TABLE OF CONTENTS – CHAPTER SEVEN

LIST OF FIGURES

LIST OF TABLES

APPENDICES

CHAPTER 7.0: DROUGHT RESPONSE INFORMATION, ACTIVITIES AND RECOMMENDATION

This chapter presents information on drought management and Drought Contingency Plans, as well as a summary of information provided by water systems in the Lower Colorado Regional Water Planning Area regarding drought management, including preparations and response throughout the Region.

Drought Definitions

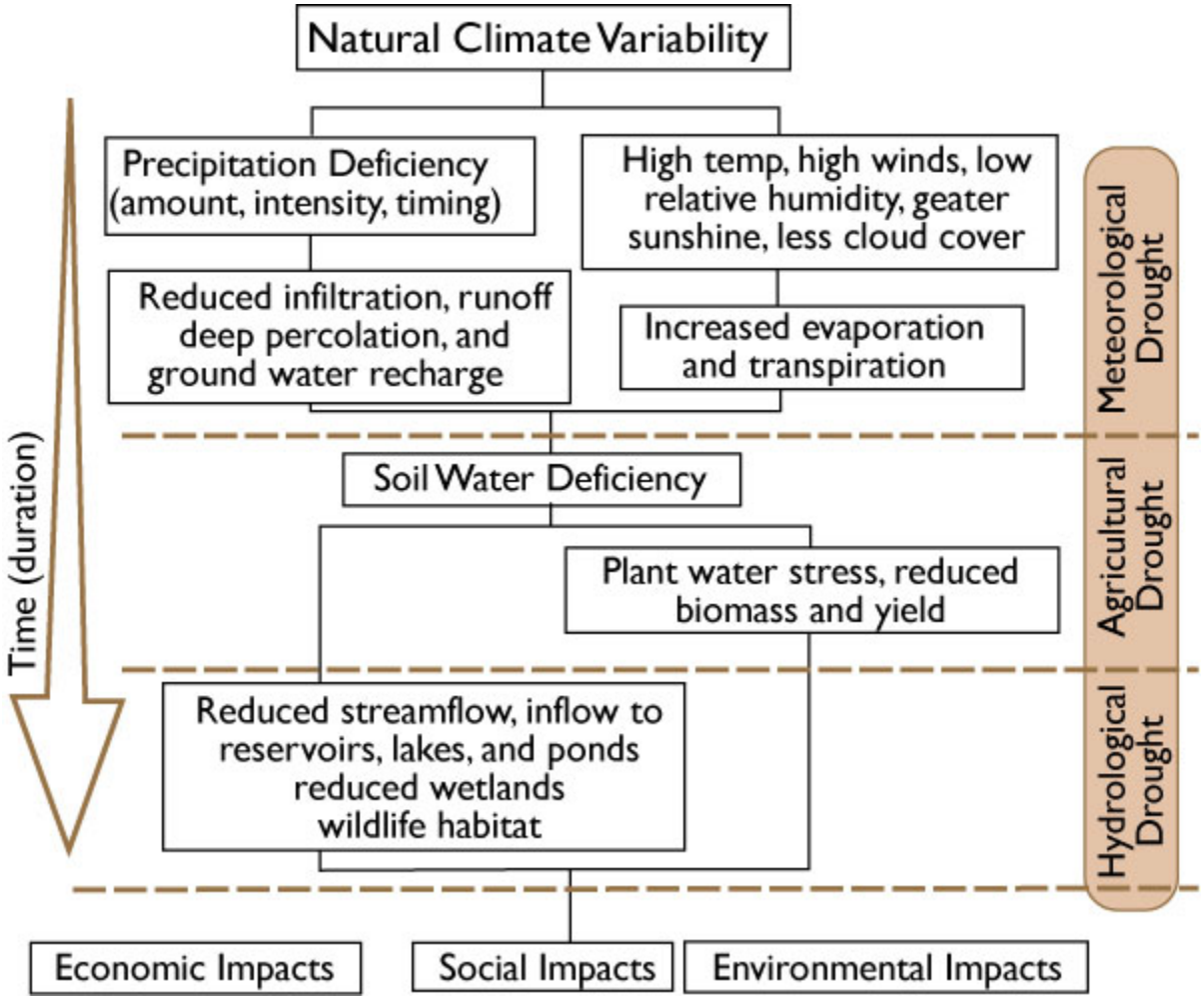
Drought is often referred to as a slow-moving emergency. The impact of droughts can be far-reaching but can be challenging to define due to the gradual and sometimes subtle progression of severity, as well as the tendency for temporal and geographic variations such as isolated rain events to shift perception of the drought severity. The types of droughts are sometimes characterized as meteorological, agricultural, and hydrological, which are events leading to the recognized socioeconomic impacts of drought. These drought terms are integrated and ordered such that as one type of drought intensifies it may lead to the development of another category of drought. The following definitions of categories of drought are taken from the State of Texas Drought Preparedness Plan and are further reflected in *Figure 7.1*:

- A meteorological drought is often defined as a period of substantially diminished precipitation duration and/or intensity that persists long enough to produce a significant hydrologic imbalance. The commonly used definition of meteorological drought is an interval of time, generally of the order of months or years, during which the actual moisture supply (typically rainfall in this region) of a given place consistently falls below the average moisture supply or average rainfall amount.
- Agricultural drought occurs when there is inadequate precipitation and/or soil moisture to sustain crop or forage production systems. The water deficit results in serious damage and economic loss to plant or animal agriculture. Agricultural drought usually begins after meteorological drought but before hydrological drought and can also affect livestock and other agricultural operations.
- Hydrological drought refers to reductions in surface and groundwater water supplies. It is measured as streamflow, and as lake, reservoir, and groundwater levels. There is usually a time lag between a lack of rain and lower amounts of measurable water in streams, lakes, and reservoirs.
- Socioeconomic drought occurs when physical water shortages start to affect the health, well- being, and quality of life of the people, or when the drought starts to affect the supply and demand of an economic product.

Determining if a dry weather pattern substantiates a meteorological drought requires an area-specific analysis that is first typically signified by dry meteorological patterns. Short intervals of dry patterns are considered within the norm of meteorological variation (seasonally and annually) so it is important to note that a true meteorological drought is dependent on the area in which it occurs.

In areas where surface and/or groundwater supplies are full at the start of a dry pattern, there is often minimal impact on water use or economic and agricultural activity. However, as dry pattern intensities deepen and duration of the meteorological drought continues and water supplies are stressed, the impacts of meteorological drought transition and begin to indicate other drought categories.

Figure 7.1: Categories of Drought and Natural Climate Variability



Source: National Drought Mitigation Center website "What is Drought?"

7.1 DROUGHT OF RECORD

The definition of Drought of Record is "the period of time when historical records indicate that natural hydrological conditions would have provided the least amount of water supply," per TAC Title 31, Part 10, Chapter 357, Subchapter A, Rule 357.10.

Hydrological droughts can be assessed using the Texas Commission on Environmental Quality (TCEQ) Water Availability Model (WAM); this assessment is directly associated with the use of the WAM model to determine firm availability of surface water for the Regional Water Plan.

Another indicator commonly used by federal and state agencies to characterize drought severity is the Palmer Drought Severity Index (PDSI). The PDSI is an estimate of soil moisture conditions calculated based on precipitation and temperature. The PDSI classifies soil moisture on a scale ranging from

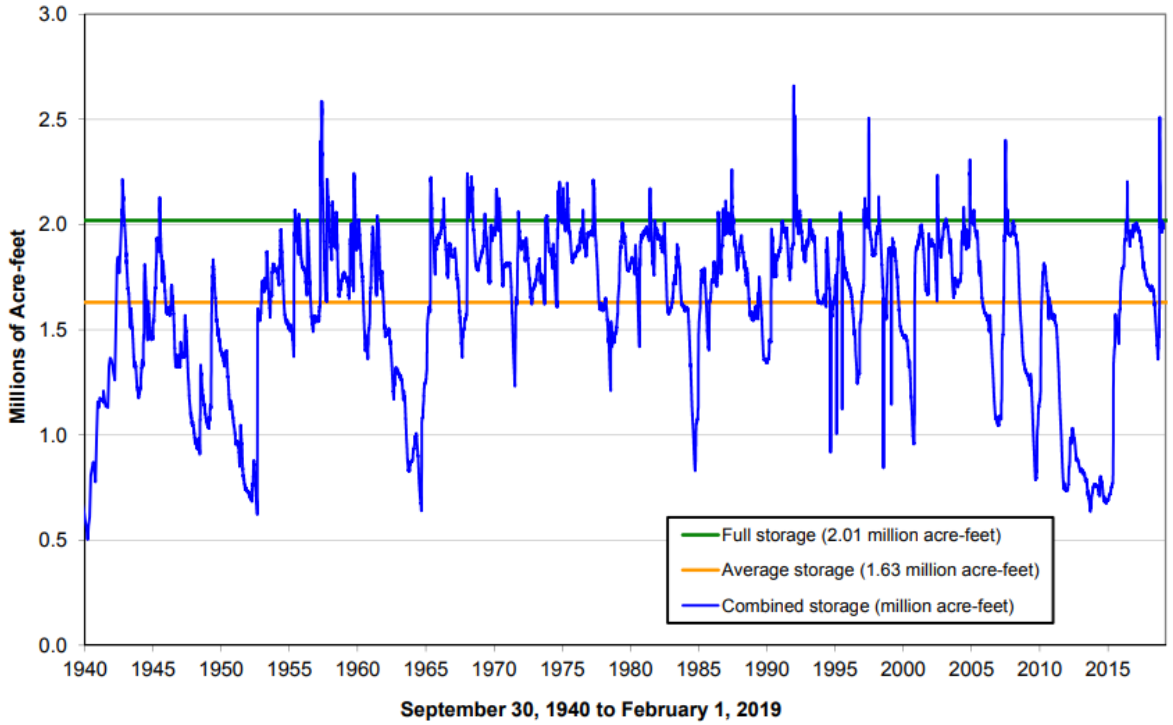
approximately -6.0 to 6.0, with values of approximately -0.49 to 0.49 reflecting normal conditions and -4.0 or lower representing extreme drought.

