



*Developed to Meet Requirements  
Outlined in 30 TAC § 288.20 and § 288.22*

# **City of Austin**

## **Drought Contingency Plan**

May 2016

**Austin Water  
Water Conservation Division  
City of Austin, Texas  
PWS # 2270001**

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# **DROUGHT CONTINGENCY PLAN**

## **City of Austin, Texas**

### **May 2016**

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#### **Section I: Declaration of Policy, Purpose and Intent**

The City of Austin (the City) adopted this Drought Contingency Plan (the Plan) 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 during drought or other emergency water supply conditions. This Plan is designed to meet Section 11.1272 of the Texas Water Code and Chapter 288 of Title 30 of the Texas Administrative Code. These regulations require all Texas wholesale public water suppliers and all retail public water suppliers providing water service to 3,300 or more connections to update Drought Contingency Plans by May 1, 2014 and every five years thereafter. If revisions to the Plan are needed before the scheduled five-year update, they must be submitted to TCEQ within 90 days of adoption. Additionally, as part of its water agreements with the Lower Colorado River Authority (LCRA), the City is required to have a Drought Contingency Plan that reflects consideration of the targets and goals set forth in the LCRA Drought Contingency Plan.

The Plan specifies how the City will respond to and manage the water system during demand and infrastructure constraints as well as during drought, including a repetition of the critical drought of record. The City will coordinate with LCRA and the policies set forth in its Water Management Plan, if and when a drought or other shortage of water supply should occur. Water management actions are codified in the City of Austin's Municipal Code, Title VI Environmental Control and Conservation, Chapter 6-4 Water Conservation, Article II Water Use Management, last revised in May 2016. This Drought Contingency Plan reflects those revisions and serves as a water conservation guideline as described therein. The amended Water Conservation Code is included in Appendix A.

#### **Section II: Background**

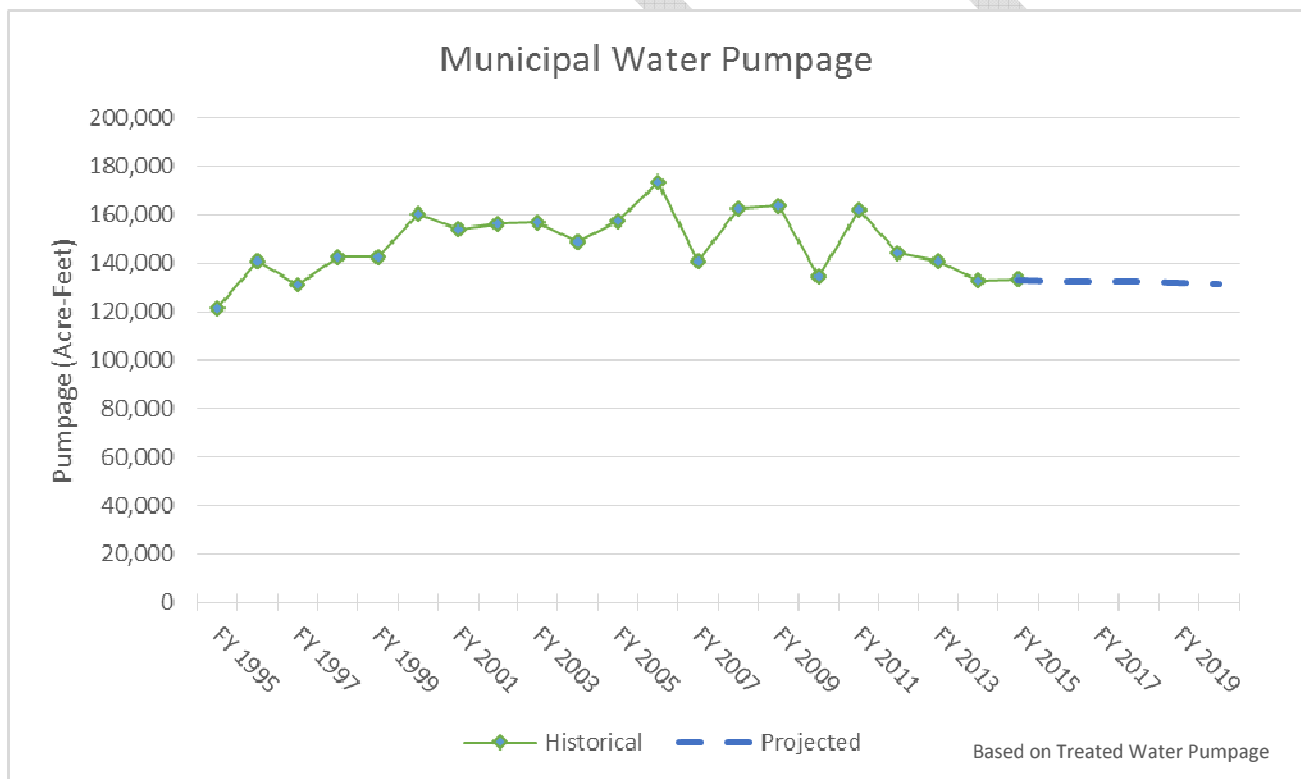
##### ***A. City of Austin Water Supply, Projected Demand, and Water Supply Contracts***

