**
- **Encourage all users to reduce the frequency of draining and refilling swimming pools.**
- **Requires notification to TCEQ by Member Cities and Customers and/or NTMWD. Initiate a rate surcharge for all water use over a certain level.**
- **Requires notification to TCEQ by Member Cities and Customers. 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. As an exception, golf course greens and tee boxes may be hand watered as needed.**

### **3.02 WATER RESOURCE MANAGEMENT – STAGE 2**

#### **A. INITIATION AND TERMINATION CRITERIA FOR STAGE 2**

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

- **General Criteria**
  - **The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the declaration of Stage 2.**
  - **One or more supply source(s) is interrupted, unavailable, or limited due to contamination, invasive species, equipment failure or other cause.**
  - **The water supply system is unable to deliver needed supplies due to the failure or damage of major water system components.**
  - **Part of the system has a shortage of supply or damage to equipment. (NTMWD may implement measures for only that portion of the system impacted.)**
  - **A portion of the service area is experiencing an extreme weather event or power grid/supply disruptions.**
- **Demand Criteria**

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- **Water demand has exceeded or is expected to exceed 95% of maximum sustainable production or delivery capacity for an extended period.**
- **Supply Criteria**
  - **The combined storage in Lavon and Bois d'Arc Lake, as published by the TWDB, is less than**
    - **55% of the combined conservation pool capacity during any of the months of April through October**
    - **45% of the combined 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 is concerned that Lake Texoma, Jim Chapman Lake, the East Fork Water Reuse Project, the Main Stem Pump Station, and/or some other NTMWD water source may be limited in availability within the next three months.**

Stage 2 may terminate when one or more of the following criteria is met:

- **General Criteria**
  - **The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the termination of Stage 2.**
  - **The circumstances that caused the initiation of Stage 2 no longer prevail.**
- **Supply Criteria**
  - **The combined storage in Lavon and Bois d'Arc Lake, as published by the TWDB, is greater than**
    - **70% of the combined conservation pool capacity during any of the months of April through October**
    - **60% of the combined conservation pool capacity during any of the months of November through March**

### B. GOAL FOR USE REDUCTION UNDER STAGE 2

**The goal for water use reduction under Stage 2 is an annual reduction of 5% in the use that would have occurred in the absence of water resource management measures. Because discretionary water use is highly concentrated in the summer months, savings should be higher than 5% in summer to achieve an annual savings goal of 5%. If circumstances warrant, the Executive Director can set a goal for greater or less water use reduction.**

### C. WATER MANAGEMENT MEASURES AVAILABLE UNDER STAGE 2

**The actions listed below are provided as potential measures to reduce water demand. NTMWD may choose to implement any or all of the available restrictions in Stage 2.**

- **Continue or initiate any actions available under the water conservation plan and Stage 1.**
- **Implement viable alternative water supply strategies.**
- **Requires notification to TCEQ by NTMWD. Require Member Cities and Customers (including indirect Customers) to initiate Stage 2 restrictions in their respective, independently adopted water resource management plans.**
- **Requires notification to TCEQ by NTMWD and/or Member Cities and Customers. 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 construction may be watered as necessary for 30 days from the installation of new landscape features.**
  - **Foundation watering (within 2 feet), watering of new plantings (first year) of shrubs, and watering of trees (within a 10-foot radius of its trunk) for up to two hours on any day by a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system, 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 the alternative water source(s) being used. However, irrigation using alternative sources of supply is subject to all other restrictions applicable to this stage. If the alternative supply source is a well, proper proof of well registration with your local water supplier (e.g., city, water supply corporation) is required. Other sources of water supply may not include imported treated water.**
  - **An exemption is 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.**
- **Requires notification to TCEQ by Member Cities and Customers. Prohibit overseeding, sodding, sprigging, broadcasting or plugging with or watering, except for golf courses and athletic fields.**

- **Requires notification to TCEQ by NTMWD. Institute a mandated reduction in water deliveries to all Member Cities and Customers. Such a reduction will be distributed as required by Texas Water Code Section 11.039 (Appendix E).**
- **Requires notification to TCEQ by Member Cities and Customers and/or NTMWD. Initiate a rate surcharge for all water use over a certain level.**
- **Requires notification to TCEQ by Member Cities and Customers. Parks and golf courses using potable water for landscape watering are required to meet the same reduction goals and measures outlined in this stage. As an exception, golf course greens and tee boxes may be hand watered as needed.**