7.1.1 Drought of Record

Statewide, the period typically considered the Drought of Record occurred in the 1950s and had significant hydrologic and economic consequences throughout the State. Within the Lower Colorado Regional Planning Area, the Drought of Record is most specifically associated with the hydrologic conditions of the Highland Lakes. The current Drought of Record for the Highland Lakes began in October 2007 and lasted through December 2016. Modeling efforts confirm that 2011 represents the worst single-year drought on record, or the dry year of the Colorado River basin. The previous Drought of Record began in May 1947 and lasted through April 1957. During this time, the Highland Lakes reached a lowest combined storage of 621,221 acre-feet on September 9, 1952.

Due to schedule requirements of the current regional plan development process, the planning group was able to extend the hydrologic data set used for the plan's surface water availability analysis through the end of 2016. However, since the full and final 2017 data sets were not yet available, analysis of any additional drought data through 2017 and beyond will need to be conducted for future planning analyses. The 5-year frequency of the regional planning cycles provides the opportunity on a regular basis to update the analyses that go into developing the plan. The 2007 to 2016 Drought of Record resulted in persistently low lake levels from 2011 to mid-2015. As of December 2019, lake storage is at 87%. *Figure 7.2* shows how the combined storage in the last several years compares to historical storage levels dating back to 1940, when the lakes were built.

Figure 7.2: Total Combined Storage Levels of Lakes Buchanan and Travis



7.2 CURRENT DROUGHT PREPARATIONS AND RESPONSE

The TCEQ, in accordance with the Texas Administrative Code (TAC), requires all wholesale public water suppliers, retail public supplier, and irrigation districts to prepare and submit Drought Contingency Plans (DCPs) meeting the requirements of 30 TAC Chapter§288(b) and to update these plans at least every five years.

While drought may be considered an emergency, it is often a slowly developing situation that provides increasing signs that water supplies could become scarce. By contrast, some supply deficiencies, such as equipment or pipeline failures, happen on shorter time intervals and provide little or no advance warning. System limitations that result from unexpected events including equipment failures, water supply contaminations, and other sudden decrease of supply should be planned for just as other emergency events. It is also important for communities to be aware that loss of supply may be a result of intentional damage or attack on a system.

The recent drought provided many water systems in the region with the opportunity to experience implementation of their Drought Contingency Plans. That real-world experience has helped shaped updates to their Drought Continency Plans. Outdoor watering restrictions are a common method of reducing water use and are now being suggested as voluntary measures for several months a year in various water systems in the region. This effort prepares customers for anticipated water restrictions during periods of drought.

The Drought Contingency Plans show that a variety of triggers have been specified by the different water suppliers as initiators of water shortage conditions. These triggers include a threshold level of total water use, well levels, and conditions caused by mechanical failure of water service systems. Strategies planned for dealing with drought conditions included restrictions on water use for irrigation, vehicle washing, and construction. The amount of water saved for each drought response conditions varied by community.

Appendix 7A provides the drought triggers for severe and critical/emergency water shortages for water users in the region, as available from the Drought Contingency Plans. The water reduction goals for the triggers are also included.

7.3 EXISTING AND POTENTIAL EMERGENCY INTERCONNECTS

The Texas Administrative Code (31 TAC 357.42(d)) states that the regional water planning groups will collect confidential information on infrastructure and submit the information to the Executive Administrator of the Texas Water Development Board in accordance with the guidance provided.

The guidance provided by the Texas Water Development Board states that "RWPGs shall collect and summarize information on existing major water infrastructure facilities that may be used for emergency interconnects and provide this information to the EA confidentially and separately from the final adopted RWP…This information may be collected in a tabular format that shows the potential user(s) of the interconnect(s), the potential supplier(s), the estimated potential volume of supply that could be provided via the interconnect (including the source name), and a general description of the facility/infrastructure and its location."

During the previous planning cycle, the Region K Drought Committee determined that a low number of responses would be expected if the planning group sent a letter requesting emergency interconnect data. Instead of a letter/survey, the Region K consultant submitted an information request to the TCEQ for

information on emergency interconnects within the counties in Region K. After repeating the process for the new cycle, the TCEQ provided an Excel spreadsheet containing data on the potential user of the interconnect, the potential supplier, source information, and contact information. *Table 7.1* shows emergency interconnects for 19 WUGs within Region K; although the submitted information included 38 existing and potential interconnects, some of the sellers or recipients were private or non-WUGs and are not included in the table. Information on existing and potential interconnect supply capacity and details related to location were not available. The confidential information was provided electronically, along with a transmittal letter, to the Executive Administrator prior to March 1, 2020.

Table 7.1: Existing and Potential Emergency Interconnects

Water User Group Recipient	Water User Group Seller	Supply Source
La Grange	Fayette WSC	GW
Fayette County WCID Monument Hill	Fayette WSC	GW
Fayette WSC	La Grange	GW
Fayette WSC	Fayette County WCID Monument Hill	GW
Manor	Austin	SW
Lakeway MUD	Travis County WCID 17	SW
Travis County WCID 17	Lakeway MUD	SW
Hurst Creek MUD	Lakeway MUD	SW
Hurst Creek MUD	Travis County WCID 17	SW
Travis County WCID 20	Travis County MUD 4	SW
Travis County WCID 20	West Travis County Public Utility Agency	SW
West Travis County Public Utility Agency	Travis County WCID 17	SW
Travis County MUD 4	Travis County WCID 20	SW
Georgetown	Round Rock	SW
Georgetown	Jonah Water SUD (Region G)	SW
Leander	Cedar Park	SW
Jonah Water SUD (Region G)	Georgetown	SW
Brushy Creek MUD	Round Rock	SW
Williamson County WSID 3	Round Rock	SW

Additionally, available DCPs for entities within the Region were reviewed to identify establishment or activation of interconnects as a drought response. The following entities have Drought Contingency Plans that mention the possibility of establishing or activating emergency interconnects as a drought response: Brookesmith SUD, Creedmoor-Maha WSC, Deer Creek Ranch, Fayette County WCID Monument Hill, Hays, Horseshoe Bay, Hurst Creek MUD, Lago Vista, Lakeway MUD, Leander, Travis County MUD 10, and Travis County WCID 17.

7.4 EMERGENCY RESPONSES TO LOCAL DROUGHT CONDITIONS OR LOSS OF MUNICIPAL SUPPLY

Emergency preparedness is of particular importance for entities that rely on a sole-source of water for supply purposes. In instances where water systems rely exclusively on a single source, the State of Texas has identified a need to develop emergency preparedness protocols should a source's availability be significantly and suddenly reduced for any reason, including drought, equipment failure, or accidental or deliberate source contamination.

7.4.1 WUGs with 2010 Population less than 7,500 and with a sole-source of water[1]

The Texas Administrative Code (31 TAC §357.42) requires that regional planning groups evaluate potential emergency responses to drought conditions or loss of existing water supplies for municipal water user groups with a population of less than 7,500 and with a sole-source of water, as well as all county-other water user groups. For these emergency responses to local drought conditions or loss of municipal supply, the WUGs were assumed to have 180 days or less of remaining supply.

A list of identified single-source municipal Water User Groups with population less than 7,500 and with a sole-source of water is provided in *Table 7.2* on the next page. The table also lists potential emergency water supply options for each Water User Group.

7.4.2 County-Other WUGs

Table 7.3 on the following pages provides the list of County-Other Water User Groups in Region K, and their potential emergency water supply options. For these emergency responses to local drought conditions or loss of municipal supply, the WUGs were assumed to have 180 days or less of remaining supply.

[1] Information in this subsection was obtained from the Texas Administrative Code, specifically TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2.0

Table 7.2: Municipal Region K WUGs under 7,500 in population and with a sole-source of water

Entity					Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	County	2020 Population	2020 Demand (AF/ year)	Supply Source	Release from upstream reservoir	curtailment of upstream/downstream water rights	local groundwater well	brackish groundwater limited treatment	brackish groundwater desalination	emergency interconnect	other named local supply	trucked-in water	Type of infrastructure required (numerical values explained on pg 7-9)	Entity providing supply (letter codes explained on pg 7-9)	Other local entities required to participate/ coordinate	Emergency agreements/ arrangements already in place?	other
Barton Creek West WSC	Travis	1,337	436	Highland Lakes						X		X	1	A		unk	
Barton Creek WSC	Travis	702	524	Highland Lakes			X					X	2				
Boling MWD	Wharton	855	105	Gulf Coast Aquifer			X					X	2				
Briarcliff	Travis	2,009	300	Highland Lakes								X					
Caney Creek MUD of Matagorda County	Matagorda	2,088	252	Gulf Coast Aquifer			X					X	2				
Cimarron Park Water Company	Hays	2,115	244	Edwards-BFZ			X					X	2				
Columbus	Colorado	3,832	1,134	Gulf Coast Aquifer	X		X					X	2,3				
Cottonwood Creek MUD 1	Travis	1,447	95	Carrizo-Wilcox			X					X	2				
Cottonwood Shores	Burnet	1,395	245	Highland Lakes			X			X		X	1,2	B		unk	
Deer Creek Ranch Water	Travis/ Hays	887	69	Highland Lakes			X					X	2				
Eagle Lake	Colorado	3,803	521	Gulf Coast Aquifer			X					X	2				
Fayette County WCID Monument Hill	Fayette	760	184	Gulf Coast Aquifer			X			X		X	2	P			
Flatonia	Fayette	1,658	346	Yegua-Jackson			X					X	2				