The City holds permitted municipal water rights granted by the State of Texas to divert a maximum of 292,703 acre-feet per year (AF/yr) from the Colorado River for municipal use. These water rights are run-of-river rights in the State's priority water rights system. This means that the City is permitted to divert water under these rights if the water is available for diversion after other more senior water rights are first fulfilled. While Austin's water rights include some of the most senior water rights in the river basin, there are various conditions, typically during dry weather, under which this run-of-river water would not reliably be available to the City of Austin's water rights. Therefore, Austin has entered into water supply contract

agreements with LCRA to further ensure water availability under a wide range of hydrologic conditions, including droughts.

In 1999, the City of Austin secured a firm water supply of 325,000 AF/yr through a contract with LCRA using stored water in the Highland Lakes and other sources to back up Austin's senior water rights. This contract is renewable by the City of Austin through the year 2100. In 2007, Austin entered into a supplemental water supply agreement with LCRA to provide Austin with an additional 250,000 AF/yr of firm water to be jointly planned incrementally for future needs beyond the 1999 contract's 325,000 AF/yr level. The 325,000 AF/yr component of the City's firm municipal water supply described above (from Austin's senior water rights backed by contract with LCRA) is roughly double the peak annual diversion level of 170,122 AF/yr, which occurred in 2008. The most recent five-year average is approximately 147,776 AF/yr. Figure 1 illustrates the amount of the City of Austin's current and projected municipal demand for that water through 2021.

**Figure 1**



According to its 2015 Water Management Plan, LCRA plans to manage water supplies in the Colorado River to ensure that stored water for firm demands is available without shortage through a repeat of the Drought of Record (DOR). When LCRA's Board declares a Drought Worse than the Drought of Record (DWDR), then LCRA requires mandatory pro-rata curtailment of firm water demand. A declaration of a DWDR includes evaluation of hydrologic and water supply conditions based on set criteria which include drought duration, inflow

volumes, and combined storage conditions. LCRA may require mandatory curtailments of firm water demand under some other water emergency that drastically reduces the available firm water supply. If a DWDR declaration is made, LCRA may, after notification and pro-rata curtailment plan approval, impose mandatory curtailment of firm customers. The City has adopted a Water Conservation Code (Appendix A) authorizing the City to consider and implement emergency conservation measures if the City were required to curtail water use during a DWDR declaration.

### ***B. Drought Conditions and Management Actions***

LCRA manages the Highland Lakes, including its water supply reservoirs lakes Travis and Buchanan, as a system, resulting in a maximum combined storage capacity of just over 2.0 million acre-feet. LCRA uses combined storage levels in lakes Travis and Buchanan, inflows to the Highland Lakes, and other hydrologic factors as indicators of water supply conditions, including possible severe, long-term drought conditions, and to trigger drought contingency plan stage implementation. The historical drought of record for the Colorado River basin region, which includes the City of Austin, is the one which occurred during the years 1947-1957, when the combined water storage levels of lakes Travis and Buchanan fell to a low of 621,221 acre-feet. Over the recent past, drought conditions have been severe. Based on the unprecedented conditions, LCRA in February 2015 announced that the basin is in a new “critical period”, which LCRA defines as the time period with the driest conditions and lowest inflows.

In order to minimize negative effects from periods of severe water shortages, the Water Conservation Code (Section 6-4) outlines the City’s stages for taking action in its retail service area during such periods caused by drought, water supply contamination, system outage due to failure or damage of water system, or other emergency conditions. In addition, if the available supply is less than the anticipated demand, the City will consider and implement additional emergency demand management measures, as outlined in the Water Conservation Code (Appendix A). All measures promulgated in the Water Conservation Code are considered part of this Plan.

### ***C. Water System Capacity***

Austin Water currently serves approximately 225,000 connections with over 3,800 miles of water mains. In 2015, Austin Water served an approximate retail service area population of 921,000 and a wholesale customer population of 56,000, for a total service population of approximately 977,000. All of Austin’s drinking water comes from the Colorado River. Two water treatment plants, with a combined capacity to treat and distribute 285 million gallons per day (MGD), draw water from Lake Austin. A third water treatment plant, which has a capacity of 50 MGD, draws from Lake Travis. Table 1 has a summary of the current plant capacities.