### **3.03 WATER RESOURCE MANAGEMENT – STAGE 3**

#### **A. INITIATION AND TERMINATION CRITERIA FOR STAGE 3**

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

- **General Criteria**
  - **The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the declaration of Stage 3.**
  - **One or more supply source(s) is interrupted, unavailable, or limited due to contamination, invasive species, equipment failure, or other cause.**
  - **The water supply system is unable to deliver needed supplies due to the failure or damage of major water system components.**
  - **Part of the system has a shortage of supply or damage to equipment. (NTMWD may implement measures for only that portion of the system impacted.)**
  - **A portion of the service area is experiencing an extreme weather event or power grid/supply disruptions.**
- **Demand Criteria**
  - **Water demand has exceeded or is expected to exceed maximum sustainable production or delivery capacity for an extended period.**
- **Supply Criteria**
  - **The combined storage in Lavon and Bois d'Arc Lake, as published by the TWDB, is less than**
    - **30% of the combined conservation pool capacity during any of the months of April through October**

- **20% of the combined 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 drought and have significantly reduced supplies available to NTMWD.**
- **The supply from Lake Texoma, Jim Chapman Lake, the East Fork Water Reuse Project, the Main Stem Pump Station, and/or some other NTMWD water source has become limited in availability.**

Stage 3 may terminate when one or more of the following criteria is met:

- **General Criteria**
  - **The Executive Director, with the concurrence of the NTMWD Board of Directors, finds that conditions warrant the termination of Stage 3.**
  - **Other circumstances that caused the initiation of Stage 3 no longer prevail.**
- **Supply Criteria**
  - **The combined storage in Lavon and Bois d'Arc Lake, as published by the TWDB, is greater than:**
    - **55% of the combined conservation pool capacity during any of the months of April through October**
    - **45% of the combined conservation pool capacity during any of the months of November through March**

## **B. GOAL FOR USE REDUCTION UNDER STAGE 3**

**The goal for water use reduction under Stage 3 is an annual reduction of 30% in the use that would have occurred in the absence of water resource management measures, or the goal for water use reduction is whatever reduction is necessary. Because discretionary water use is highly concentrated in the summer months, savings should be higher than 30% in summer to achieve an annual savings goal of 30%. If circumstances warrant, the Executive Director can set a goal for greater or less water use reduction.**

## **C. WATER MANAGEMENT MEASURES AVAILABLE UNDER STAGE 3**

**The actions listed below are provided as potential measures to reduce water demand. NTMWD may choose to implement any or all of the available restrictions in Stage 3.**

- **Continue or initiate any actions available under the water conservation plan and Stages 1 and 2.**
- **Implement viable alternative water supply strategies.**

- **Requires notification to TCEQ by NTMWD. Require Member Cities and Customers (including indirect Customers) to initiate Stage 3 restrictions in their respective, independently adopted water resource management plans.**
- **Requires notification to TCEQ by Member Cities and Customers. 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.**
- **Requires notification to TCEQ by Member Cities and Customers. Prohibit new sod, overseeding, sodding, sprigging, broadcasting or plugging with or watering.**
- **Requires notification to TCEQ by Member Cities and Customers. Prohibit the use of potable water for the irrigation of new landscape.**
- **Requires notification to TCEQ by NTMWD and/or Member Cities and Customers. Prohibit all commercial and residential landscape watering, except foundations (within 2 feet) and trees (within a 10-foot radius of its trunk) may be watered for two hours one day per week with a hand-held hose, a soaker hose, or a dedicated zone using a drip irrigation system provided no runoff occurs. Drip irrigation systems are not exempt from this requirement.**
- **Requires notification to TCEQ by Member Cities and Customers. Prohibit washing of vehicles except at a commercial vehicle wash facility.**
- **Requires notification to TCEQ by Member Cities and Customers. Landscape watering of parks, golf courses, and athletic fields with potable water is prohibited. As an exception, golf course greens and tee boxes may be hand watered as needed. Variances may be granted by the water provider under special circumstances.**
- **Requires notification to TCEQ by Member Cities and Customers. Prohibit the filling, draining, and/or 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 by Member Cities and Customers. Prohibit the operation of interactive water features such as 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.**

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- Requires notification to TCEQ by Member Cities and Customers. **Require all commercial water users to reduce water use by a set percentage.**
- Requires notification to TCEQ by NTMWD. **Institute a mandated reduction in deliveries to all Member Cities and Customers. Such a reduction will be distributed as required by Texas Water Code Section 11.039.**
- Requires notification to TCEQ by NTMWD and/or Member Cities and Customers. **Initiate a rate surcharge over normal rates for all water use or for water use over a certain level**