Entity					Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	County	2020 Population	2020 Demand (AF/ year)	Supply Source	Release from upstream reservoir	curtailment of upstream/downstream water rights	local groundwater well	brackish groundwater limited treatment	brackish groundwater desalination	emergency interconnect	other named local supply	trucked-in water	Type of infrastructure required (numerical values explained on pg 7-9)	Entity providing supply (letter codes explained on pg 7-9)	Other local entities required to participate/ coordinate	Emergency agreements/ arrangements already in place?	other
Garfield WSC	Travis	1,772	199	Trinity Aquifer			X					X	2				
Granite Shoals	Burnet	5,401	578	Highland Lakes			X			X		X	1,2	C		unk	
Hays	Hays	1,222	183	Edwards-BFZ			X			X		X	1	O		unk	
Hays County WCID 1	Hays	3,647	821	Highland Lakes			X					X	2				
Hays County WCID 2	Hays	1,224	285	Highland Lakes			X					X	2				
Hornsby Bend Utility	Travis	7,066	594	Carrizo-Wilcox			X					X	2				
Horseshoe Bay	Burnet/ Llano	6,125	2,268	Highland Lakes/Direct Reuse			X			X		X	1,2	D		unk	
Hurst Creek MUD	Travis	3,095	1,718	Highland Lakes						X		X		F		unk	
Jonestown	Travis	3,948	675	Highland Lakes						X		X	1	E		unk	
Kelly Lane WCID 1	Travis	1,693	322	Trinity Aquifer			X					X	2				
La Grange	Fayette	5,478	957	Yegua-Jackson	X		X			X		X	2,3	P		unk	
Llano	Llano	3,565	862	Llano Lake		X						X					
Loop 360 WSC	Travis	2,086	1,225	Highland Lakes								X					
Markham MUD	Matagorda	1,013	97	Gulf Coast Aquifer			X					X	2				
Matagorda County WCID 6	Matagorda	1,099	113	Gulf Coast Aquifer			X					X	2				
Matagorda Waste Disposal & WSC	Matagorda	691	127	Gulf Coast Aquifer			X					X	2				

Entity					Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	County	2020 Population	2020 Demand (AF/ year)	Supply Source	Release from upstream reservoir	curtailment of upstream/downstream water rights	local groundwater well	brackish groundwater limited treatment	brackish groundwater desalination	emergency interconnect	other named local supply	trucked-in water	Type of infrastructure required (numerical values explained on pg 7-9)	Entity providing supply (letter codes explained on pg 7-9)	Other local entities required to participate/ coordinate	Emergency agreements/ arrangements already in place?	other
Meadowlakes	Burnet	2,540	852	Colorado Run-of-River			X			X		X	1,2	J		unk	
North San Saba WSC	San Saba	647	185	Ellenburger-San Saba			X					X	2				
Palacios	Matagorda	5,019	615	Gulf Coast Aquifer			X					X	2				
Rollingwood	Travis	1,421	383	Austin Water Contract			X					X	2				
Rough Hollow in Travis County	Travis	2,767	589	Highland Lakes			X					X	2				
Senna Hills MUD	Travis	1,219	420	Highland Lakes			X			X		X	2	M		unk	
Shady Hollow MUD	Travis	4,366	793	Austin Water Contract			X					X	2				
Smithville	Bastrop	4,797	821	Carrizo-Wilcox	X		X					X	2,3				
Sweetwater Community	Travis	2,760	408	Highland Lakes			X					X	2				
Travis County MUD 10	Travis	348	74	Highland Lakes			X			X		X	2	unk		unk	
Travis County MUD 14	Travis	2,015	172	Carrizo-Wilcox			X					X	2				
Travis County MUD 4	Travis	2,446	1,500	Highland Lakes						X		X		K		unk	
Travis County WCID 18	Travis	6,344	1,070	Highland Lakes			X			X		X	1,2	K		unk	
Travis County WCID 19	Travis	682	449	Highland Lakes						X		X		K		unk	

Entity					Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	County	2020 Population	2020 Demand (AF/ year)	Supply Source	Release from upstream reservoir	curtailment of upstream/downstream water rights	local groundwater well	brackish groundwater limited treatment	brackish groundwater desalination	emergency interconnect	other named local supply	trucked-in water	Type of infrastructure required (numerical values explained on pg 7-9)	Entity providing supply (letter codes explained on pg 7-9)	Other local entities required to participate/ coordinate	Emergency agreements/ arrangements already in place?	other
Travis County WCID 20	Travis	1,130	584	Highland Lakes						X		X	1	A		unk	
Travis County WCID Point Venture	Travis	1,036	255	Highland Lakes			X			X		X	2	N		unk	
Weimar	Colorado	2,164	496	Gulf Coast Aquifer	X		X					X	2,3				
Wharton County WCID 2	Wharton	2,235	456	Gulf Coast Aquifer			X					X	2				

Type of Infrastructure Required:

1. Transmission pipeline and pump station
2. Water Well
3. River intake, transmission pipeline, and surface water treatment plant

Entities potentially providing emergency interconnect water

A. Travis County MUD 4
B. Horseshoe Bay
C. Sunrise Beach
D. Cottonwood Shores
E. Lago Vista
F. Lakeway MUD or Travis County WCID 17
G. Jonestown
H. Austin
I. Meadowlakes
J. Marble Falls
K. Travis County WCID 20
L. West Travis County PUA
M. Hurst Creek MUD
N. Travis County MUD 1
O. Buda
P. Fayette WSC West

Table 7.3: County-Other WUGs in Region K

Entity					Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	County	2020 Population	2020 Demand (AF/year)	Supply Source(s)	Release from upstream reservoir	curtailment of upstream/downstream water rights	local groundwater well	brackish groundwater limited treatment	brackish groundwater desalination	emergency interconnect	other named local supply	trucked-in water	Type of infrastructure required	Entity providing supply	Other local entities required to participate/ coordinate	Emergency agreements/ arrangements already in place?	other
County-Other	Bastrop	7,794	1,418	Carrizo Wilcox / Highland Lakes			X			X		X	well	Aqua WSC			
County-Other	Blanco	8,141	1,008	Ellenburger-San Saba Aquifer / Hickory / Trinity / Canyon Lake			X					X	well				
County-Other	Burnet	22,242	3,414	Ellenburger-San Saba / Hickory / Marble Falls Aquifer / Other Alluvium / Trinity / Highland Lakes			X					X	well				
County-Other	Colorado	11,810	1,453	Gulf Coast Aquifer			X					X	well				

Entity					Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	County	2020 Population	2020 Demand (AF/year)	Supply Source(s)	Release from upstream reservoir	curtailment of upstream/downstream water rights	local groundwater well	brackish groundwater limited treatment	brackish groundwater desalination	emergency interconnect	other named local supply	trucked-in water	Type of infrastructure required	Entity providing supply	Other local entities required to participate/ coordinate	Emergency agreements/ arrangements already in place?	other
County-Other	Fayette	9,532	1,238	Gulf Coast Aquifer / Fayette WSC / Sparta / Yegua-Jackson / Highland Lakes			X					X	well				
County-Other	Gillespie	14,739	1,735	Edwards-Trinity Plateau / Ellenburger-San Saba / Hickory / Highland Lakes			X					X	well				
County-Other	Hays (p)	10,986	1,351	Edwards-BFZ / Trinity / Canyon Lake			X					X	well				
County-Other	Llano	2,455	260	Ellenburger-San Saba / Hickory / Other-alluvium / Highland Lakes			X			X		X	well	Horse-shoe Bay			
County-Other	Matagorda	9,928	1,036	Gulf Coast Aquifer			X					X	well				
County-Other	Mills	2,676	343	Ellenburger-San Saba / Trinity			X					X	well				

Entity					Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	County	2020 Population	2020 Demand (AF/year)	Supply Source(s)	Release from upstream reservoir	curtailment of upstream/downstream water rights	local groundwater well	brackish groundwater limited treatment	brackish groundwater desalination	emergency interconnect	other named local supply	trucked-in water	Type of infrastructure required	Entity providing supply	Other local entities required to participate/ coordinate	Emergency agreements/ arrangements already in place?	other
County-Other	San Saba	1,403	218	Ellenburger-San Saba / Hickory / Marble Falls / Highland Lakes			X					X	well				
County-Other	Travis	6,206	870	Carrizo-Wilcox / Other Aquifer / Trinity / Highland Lakes			X			X		X	well	Lakeway MUD			
County-Other	Wharton (p)	14,640	2,385	Gulf Coast			X					X	well				
County-Other	Williamson (p)	434	67	Colorado Run-of-River, Highland Lakes			X					X	well				

7.5 REGION-SPECIFIC DROUGHT RESPONSE RECOMMENDATIONS AND MODEL DROUGHT CONTINGENCY PLANS

7.5.1 Surface Water

The Highland Lakes and Colorado River provide substantial water supply to the Lower Colorado Region, and almost exclusively provide the primary source water for a number of Central Texas municipal utilities, including Austin (Austin Water). The Lower Colorado River Authority manages the Highland Lakes and closely monitors total combined storage in the lakes and establishes drought stages based on combined storage levels. *Table 7.4* below summarizes recommended drought stage triggers and actions as identified in the LCRA's DCP for Firm Water Customers. LCRA requires all customers to submit drought contingency plans (DCPs) stating the specific combined storage triggers located in its water management plan and requires customers to update their plans every five years. Austin also follows Drought Contingency Plan triggers based on the combined storage levels in the Highland Lakes, as well as other triggers based on peak day system demand.

Table 7.4: Summary of LCRA Recommended Drought Triggers and Responses

Drought Stage	Trigger	Action
Stage 1	Combined Storage less than 1.4 million acre-feet and interruptible stored water is being curtailed	5% reduction by customers
Stage 2	Combined Storage less than 900,000 acre-feet and interruptible stored water is being curtailed	10-20% reduction by customers LCRA will implement an aggressive public information campaign
Stage 3	LCRA Board of Directors declares a Drought Worse than the Drought of Record	Minimum 20% reduction by customers and encouragement to use alternative supplies All uses of interruptible stored water will be cut off.
Stage 4	LCRA Board determines that conditions constitute a water supply emergency	Determined by LCRA Board. Encourage customers to use alternative water supplies

Based on LCRA Drought Contingency Plan for Firm Water Customers, February 2019.

The Lower Colorado Regional Water Planning Group (LCRWPG) acknowledges that the Major Water Providers in Region K have extensive knowledge regarding surface water sources in the region, and they may play a leadership role in developing appropriate drought response actions for themselves and their customers. Please see *Appendix 7A* for severe and critical/emergency triggers and responses associated with the surface water customers of the Major Water Providers in the region. One area the LCRWPG feels could potentially be improved upon is the coordination and uniformity of Drought Stage levels for all users of a particular source. It has been acknowledged that there can be some confusion when two

water users of the same water source are at different Drought Stage levels, even if they are implementing similar drought responses. No unnecessary or counterproductive variations in specific drought response strategies among user groups in Region K were identified that may confuse the public or otherwise impede drought response efforts.