**Table 1. City of Austin Water Treatment Plants and Capacity**

Plant Name	Year Constructed	Treatment Capacity (million gallons/day)
Davis	1954	118 <sup>a</sup>
Ullrich	1969	167 <sup>b</sup>
Water Treatment Plant 4	2014	50 <sup>c</sup>
<i>Total</i>		335

a) Expanded in 1963, 1977, 1987, and 1999.

b) Modernized in 1993 to meet the higher standards of the Safe Drinking Water Act and expanded in 1987 and 2000. Capacity expansion from 100 to 167 MGD was completed in 2008.

c) Capacity can be expanded to 300 MGD over time.

### **Section III: Trigger Conditions and Goals**

The City of Austin has established a Conservation Stage containing year-round water conservation measures that apply to its retail water customers. These measures include a schedule that gives more efficient irrigation methods more time to water. During Conservation Stage, the following measures are in place:

- Residential and commercial facilities may irrigate either before 10:00 a.m. or after 7:00 p.m. only on a designated outdoor water use day.
- Automatic irrigation systems are limited to no more than one designated outdoor water use day per week, which allows up to fifteen hours of irrigation.
- Hose-end sprinklers are allowed up to two designated outdoor water use days per week, for a total of thirty hours of irrigation.
- Vehicles and outdoor surfaces may be washed if a hose with a positive shut-off or a bucket is used.
- Commercial patio misters may operate only between 4:00 p.m. and midnight.

The City Manager or his/her designee monitors water supply, water system capacity and demand conditions to determine when to consider implementing additional conservation actions for the City's retail water customers as outlined in the demand, supply, and emergency triggers listed in Table 2.

**Table 2. Demand, Supply and Emergency Triggers**

	<b>Trigger</b>	<b>Goal</b>	<b>Action<sup>a</sup></b>	<b>Irrigation Restriction<sup>a</sup></b>	<b>End Condition</b>
<b>Demand Triggers</b>	300 million gallons per day (MGD) for 3 consecutive days	Reduce water use by 15% of 300 MGD	City Manager may order Drought Response Stage Two Regulations	1x/week (10-15 hours)	City Manager ends based on daily supply and demand of water
	320 MGD for one day	Reduce current water use by 15% of 320 MGD	City Manager may order Drought Response Stage Two Regulations	1x/week (10-15 hours)	City Manager ends based on daily supply and demand of water
<b>Supply Triggers</b>	Combined lake storage falls below 1.4 million acre-feet (MAF)	Reduce current water use by 5%	City Manager may order Drought Response Stage One Regulations	1x/week (13 hours automatic) 2x/week (30 hours hose-end)	Considered when combined storage reaches 1.4 MAF and expected to remain above 1.4 MAF for four months
	Combined lake storage falls below 900,000 acre-feet (AF)	Reduce current water use by 10 to 20%	City Manager may order Drought Response Stage Two Regulations	1x/week (10-15 hours)	Considered when combined storage reaches 1.1 MAF and projected to stay above 900,000 AF for four months <sup>b</sup>
	Combined lake storage falls below 600,000 AF or a drought worse than the drought of record is declared	Reduce water use by a minimum of 20% from a baseline approved by LCRA, which may account for City's conservation measures	City Manager may order Drought Response Stage Three Regulations or Additional Restrictions as necessary to meet pro rata curtailment requirements	1x/week (6 hours)	City Manager determines that condition is no longer required to meet mandatory curtailment targets; combined storage expected to remain above 600,000 AF for four months
<b>Emergency Triggers</b>	As determined by City Manager, system outage, equipment failure, contamination of water source or other emergencies	Reduce water use to levels deemed necessary	City Manager may order Emergency Stage Four Regulations or Additional Restrictions	Prohibited	City Manager ends based on daily water demand or the end of supply constraints

<sup>a</sup> Detailed information about the watering schedule and additional conservation measures for each stage can be found in Appendix A

<sup>b</sup> The City Manager may also base a determination to end regulations on other conditions and an assessment of all relevant circumstances which in the judgment of the City Manager merit such action.

Procedures for the granting of variances to the watering regulations are contained in the City of Austin Water Conservation Code and may be authorized if necessary to protect the public health and safety. Violations are subject to criminal and administrative penalties as provided in the Code. Additional requirements are included under the Water Conservation Code in City Code Chapter 6-4 and in rules adopted pursuant to that chapter.

## **Section IV: Wholesale Contract Provisions**

New wholesale contracts include standard language requiring that the customer adhere to the City's Water Conservation Code. Generally, wholesale customers in a new contract are also required to establish a water conservation program similar to the one administered by the City. Customers with older contracts not requiring water conservation provisions are requested to voluntarily implement water conservation measures similar to those imposed by the City.