7.5.2 Groundwater

A large portion of the region uses groundwater as their main source of supply. Throughout the region, the Drought Contingency Plans for groundwater users are developed specifically to their use and location. Aquifer characteristics can vary across the region and it can be difficult to require the same triggers for all users of a particular groundwater source that covers several counties. The LCRWPG acknowledges that the municipalities and water utilities that rely upon groundwater should have the best knowledge to develop their Drought Contingency Plan triggers and responses using their specialized knowledge. Please see *Appendix 7A* for severe and critical/emergency triggers and responses associated with groundwater users in the region. Even so, the LCRWPG encourages ongoing coordination between groundwater users, Groundwater Conservation Districts, and the Groundwater Management Areas to monitor local conditions for necessary modifications to the Drought Contingency Plans.

Several resources are available to aid in drought monitoring. The following sources provide information related to drought that groundwater suppliers, Groundwater Conservation Districts, and Groundwater Management Areas can all use to monitor drought conditions and help aid in making decisions related to triggers and drought response.

Texas Drought Preparedness Council:
http://www.txdps.state.tx.us/dem/CouncilsCommittees/droughtCouncil/stateDroughtPrepCouncil.htm

Palmer Drought Severity Index:
https://www.drought.gov/drought/data/category/pdsi-palmer-drought-severity-index

TCEQ drought information:
https://www.tceq.texas.gov/response/drought

7.5.3 Region-Specific Model-Drought Contingency Plans

Model drought contingency plans addressing the requirements of 30 TAC Chapter §288(b) were developed for Region K and are available in *Appendix 7B*. Model plans were developed for wholesale water providers, retail public water suppliers, irrigation water users, and steam-electric water users, based on the recommendations of the Drought Preparedness Council this planning cycle. The recommendation was to include region-specific model drought contingency plans for any water use category that uses 10 percent or more of the region's water demand in any given decade. Other than for steam-electric, these model plans were largely based on templates provided by the TCEQ with modifications made to acknowledge coordination with the Lower Colorado Regional Water Planning Group and to make the template more specific to the region. The TCEQ does not have templates for steam-electric water users, so a model plan was developed using a Drought Contingency Plan from a steam-electric facility in the region as an example.

7.6 DROUGHT MANAGEMENT WATER MANAGEMENT STRATEGIES

7.6.1 Potentially Feasible Drought Management WMS Considered

The Lower Colorado Regional Water Planning Group considers drought management an integral component of meeting the future water needs of the Region. Although drought management measures are often temporary mechanisms to reduce water consumption and drought impact, it is equally evident that some drought management measures may develop into permanent shifts or reductions in water use practices in the region. The Lower Colorado River Authority and Austin (Austin Water), as well as other smaller water providers throughout the Region, have implemented drought contingency measures largely since 2011. These measures and the subsequent awareness for mindful water use among citizens have become an important part of managing water supplies throughout the Region, particularly in the Highland Lakes.

Drought management as a water management strategy was considered for each municipal WUG, regardless of whether they had water needs. In general, the following guidelines were utilized in considering drought management as a municipal WUG strategy:

- For municipal WUGs with GPCD equal to or less than 100 gallons per capita daily, a 5% demand reduction was recommended.
- For municipal WUGs with GPCD greater than 100 gallons per capita daily, a 20% demand reduction was recommended.
- The demand reduction percentages listed above were modified based on available Drought Contingency Plans for individual WUGs to reflect the utilities' identified goal for reduction during severe drought.
- Consideration was given whether water use restrictions were in place in 2011.

Drought management was also considered as a potentially feasible strategy for several irrigation water user groups with water needs. Irrigation in Colorado, Matagorda, and Wharton counties has severe shortages throughout the planning period, and drought management may be a necessary strategy to implement. Rice farming is prominent in these three counties, and generally involves growing both a first and second (ratoon) crop. Drought management would assume that most rice farmers would grow only a first crop and not a second crop. In addition, drought management is recommended for irrigation in Mills County (Brazos Basin.) There are limited supplies of water in that area of the county, and it is assumed that the water use by agriculture would be reduced based on drought conditions.

7.6.2 Recommended Drought Management WMS

Drought management was recommended as a water management strategy for nearly all municipal WUGs that have Region K as their primary region, and for the irrigation WUGs mentioned in *Section 7.6.1*. Triggers associated with these recommended strategies include those referenced in the LCRA Water Management Plan and the individual utility drought contingency plans. The Palmer Drought Severity Index is another resource that could be used for determining triggers for these strategies. Please refer to *Chapter 5* for additional details.

Total water savings for municipal and irrigation-related drought management strategies within the Region reach approximately 83,000 ac-ft/yr by the year 2070, with the largest portion of that coming from municipal utilities.

Other recommended drought-related strategies that may be implemented specifically to help manage extreme drought conditions and extend water supplies include two strategies for Austin (Austin Water). The two Austin strategies include the Indirect Potable Reuse through Lady Bird Lake strategy and the Lake Austin Operations strategy, both discussed more fully, including drought triggers, in *Chapter 5*. In addition, Llano has a recommended strategy for purchasing water that would need to be trucked in. It is acknowledged that this strategy would only be implemented under extreme drought conditions where senior downstream water users divert all of their authorized water. This strategy is discussed in more detail in *Chapter 5*.

7.6.3 Alternative Drought Management WMS

There is one alternative strategy for LCRA that would likely be implemented only during times of drought. This is the Supplement Bay and Estuary Inflows with Brackish Groundwater strategy, discussed in *Chapter 5*.

7.7 OTHER DROUGHT RECOMMENDATIONS

Housed within the Office of Emergency Management within the Texas Department of Public Safety, the Drought Preparedness Council was authorized and established by the 76th legislature (HB-2660) in 1999, subsequent to the establishment of the Drought Monitoring and Response Committee (75th legislature, SB1.) The Council is composed of representatives of state agencies and appointees by the governor. As defined by the Texas Water Code, the Council is responsible for the monitoring and assessing drought conditions and advising elected and planning officials about drought-related topics.

During the 2021 cycle, the Lower Colorado Regional Water Planning Group (LCRWPG) reviewed and considered recommendations from the Drought Preparedness Council with regards to developing region-specific model drought contingency plans for water use categories in the region with more than 10 percent of water demands, as well as following the outline template provided by the Texas Water Development Board, making an effort to fully address the assessment of current drought preparations, as well as planned responses to local drought conditions or loss of municipal supply. The LCRWPG recommended conservation and drought management as water management strategies for municipal water user groups, which will aid in buffering any unanticipated population growth.

The Lower Colorado Regional Water Planning Group recognizes that the most valuable contingency will be completed at a local level. Further guidance and regional cooperation would be valuable in producing meaningful plans with clear trigger definition and implementation guidance. Communication of these between state, regional, and local levels would also further facilitate necessary emergency responses when drought measures need to be implemented. The following recommendations are made to support development and implementation of meaningful Drought Contingency Plans during times of drought:

- Uniform consistency of drought stage definition among users of the same source of water.

- Coordination by water providers with local Groundwater Conservation Districts, in order to consider more uniform triggers and responses from a particular source within the district, as applicable.

- Coordination with wholesale providers regarding drought conditions and potential implementation of drought stages.

- Communication with customers upon reaching a voluntary drought stage level to raise public awareness and facilitate potential implementation of drought measures.

- Communication with customers upon reaching a mandatory drought stage level to reinforce the importance of compliance with mandatory drought measures and emphasize heightened need for public awareness.

APPENDIX 7A

EXISTING DROUGHT TRIGGERS AND REDUCTION GOALS

THIS PAGE LEFT INTENTIONALLY BLANK

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
AQUA WSC	BASTROP	CARRIZO-WILCOX AQUIFER	1. Major water line breaks, or pump or system failures occur, which cause an unprecedented loss of capability to provide water service; or 2. Natural or man-made contamination of the water supply source(s).	Minimum 20% reduction in daily demand sufficient to meet basic water needs for public health and safety.	1. Major water line breaks, or pump or system failures occur, which cause an unprecedented loss of capability to provide water service; or 2. Natural or man-made contamination of the water supply source(s).	Minimum 25% reduction in daily demand sufficient to meet basic water needs for public health and safety.
AQUA WSC	FAYETTE	CARRIZO-WILCOX AQUIFER	1. Major water line breaks, or pump or system failures occur, which cause an unprecedented loss of capability to provide water service; or 2. Natural or man-made contamination of the water supply source(s).	Minimum 20% reduction in daily demand sufficient to meet basic water needs for public health and safety.	1. Major water line breaks, or pump or system failures occur, which cause an unprecedented loss of capability to provide water service; or 2. Natural or man-made contamination of the water supply source(s).	Minimum 25% reduction in daily demand sufficient to meet basic water needs for public health and safety.
AQUA WSC	TRAVIS	CARRIZO-WILCOX AQUIFER	1. Major water line breaks, or pump or system failures occur, which cause an unprecedented loss of capability to provide water service; or 2. Natural or man-made contamination of the water supply source(s).	Minimum 20% reduction in daily demand sufficient to meet basic water needs for public health and safety.	1. Major water line breaks, or pump or system failures occur, which cause an unprecedented loss of capability to provide water service; or 2. Natural or man-made contamination of the water supply source(s).	Minimum 25% reduction in daily demand sufficient to meet basic water needs for public health and safety.
AUSTIN	HAYS	HIGHLAND LAKES and COLORADO RUN-OF-RIVER	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.	As determined by City Manager, system outage, equipment failure, contamination of water source or other emergencies.	Reduce water use to levels deemed necessary.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
AUSTIN	TRAVIS	HIGHLAND LAKES and COLORADO RUN-OF-RIVER	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.	As determined by City Manager, system outage, equipment failure, contamination of water source or other emergencies.	Reduce water use to levels deemed necessary
AUSTIN	WILLIAMSON	HIGHLAND LAKES and COLORADO RUN-OF-RIVER	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.	As determined by City Manager, system outage, equipment failure, contamination of water source or other emergencies.	Reduce water use to levels deemed necessary.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
BARTON CREEK WEST WSC	TRAVIS	HIGHLAND LAKES	Either of the following criteria is met: a. For surface water supply systems, when total daily water demand equals or exceeds 85% of: a. the total design capacity of a WTCPUA water treatment plant for three consecutive days; or b. The LCRA Board determines a drought worse than the drought of record.	Minimum 20% reduction in use	Include, but are not limited to, the following: a. Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service, b. Contamination of the water supply source, c. Any other emergency water supply or demand conditions that the WTCPUA Water Services executive manager, or designee, determines to constitute a water supply emergency more severe than that contemplated in the triggers contained in the LCRA Water Management Plan	As determined by the WTCPUA Board.
BARTON CREEK WSC	TRAVIS	HIGHLAND LAKES	The District will declare that a severe water shortage condition exists when average daily water consumption reaches 95% of production/distribution capacity for a period of 3 days.	25% reduction in demand	The District will declare that an emergency water shortage condition exists when the Board of Directors determine that Stage 4 implementation is necessary pursuant to requirements specified in the District's wholesale water purchase contract with the Lower Colorado River Authority or when the Board of Directors declares that Stage 4 implementation is necessary due to a system outage or catastrophic equipment failure.	Additional pro-rata curtailment in total water use specified by LCRA.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
BASTROP	BASTROP	OTHER AQUIFER	Daily water demand exceeds 95% of total production capability for 3 consecutive days and that response measures required by Stage 2 have been implemented, and City Manager determines demand will not drop below without conservation by customers.	Achieve reduction in daily demand to 95% or less of the Total Production Capability.	1. Major water line breaks, or pump or system failures occur, which cause a substantially significant threat of a loss of capability to provide water service; or 2. Natural or man-made contamination of the water supply source(s); or 3. Daily water demand equals 100% of the Total Production Capability for three consecutive days.	Achieve reduction in daily demand sufficient to assure the water system for the protection of public health and safety until the Stage 4 Trigger criteria(s) can be abated.
BASTROP COUNTY WCID 2	BASTROP	CARRIZO-WILCOX AQUIFER	NA	NA	NA	NA
BAY CITY	MATAGORDA	GULF COAST AQUIFER	Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this Plan when the total daily water demand equals or exceeds 90% of the City of Bay City's water wells pumping capacity for 7 consecutive days.	20% reduction in demand	a. Major water line breaks, pump or system failures occur which cause unprecedented loss of capability to provide water service; or maintain an adequate level in the storage facilities b. Natural or man-made contamination of the water supply source(s).	40% reduction in demand
BERTRAM	BURNET	ELLENBURGER-SAN SABA	(i) The static water level in city Well Number 9 (Felps Well) is 75 feet or greater below the surface of the ground. (ii) The total daily water demand equals or exceeds 550,000 gallons for four (4) consecutive days or 600,000 gallons on a single day. (iii) Continually falling treated water reservoir levels do not refill above 60% overnight.	11% reduction from either or both the 550,000 gallon daily water demand and the 600,000 gallon single day demand.	(i) When the static water level in city Well Number 9 (Felps Well) is 85 feet or greater below the surface of the ground. (ii) When total daily water demand equals or exceeds 575,000 gallons for four (4) consecutive days or 625,000 gallons on a single day. (iii) Continually falling treated water reservoir levels do not refill above 40% overnight.	Achieve a 20% reduction from either or both the 575,000 gallon daily water demand and the 625,000 gallon single day demand.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
BLANCO	BLANCO	BLANCO LAKE, CANYON LAKE, and TRINITY AQUIFER	Water System Demand has reached 85% of the available water supply capacity for 3 consecutive days.	30% reduction	The water system demand has reached 95% of the available water supply capacity for 3 consecutive days; or if less than 90 days of storage exists in the cities Blanco River Reservoirs.	40% reduction
Blanco-Pedernales GCD	BLANCO	Several aquifers in Blanco County	District General Manager monitors conditions and considers City of Blanco and Johnson City declarations			
BOLING MWD	WHARTON	GULF COAST AQUIFER	NA	NA	NA	NA
BRIARCLIFF	TRAVIS	HIGHLAND LAKES	Combined lake storage falls below 600,000 AF or a drought worse than the drought of record is declared.	20% reduction in water use	Any other emergency water supply or demand conditions that LCRA determines to constitute a water supply emergency more severe that that contemplated in the triggers contained in the LCRA Water Management Plan, including a drought more severe than the drought of record. Water use reduction targets shall be determined by LCRA for its Firm Water Customers.	Water Supply Reduction Target: As determined by the LCRA Board.
BROOKESMITH SUD	MILLS	BROWNWOOD LAKE	a. Supply-Based Triggers: Wholesale supplier's drought Stage III b. Demand- or Capacity-Based Triggers: Total daily demand equals or exceeds 3.7 mgd for 3 consecutive days or 4 mgd on a single day. c. Production or distribution limitations.	10% reduction in demand	a. Supply-Based Triggers: Wholesale supplier's drought Stage IV or supply contamination. b. Demand- or Capacity-Based Triggers: Total daily demand equals or exceeds 4 mgd for 3 consecutive days. c. Production or distribution limitations: When imminent or actual failure of a major component of the system which would cause an immediate health or safety hazard. d. System outage.	25% reduction in demand

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
BS/EACD		EDWARDS-BFZ and TRINITY AQUIFER	Monitored by BS/EACD, Critical Stage using Barton Spring Flow less than or equal to 38 cfs, Lovelady Well depth greater than or equal 462.7 msl	20% curtailment	Monitored by BS/EACD, Critical Stage using Barton Spring Flow less than or equal to 20 cfs, Lovelady Well depth greater than or equal 457.1 msl	30% curtailment
BUDA	HAYS	EDWARDS-BFZ and CANYON LAKE	One of the following conditions occur: 1. BSEACD declares an exceptional stage in accordance with its Drought Contingency Plan; 2. GBRA declares Stage III drought in accordance with their Drought Contingency Plan; 3. Daily demand reaches 85% of available supply, based on the City's current water supply resulting from any curtailments implemented by water suppliers, for five consecutive days; or 4. A water quality, supply, distribution system or other emergency exists as determined by the City Manager.	30% reduction in use	One of the following conditions occur: 1. BSEACD declares an emergency response stage in accordance with its Drought Contingency Plan; 2. GBRA declares Stage IV drought in accordance with their Drought Contingency Plan; 3. Daily demand reaches 90% of available supply, based on the City's current water supply resulting from any curtailments implemented by water suppliers, for five consecutive days; or 4. A water quality, supply, distribution system or other emergency exists as determined by the City Manager.	40% reduction in use

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
BURNET	BURNET	ELLENBURGER-SAN SABA	(i) Total daily water demand equals or exceeds 90% of the total system distribution or treatment capacity for three consecutive days; (ii) Any other system demand or supply factors that, in the opinion of the City Manager, could jeopardize the health, safety and welfare of the public; (iii) Weather conditions have occurred and/or are predicted to occur which could jeopardize the long-term sustainability of the City's water apply; (iv) The declaration of a Drought Worse than the Drought of Record by the Lower Colorado River Authority.	During this stage, the target reduction goal is a minimum of 20%.	(i) Customers shall be required to comply with the requirements and restrictions for Stage 4 of this Plan when the City Manager declares it is in the best interest of the City due to emergency situations, or system demand/supply factors that could jeopardize the health, safety and welfare of the public. (ii) Weather conditions have occurred and/or are predicted to occur which could jeopardize the long-term sustainability of the City's water supply; (iii) The declaration of a Drought Worse than the Drought of Record by the Lower Colorado River Authority.	During this stage, the target reduction goal is a minimum of 30%.
CANEY CREEK MUD OF MATAGORDA COUNTY	MATAGORDA	GULF COAST AQUIFER	NA	NA	NA	NA

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CANYON LAKE WATER SERVICE	BLANCO	CANYON LAKE	a) Failure of a major component of the system or an event which reduces the minimum residual pressure in the system below 20 psi for a period of 24 hours or longer. b) Water consumption has reached 95% or more of the maximum production capacity for three consecutive days. c) Water consumption of 100% of the maximum production capacity and water storage levels in the system are unable to recover in one 24 hour period. d) Other unforeseen events which could cause imminent health or safety risks to the public. e) Canyon Reservoir water surface elevation drops to a level of 880 ft. msl or lower.	25% reduction in demand	a) Failure of a major component of the system or an event which reduces the minimum residual pressure in the system below 20 psi for a period of 24 hours or longer. b) Water consumption has reached 95% or more of the maximum production capacity for three consecutive days. c) Water consumption of 100% of the maximum production capacity and water storage levels in the system are unable to recover in one 24 hour period. d) Other unforeseen events which could cause imminent health or safety risks to the public. e) Canyon Reservoir water surface elevation drops to a level of 880 ft. msl or lower.	25% reduction in demand
CEDAR PARK	TRAVIS	HIGHLAND LAKES	(i) Total daily water demand equals or exceeds 95% of the total operating system treatment capacity for three consecutive days; (ii) The combined storage of Lakes Buchanan and Travis are less than 750,000 acre-feet but greater than 600,000 acre-feet; (iii) Water system is contaminated whether accidentally or intentionally. Severe condition is reached immediately upon detection; and/or (iv) City Manager discretion.	Minimum 20% reduction in daily demand	To be determined by City Manager	Minimum 30% reduction in daily water demand or as determined by the LCRA board.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CIMARRON PARK WATER	HAYS	EDWARDS-BFZ	NA	NA	NA	NA
COLUMBUS	COLORADO	GULF COAST AQUIFER	a) Average daily water consumption reaches 110% of production capacity (1,870,000 gpd); b) Average daily water consumption will not enable storage levels to be maintained; c) System demands exceeds available high service pump capacity; d) Any two conditions listed in moderate drought classification occurs at the same time for a 24 hour period; e) Water system is contaminated either accidentally or intentionally; f) Water systems fails - from acts of God (tornadoes, hurricanes, or other natural disasters) or man-made. Severe condition is reached immediately upon detection; g) Any or all of the above conditions.	NA	a) Average daily water consumption reaches 110% of production capacity (1,870,000 gpd); b) Average daily water consumption will not enable storage levels to be maintained; c) System demands exceeds available high service pump capacity; d) Any two conditions listed in moderate drought classification occurs at the same time for a 24 hour period; e) Water system is contaminated either accidentally or intentionally; f) Water systems fails - from acts of God (tornadoes, hurricanes, or other natural disasters) or man-made. Severe condition is reached immediately upon detection; g) Any or all of the above conditions.	NA