Pro rata curtailment shall be done in accordance with Texas Water Code §11.039. All new, renewed, or extended wholesale supply contracts will also include a provision that water shall be distributed on a pro rata basis in the event of a water shortage resulting from drought.

Enforcement actions for non-compliance with either the Water Conservation Code or pro rata water reductions by wholesale customers will vary according to the specifics of each wholesale customer's contract.

## **Section V: Public Involvement**

Opportunities for Austin Water's retail and wholesale water customers to offer input into the development of revisions to the Water Conservation Code, including those relating to drought management included:

- A series of five public workshops to gather citizen, wholesale customer, and stakeholder feedback on potential changes to the current Water Conservation Code (Chapter 6-4 of City Code) and drought response measures to better regulate water use during future droughts. Input received during these workshops was used in revising the Water Conservation Code and developing the Plan,
- A survey at [SpeakUpAustin.org](http://SpeakUpAustin.org) for interested parties to leave feedback on revisions to the Water Conservation Code, and
- Presentations at meetings of the Austin Integrated Water Resource Planning Community Task Force, and the following City advisory boards: the Water and Wastewater Commission, and the Resource Management Commission. Their resolutions supporting the Plan are in Appendix C.

## **Section VI: Public Notification and Education**

The City will provide its wholesale and retail water customers with information about the Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided by means of press releases, newspaper advertisements, web page updates, presentations to community organizations and neighborhood groups, meetings with wholesale customers, and other outreach methods as appropriate. The City will also make water conservation-related public information materials, including brochures and program information, available to its wholesale water customers for distribution to their retail customers.



## **Section VII: Coordination with Regional Planning Groups (RPG)**

The City of Austin has provided a copy of this Plan to the Lower Colorado Regional Planning Group (Region K). A copy of the transmittal letter to the planning group is provided in Appendix D.

## **Section VIII: TCEQ Notification**

The City shall notify the executive director of the Texas Commission on Environmental Quality within five (5) business days of the implementation of any mandatory provisions of the Drought Contingency Plan.

## **Section IX: Plan Review and Updates**

This Plan was developed to meet the requirements in 30 TAC § 288.20 and § 288.22 to submit a Drought Contingency Plan and provide the community and water customers with essential drought contingency response information, regulations, and services. The Plan will be reviewed at minimum every five (5) years and updated as needed based on major developments in Austin's water service area. The next scheduled plan review will occur in 2019.

## **APPENDIX A: Water Conservation Code**

Revised Water Conservation Code will be inserted in Appendix A once approved by City Council

DRAFT

## **APPENDIX B: Water Use Triggers for Water Use Management Ordinance**

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## MEMORANDUM

TO: Greg Meszaros, Director  
FROM: Jane Burazer, Assistant Director, Austin Water  
DATE: March 23, 2016  
SUBJECT: Conservation Triggers

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The purpose of this memo is to recommend water usage triggers for this summer under the Water Conservation Ordinance. As Stage I of the Water Use Management Plan mandates a twice/week outdoor watering schedule, Stage II will mandate a one day per week outdoor watering following the prescribed schedule in the rule.

Prior to the recent drought when the combined storage for the highland lakes triggered Stage II Water Use Restrictions, the conservation triggers had been based upon system capacities. The recommended triggers for Stage II Mandatory Water Use Restrictions for this summer are based on a system capacity of 335 MGD. The recommended triggers are:

3 consecutive days of water usage	300 MGD
1 day of water usage	320 MGD

Additional restrictions due to demand conditions will be at the discretion of the Director of Austin Water.

If you have any questions or need additional information, please call me

  
Jane Burazer, Assistant Director  
Water & Wastewater Treatment Program  
Austin Water

Concurrence:

  
\_\_\_\_\_  
Greg Meszaros, Director

  
\_\_\_\_\_  
Date

## **APPENDIX C: Resolutions in Support of Adoption of the Drought Contingency Plan**

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## **APPENDIX D: Transmittal Letter to Regional Planning Group**

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John Burke, Chair  
Lower Colorado River Authority (LCRA)  
Attn: Region K  
Mailstop L211  
P.O. Box 220  
Austin, TX 78767-0220

May 5, 2016

Dear Mr. Burke:

The enclosed Drought Contingency Plan, which updates the previously adopted 2012 Drought Contingency Plan, was developed by the City of Austin to fulfill Texas Commission on Environmental Quality (TCEQ) requirements for retail and wholesale water providers as outlined in Texas Administrative Code Title 30, Chapter 288. It is being forwarded to TCEQ.

If you have any questions on the enclosed plan please contact me at 512-974-2787.

Sincerely,

Drema Gross  
Austin Water  
Water Conservation Division Manager