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CORIX UTILITIES TEXAS INC	BURNET	ELLENBURGER-SAN SABA, TRINITY, HICKORY, HIGHLAND LAKES, and MARBLE FALLS	(a) When total daily water demand equals or exceeds 95% of the total design capacity of a Corix water treatment plant for three consecutive days , or 97% on a single day under normal operating conditions; or (b) For groundwater systems, when maximum daily usage equals or exceeds 95% of the pump's rated capacity for three consecutive days; or (c) When the combined storage level of lakes Travis and Buchanan reaches 600,000 acre-feet in accordance with the LCRA Drought Contingency Plan for Firm Water Customers. There is also a water use reduction target of 20%; or (d) When any other additional trigger criteria for individual systems	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.	(a) Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service; or (b) Natural or man-made contamination of the water supply source; or (c) Any other emergency water supply or demand issue the Corix Utilities (Texas) General Manager determines to warrant the declaration of Stage 4; or (d) Any other emergency water supply or demand conditions that LCRA determines to constitute a water supply emergency more severe that that contemplated in the triggers contained in the LCRA Water Management Plan, including a drought more severe than the drought of record. Water use reduction targets shall be determined by LCRA for its Firm Water Customers.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CORIX UTILITIES TEXAS INC	COLORADO	GULF COAST AQUIFER	Any of the following criteria is met: (a) When total daily water demand equals or exceeds 95% of the total design capacity of a Corix water treatment plant for three consecutive days , or 97% on a single day under normal operating conditions; or (b) For groundwater systems, when maximum daily usage equals or exceeds 95% of the pump's rated capacity for three consecutive days; or (c) When the combined storage level of lakes Travis and Buchanan reaches 600,000 acre-feet in accordance with the LCRA Drought Contingency Plan for Firm Water Customers. There is also a water use reduction target of 20%; or (d) When any other additional trigger criteria for individual systems are achieved.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.	(a) Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service; or (b) Natural or man-made contamination of the water supply source; or (c) Any other emergency water supply or demand issue the Corix Utilities (Texas) General Manager determines to warrant the declaration of Stage 4; or (d) Any other emergency water supply or demand conditions that LCRA determines to constitute a water supply emergency more severe that that contemplated in the triggers contained in the LCRA Water Management Plan, including a drought more severe than the drought of record. Water use reduction targets shall be determined by LCRA for its Firm Water Customers.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CORIX UTILITIES TEXAS INC	LLANO	ELLENBURGER-SAN SABA, HICKORY, and HIGHLAND LAKES	Any of the following criteria is met: (a) When total daily water demand equals or exceeds 95% of the total design capacity of a Corix water treatment plant for three consecutive days , or 97% on a single day under normal operating conditions; or (b) For groundwater systems, when maximum daily usage equals or exceeds 95% of the pump's rated capacity for three consecutive days; or (c) When the combined storage level of lakes Travis and Buchanan reaches 600,000 acre-feet in accordance with the LCRA Drought Contingency Plan for Firm Water Customers. There is also a water use reduction target of 20%; or (d) When any other additional trigger criteria for individual systems are achieved.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.	(a) Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service; or (b) Natural or man-made contamination of the water supply source; or (c) Any other emergency water supply or demand issue the Corix Utilities (Texas) General Manager determines to warrant the declaration of Stage 4; or (d) Any other emergency water supply or demand conditions that LCRA determines to constitute a water supply emergency more severe that that contemplated in the triggers contained in the LCRA Water Management Plan, including a drought more severe than the drought of record. Water use reduction targets shall be determined by LCRA for its Firm Water Customers.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CORIX UTILITIES TEXAS INC	LLANO	ELLENBURGER-SAN SABA, HICKORY, and HIGHLAND LAKES	Any of the following criteria is met: (a) When total daily water demand equals or exceeds 95% of the total design capacity of a Corix water treatment plant for three consecutive days , or 97% on a single day under normal operating conditions; or (b) For groundwater systems, when maximum daily usage equals or exceeds 95% of the pump's rated capacity for three consecutive days; or (c) When the combined storage level of lakes Travis and Buchanan reaches 600,000 acre-feet in accordance with the LCRA Drought Contingency Plan for Firm Water Customers. There is also a water use reduction target of 20%; or (d) When any other additional trigger criteria for individual systems are achieved.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.	(a) Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service; or (b) Natural or man-made contamination of the water supply source; or (c) Any other emergency water supply or demand issue the Corix Utilities (Texas) General Manager determines to warrant the declaration of Stage 4; or (d) Any other emergency water supply or demand conditions that LCRA determines to constitute a water supply emergency more severe that that contemplated in the triggers contained in the LCRA Water Management Plan, including a drought more severe than the drought of record. Water use reduction targets shall be determined by LCRA for its Firm Water Customers.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CORIX UTILITIES TEXAS INC	MATAGORDA	GULF COAST AQUIFER	Any of the following criteria is met: (a) When total daily water demand equals or exceeds 95% of the total design capacity of a Corix water treatment plant for three consecutive days , or 97% on a single day under normal operating conditions; or (b) For groundwater systems, when maximum daily usage equals or exceeds 95% of the pump's rated capacity for three consecutive days; or (c) When the combined storage level of lakes Travis and Buchanan reaches 600,000 acre-feet in accordance with the LCRA Drought Contingency Plan for Firm Water Customers. There is also a water use reduction target of 20%; or (d) When any other additional trigger criteria for individual system are achieved.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.	(a) Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service; or (b) Natural or man-made contamination of the water supply source; or (c) Any other emergency water supply or demand issue the Corix Utilities (Texas) General Manager determines to warrant the declaration of Stage 4; or (d) Any other emergency water supply or demand conditions that LCRA determines to constitute a water supply emergency more severe that that contemplated in the triggers contained in the LCRA Water Management Plan, including a drought more severe than the drought of record. Water use reduction targets shall be determined by LCRA for its Firm Water Customers.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CORIX UTILITIES TEXAS INC	MILLS	HIGHLAND LAKES	Any of the following criteria is met: (a) When total daily water demand equals or exceeds 95% of the total design capacity of a Corix water treatment plant for three consecutive days , or 97% on a single day under normal operating conditions; or (b) For groundwater systems, when maximum daily usage equals or exceeds 95% of the pump's rated capacity for three consecutive days; or (c) When the combined storage level of lakes Travis and Buchanan reaches 600,000 acre-feet in accordance with the LCRA Drought Contingency Plan for Firm Water Customers. There is also a water use reduction target of 20%; or (d) When any other additional trigger criteria for individual systems are achieved.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.	(a) Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service; or (b) Natural or man-made contamination of the water supply source; or (c) Any other emergency water supply or demand issue the Corix Utilities (Texas) General Manager determines to warrant the declaration of Stage 4; or (d) Any other emergency water supply or demand conditions that LCRA determines to constitute a water supply emergency more severe that that contemplated in the triggers contained in the LCRA Water Management Plan, including a drought more severe than the drought of record. Water use reduction targets shall be determined by LCRA for its Firm Water Customers.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CORIX UTILITIES TEXAS INC	SAN SABA	ELLENBURGER-SAN SABA, HICKORY, MARBLE FALLS, and HIGHLAND LAKES	Any of the following criteria is met: (a) When total daily water demand equals or exceeds 95% of the total design capacity of a Corix water treatment plant for three consecutive days, or 97% on a single day under normal operating conditions; or (b) For groundwater systems, when maximum daily usage equals or exceeds 95% of the pump's rated capacity for three consecutive days; or (c) When the combined storage level of lakes Travis and Buchanan reaches 600,000 acre-feet in accordance with the LCRA Drought Contingency Plan for Firm Water Customers. There is also a water use reduction target of 20%; or (d) When any other additional trigger criteria for individual systems are achieved.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.	(a) Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service; or (b) Natural or man-made contamination of the water supply source; or (c) Any other emergency water supply or demand issue the Corix Utilities (Texas) General Manager determines to warrant the declaration of Stage 4; or (d) Any other emergency water supply or demand conditions that LCRA determines to constitute a water supply emergency more severe that that contemplated in the triggers contained in the LCRA Water Management Plan, including a drought more severe than the drought of record. Water use reduction targets shall be determined by LCRA for its Firm Water Customers.	The target for all Corix Utilities (Texas) water utility systems required to implement their drought contingency plans based on capacity criteria is limiting daily water demand to 80% of water treatment or pumping capacity.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
COTTONWOOD CREEK MUD 1	TRAVIS	CARRIZO-WILCOX	a. the water system is contaminated, whether accidentally or intentionally (Stage 3 may be reached immediately upon detection of contamination); b. the water system fails due to an act of God (tornadoes, hurricanes) or man (Stage 3 may be reached immediately upon detection of the failure); c. any mechanical failure of pumping equipment which will require more than 12 hours to repair and which causes unprecedented loss of capability to provide water service; d. required under any District water supply contract; e. the availability of the District's water supply is reduced up to a drought of record; or f. otherwise approved by the Board.	30% reduction in average daily use	a. there is a failure of water supply or distribution facilities; b. there is a contamination of water source; c. required under any District water supply contract; d. the District Manager or his/her designee, in consultation with the Board President or Vice President, considers it necessary; or e. otherwise approved by the Board.	40% reduction in average daily use
COTTONWOOD SHORES	BURNET	HIGHLAND LAKES	City Administrator of Cottonwood Shores (designated official), or his/her designee, determines that a water supply emergency exists based on: 1) LCRA declares a drought worse than the drought of record or other shortage resulting from emergency. 2) The total storage in Lakes Buchanan and Travis is at or below 600,000 acre-ft. 3) Upon notification from LCRA that it is implementing stage 3 of the LCRA Drought Contingency Plan.	20% reduction in use	When one or a combination of the following occurs: 1) Major water line breaks, or pump or system failures ovvur, which cause unprecedented loss of capability to provide water service. 2) Natural or man-made contamination of the water supply source(s). 3) Any other emergencies are determined and declared by the City and LCRA associated with a drought worse than the drought of record.	Water use will be prohibited for any portions of the distribution system affected until further notice. Achieve 25% reduction in total water use or a prescribed LCRA drought contingency plan reduction target

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
COUNTY-OTHER	BASTROP	CARRIZO-WILCOX and HIGHLAND LAKES	NA	NA	NA	NA
COUNTY-OTHER	BLANCO	ELLENBURGER-SAN SABA, HICKORY, and TRINITY	NA	NA	NA	NA
COUNTY-OTHER	BURNET	ELLENBURGER-SAN SABA, HICKORY, MARBLE FALLS, TRINITY, OTHER AQUIFER, and HIGHLAND LAKES	NA	NA	NA	NA
COUNTY-OTHER	COLORADO	GULF COAST AQUIFER	NA	NA	NA	NA
COUNTY-OTHER	FAYETTE	GULF COAST AQUIFER, OTHER AQUIFER, SPARTA, YEGUA-JACKSON, and HIGHLAND LAKES	NA	NA	NA	NA
COUNTY-OTHER	GILLESPIE	EDWARDS-TRINITY-PLATEAU, ELLENBURGER-SAN SABA, HICKORY, and HIGHLAND LAKES	NA	NA	NA	NA
COUNTY-OTHER	HAYS	EDWARDS-BFZ, TRINITY, CANYON LAKE/RESERVOIR	NA	NA	NA	NA

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
COUNTY-OTHER	LLANO	ELLENBURGER-SAN SABA, HICKORY, OTHER AQUIFER, and HIGHLAND LAKES	NA	NA	NA	NA
COUNTY-OTHER	MATAGORDA	GULF COAST AQUIFER	NA	NA	NA	NA
COUNTY-OTHER	MILLS	ELLENBURGER-SAN SABA and TRINITY	NA	NA	NA	NA
COUNTY-OTHER	SAN SABA	ELLENBURGER-SAN SABA, HICKORY, MARBLE FALLS, and HIGHLAND LAKES	NA	NA	NA	NA
COUNTY-OTHER	TRAVIS	CARRIZO-WILCOX, TRINITY, OTHER AQUIFER, and HIGHLAND LAKES	NA	NA	NA	NA
COUNTY-OTHER	WHARTON	GULF COAST AQUIFER	NA	NA	NA	NA
COUNTY-OTHER	WILLIAMSON	CITY OF AUSTIN - ROR (MUNICIPAL), TRINITY, and EDWARDS-BFZ	NA	NA	NA	NA

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CREEDMOOR-MAHA WSC	BASTROP	CARRIZO-WILCOX AQUIFER	1) Water consumption has reached 90% of the amount available for 3 consecutive days. 2) The water level in any of the water storage tanks cannot be replenished for 3 consecutive days or as may otherwise be indicated in the Corporation's approved drought management plan. 3) Critical Stage pumpage reductions are ordered by the Barton Springs/Edwards Aquifer Conservation district, the City of Austin Water Utility, or Aqua Water Supply Corporation; or similar water conservation order by the TCEQ or other empowered agency.	30% reduction in daily use over baseline conditions	1) Failure of a major component of the system or an event which reduces minimum residual pressure in the system below 20 psi for a period of 24 hours or longer. 2) Water consumption of 95% or more of the maximum available for 3 consecutive days. 3) Water consumption of 100% of the maximum available and the water storage levels in the system drop during one 24-hour period. 4) Other unforeseen events that could cause imminent health or safety risks to the public. 5) Exceptional Stage pumpage reductions are ordered by the Barton Springs/Edwards Aquifer Conservation District, the City of Austin Water Utility, or Aqua Water Supply Corporation; or similar water conservation order by the TCEQ or other empowered agency is issued.	40% reduction in daily use over baseline conditions

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CREEDMOOR-MAHA WSC	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL) and EDWARDS-BFZ	1) Water consumption has reached 90% of the amount available for 3 consecutive days. 2) The water level in any of the water storage tanks cannot be replenished for 3 consecutive days or as may otherwise be indicated in the Corporation's approved drought management plan. 3) Critical Stage pumpage reductions are ordered by the Barton Springs/Edwards Aquifer Conservation district, the City of Austin Water Utility, or Aqua Water Supply Corporation; or similar water conservation order by the TCEQ or other empowered agency.	30% reduction in daily use over baseline conditions	1) Failure of a major component of the system or an event which reduces minimum residual pressure in the system below 20 psi for a period of 24 hours or longer. 2) Water consumption of 95% or more of the maximum available for 3 consecutive days. 3) Water consumption of 100% of the maximum available and the water storage levels in the system drop during one 24-hour period. 4) Other unforeseen events that could cause imminent health or safety risks to the public. 5) Exceptional Stage pumpage reductions are ordered by the Barton Springs/Edwards Aquifer Conservation District, the City of Austin Water Utility, or Aqua Water Supply Corporation; or similar water conservation order by the TCEQ or other empowered agency is issued.	40% reduction in daily use over baseline conditions
CYPRESS RANCH WCID 1	TRAVIS	HIGHLAND LAKES and TRINITY	NA	NA	NA	NA

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
DEER CREEK RANCH WATER	HAYS	HIGHLAND LAKES and EDWARDS-BFZ	1. Treatment Capacity: -For surface water systems, when total daily water demand equals or exceeds 95 percent of the total operating system treatment capacity for three consecutive days, or 97 percent on a single day; or -For groundwater systems, when maximum daily usage equals or exceeds 95 percent of the pump's withdrawal capacity for three consecutive days. 2. Water Supply: -Combined storage of Lakes Travis and Buchanan reaches 600,000 acre-feet, in accordance with the LCRA DCP, or -The LCRA Board declares a drought worse than the Drought of Record or other water supply emergency and orders the mandatory curtailment of firm water supplies.	System Capacity Reduction Target: Limit daily water demand to no more than 80% capacity for three days or 85% for one day. Water Supply Reduction Target: Achieve a minimum 20% reduction in water use.	1. Treatment Capacity: -Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service. 2. Water Supply: - Natural or man-made contamination of the water supply source; or - Any other emergency water supply or demand conditions that the LCRA general manager or the LCRA Board determines that either constitutes a water supply emergency or is associated with the LCRA Board declaration of a drought worse than the drought of record.	System Capacity Reduction Target: Achieve a minimum of 25% reduction in water use. Water Supply Reduction Target: As determined by the LCRA Board.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
DEER CREEK RANCH WATER	TRAVIS	HIGHLAND LAKES	1. Treatment Capacity: -For surface water systems, when total daily water demand equals or exceeds 95 percent of the total operating system treatment capacity for three consecutive days, or 97 percent on a single day; or -For groundwater systems, when maximum daily usage equals or exceeds 95 percent of the pump's withdrawal capacity for three consecutive days. 2. Water Supply: -Combined storage of Lakes Travis and Buchanan reaches 600,000 acre-feet, in accordance with the LCRA DCP, or -The LCRA Board declares a drought worse than the Drought of Record or other water supply emergency and orders the mandatory curtailment of firm water supplies.	System Capacity Reduction Target: Limit daily water demand to no more than 80% capacity for three days or 85% for one day. Water Supply Reduction Target: Achieve a minimum 20% reduction in water use.	1. Treatment Capacity: -Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service. 2. Water Supply: - Natural or man-made contamination of the water supply source; or - Any other emergency water supply or demand conditions that the LCRA general manager or the LCRA Board determines that either constitutes a water supply emergency or is associated with the LCRA Board declaration of a drought worse than the drought of record.	System Capacity Reduction Target: Achieve a minimum of 25% reduction in water use. Water Supply Reduction Target: As determined by the LCRA Board.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
DRIPPING SPRINGS WSC	HAYS	HIGHLAND LAKES	One or a combination of: 1.) The static water level in DSWSC Well No. 4 is 225 ft or greater below the surface of the ground, 2.) The total daily water demand equals or exceeds 950,000 gallons for 4 consecutive days, 3.) The total daily water demand equals or exceeds 1,200,000 gallons on a single day, or 4.) Continually falling water reservoir levels do not refill above 50% overnight, or 5.) Notice is given by the LCRA that total daily water demand equals or exceeds 95% of the total operating surface water treatment capacity for 3 consecutive days, or 97% on a single day, or 6.) Combined storage of Lakes Travis and Buchanan reaches 600,000 acre-ft, in accordance with the LRCA DCP, or 7.) The LCRA Board declares a drought worse than the Drought of Record or other water supply emergency and orders the mandatory curtailment of firm water supplies.	Minimum 20% reduction from either or both the 950,000 gallon daily water demand and the 1,200,000 gallon single day demand.	1. Major water line breaks, or pump or system failures occur, which cause an unprecedented loss of capability to provide water service; or 2. Natural or man-made contamination of the water supply source(s). 3. Any other emergency water supply or demand conditions the LCRA General Manager or the LCRA Board determines or is associated with the LCRA Board declaration of a drought worse than the Drought of Record.	Achieve a reduction in daily water demand sufficient that will allow DSWSC to supply water within the capability of the system during the emergency event.
EAGLE LAKE	COLORADO	GULF COAST AQUIFER	When water production exceeds 1,300,000 gallons per day for three (3) consecutive days.	NA	Water production exceeds 1,400,000 gallons per day for three (3) consecutive days.	NA
EL CAMPO	WHARTON	GULF COAST AQUIFER	Total daily demand equals or exceeds 4.5 MGD for 3 consecutive days or 5.0 MGD on a single day.	15% reduction in daily water pumpage	Total daily demand equals or exceeds 5.0 MGD for 3 consecutive days or 5.5 MGD on a single day.	20% reduction in daily water pumpage.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
ELGIN	BASTROP	CARRIZO-WILCOX AQUIFER	1. Average daily water consumption has reached 90% of rated production/distribution capacity for a three-day period or the aquifer level drops to a level which could be considered critical, and weather conditions indicate mild drought will exist five days or more. 2. Delivery capability is reduced due to a mechanical failure which will require more than 24 hours to repair.	NA	1. System demand exceeds available high service pump capacity; 2. There is detection of water systems failure from acts of God (tornados, hurricanes) or man; or 3. Delivery capability is reduced due to a mechanical failure which will require more than 12 hours to repair.	NA
ELGIN	TRAVIS	CARRIZO-WILCOX AQUIFER	1. Average daily water consumption has reached 90% of rated production/distribution capacity for a three-day period or the aquifer level drops to a level which could be considered critical, and weather conditions indicate mild drought will exist five days or more; or 2. Delivery capability is reduced due to a mechanical failure which will require more than 24 hours to repair.	NA	1. System demand exceeds available high service pump capacity; 2. There is detection of water systems failure from acts of God (tornados, hurricanes) or man; or 3. Delivery capability is reduced due to a mechanical failure which will require more than 12 hours to repair.	NA

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
FAYETTE COUNTY WCID MONUMENT HILL	FAYETTE	GULF COAST, QUEEN CITY, SPARTA, and HIGHLAND LAKES	1. Average water demand reaches 496,800 gallons per day (75% of plant capacity) for three consecutive days. 2. All available standby water supply, such as Fayette Water Supply Corporation, is being used by its members.	15% reduction in demand	1. The imminent or actual failure of a major component of the system which would cause an immediate health or safety hazard, i.e. water well or plant equipment. 2. Natural or man-made contamination of the water supply source(s). 3. Water demand is exceeding the system capacity of 596,200 gallons per day (90% of plant capacity - 460 gpm water well) for two (2) consecutive days.	NA
FAYETTE WSC	FAYETTE	QUEEN CITY and GULF COAST	NA	NA	NA	NA
FLATONIA	FAYETTE	YEGUA-JACKSON and GULF COAST	NA	NA	NA	NA
FREDERICKSBURG	GILLESPIE	ELLENBURGER-SAN SABA and HICKORY	When the City Manager determines that Stage 3 conditions and commensurate water reduction goals have not been met or that the reductions in use are not otherwise sufficient based upon the criteria described above.	15% reduction in the Average Daily Water Demand or 25% reduction in the Maximum Daily Water Demand.	When the City Manager determines that Stage 4 conditions and commensurate water reduction goals have not been met or that the reductions in use are not otherwise sufficient based upon the criteria described above.	20% reduction in the Average Daily Water Demand or 40% reduction in the Maximum Daily Water Demand.
GARFIELD WSC	TRAVIS	TRINITY AQUIFER	NA	NA	NA	NA

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
GEORGETOWN	BURNET	EDWARDS-TRINITY and BRAZOS RIVER AUTHORITY	An event occurs where water demand exceeds the supply and severe conservation measures are required to maintain the ability to provide the proper level of service as determined by the GM, or designee.	Peak demand equal to the annual average daily usage (50% reduction).	1. Water demand approaches a reduced delivery capacity for all or part of the system, creating a situation in which water system demand exceeds water system capacity, for an extended length of time, as determined by the General Manager; 2. major water line break, or a pump or other system failure occurs, which causes a loss in the capability to provide treated water service; or 3. A natural or man-made contamination of the water supply.	Peak demand equal to or surpasses the annual average daily usage (50% reduction).
GOFORTH SUD	HAYS	CANYON LAKE and EDWARDS-BFZ	1. Any of Goforth SUD's water providers initiates Stage II of their Drought Contingency Plan. 2. Water consumption has reached 90% of daily maximum supply for three (3) consecutive days. 3. The water level in any of the storage tanks cannot be replenished for three (3) consecutive days.	25% reduction in total use	1. Any of Goforth SUD's water providers initiates Stage III of their Drought Contingency Plan. 2. Water consumption has reached 95% of daily maximum supply for three (3) consecutive days. 3. The water level in any of the storage tanks cannot be replenished for five (5) consecutive days.	30% reduction in use.
GOFORTH SUD	TRAVIS	CANYON LAKE and EDWARDS-BFZ	1. Any of Goforth SUD's water providers initiates Stage II of their Drought Contingency Plan. 2. Water consumption has reached 90% of daily maximum supply for three (3) consecutive days. 3. The water level in any of the storage tanks cannot be replenished for three (3) consecutive days.	25% reduction in use	1. Any of Goforth SUD's water providers initiates Stage III of their Drought Contingency Plan. 2. Water consumption has reached 95% of daily maximum supply for three (3) consecutive days. 3. The water level in any of the storage tanks cannot be replenished for five (5) consecutive days.	30% reduction in use.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
GOLDTHWAITE	MILLS	TRINITY and GOLDTHWAITE RESERVOIR	NA	NA	NA	NA
GRANITE SHOALS	BURNET	HIGHLAND LAKES	When (either, any of) the following condition(s) exist; or as determined by the mayor or his/her designee. (1) When, pursuant to requirements specified in the City of Granite Shoals wholesale water purchase contract with LCRA notification is received requesting initiation of stage 3 of the drought contingency plan or if initiation of stage 3 is requested by the Central Texas Ground Water Conservation District. (2) When total daily water demands equals or exceeds 95% of plant capacity for three consecutive days of 97% of plant capacity on a single day. (3) Continually falling treated water reservoir levels that do not refill above 75% overnight. (4) When, for groundwater systems, maximum daily usage exceeds 90% of the pumping system withdrawal capacity for three consecutive days.	30% reduction in daily demand compared to non-drought levels	When the mayor or his/her designee determines that a water supply emergency exists based on: (1) When, pursuant to requirements specified in the City of Granite Shoals wholesale water purchase contract with LCRA notification is received requesting initiation of stage 4 of the drought contingency plan or if initiation of stage 4 is requested by the Central Texas Ground Water Conservation District. (2) Major water line breaks, or pump or system failures occur, which cause critical loss of capability to provide water service; or (3) Natural or man-made contamination of the water supply source. (4) Any other emergency water supply or production/demand condition that the mayor or his/her designee determines that either constitutes a water supply emergency or is associated with a declaration of a drought worse than the drought of record. (5) When, for groundwater systems, maximum daily usage exceeds 95% of the pumping system withdrawal capacity for three consecutive days.	40% reduction in daily demand compared to non-drought levels

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
HAYS	HAYS	EDWARDS-BFZ	Notification by the Barton Springs/Edwards Aquifer Conservation District that the District has declared the aquifer to be in an Alarm Stage Drought.	Mandatory overall minimum 20% monthly reduction plus additional curtailments as directed by District Rules.	Notification by the Barton Springs/Edwards Aquifer Conservation District that the District has declared the aquifer to be in a Exceptional Stage Drought.	Mandatory overall minimum 40% monthly reduction plus additional curtailments as directed by District Rules.
HAYS COUNTY WCID 1	HAYS	HIGHLAND LAKES	One or more of the following triggering criteria are met: 1. When the WTCPUA total daily water demand equals or exceeds 85% of the total design capacity of the WTCPUA water treatment plant for three (3) consecutive days; 2. When the LCRA Board declares a drought worse than the drought of record or other water supply emergency and orders the mandatory curtailment of firm water supplies; or 3. For Customers using water from District groundwater sources, when maximum daily usage equals or exceeds 95% of the pump's rated capacity for three (3) consecutive days.	Minimum 20% reduction in daily demand	One or more of the following triggering criteria are met: 1. When major line breaks, loss of distribution pressure, or pump system failures cause substantial loss in ability to provide water service; 2. When natural or man-made contamination of the water supply occurs; or 3. Any other emergency water supply or demand conditions that the LCRA, the WTCPUA or the General Manager determines to constitute a water supply emergency more severe than that contemplated herein or in the triggers contained in the LCRA Water Management Plan.	Reduce water demand as determined by the Board.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
HAYS COUNTY WCID 2	HAYS	HIGHLAND LAKES	One or more of the following triggering criteria are met: 1. When the WTCPUA total daily water demand equals or exceeds 85% of the total design capacity of the WTCPUA water treatment plant for three (3) consecutive days; 2. When the LCRA Board declares a drought worse than the drought of record or other water supply emergency and orders the mandatory curtailment of firm water supplies; or 3. For Customers using water from District groundwater sources, when maximum daily usage equals or exceeds 95% of the pump's rated capacity for three (3) consecutive days.	Minimum 20% reduction in daily water demand	One or more of the following triggering criteria are met: 1. When major line breaks, loss of distribution pressure, or pump system failures cause substantial loss in ability to provide water service; 2. When natural or man-made contamination of the water supply occurs; or 3. Any other emergency water supply or demand conditions that the LCRA, the WTCPUA or the General Manager determines to constitute a water supply emergency more severe than that contemplated herein or in the triggers contained in the LCRA Water Management Plan.	Reduce water demand as determined by the Board.
Hays-Trinity GCD	HAYS	TRINITY AQUIFER	Monitors discharge of flow to the Pedernales River near Johnson City, rates of 10.2 cfs trigger "critical" conditions			
HORNSBY BEND UTILITY	TRAVIS	CARRIZO-WILCOX	75% water treatment capacity reached for 3 or more days in a week, or well pump hours per day are 18 hours for more than 3 days.	Reduce water consumption and usage by 20% through mandatory restrictions.	90% water treatment capacity reached for 3 or more days in a week, or well pump hours per day are 22 hours for more than 3 days.	Reduce water consumption and usage by 30%.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
HORSESHOE BAY	BURNET	HIGHLAND LAKES	(a) Drought year with severe water shortage conditions; (b) Loss or failure of water production or water distribution appurtenances or facility that would decrease water system supply capabilities by 25%; (c) When drought conditions worsen triggering the implementation of additional mandatory water restrictions; (d) Any surface water supplies withdrawal restriction enacted by the LCRA that would entail a reduction of 25% in water supply to the city; or (e) Short-term or long-term situation requiring a reduction of 25% in water consumption.	Target water demand reduction goal: 25%.	(a) Critical drought conditions, resulting in emergency water conditions and curtailment of water use; (b) Loss or damage to the city water production or water distribution appurtenance or facility that would decrease water supply system capabilities by 35%; (c) Any other emergency water supply or demand issue the LCRA general manager or the LCRA board determines to warrant the declaration of stage 4; (d) Any surface water supplies withdrawal restriction enacted by the LCRA that would entail a 35% reduction in water supply to the city; or (e) Any short-term or long-term water supply situation requiring a 35% reduction in water consumption.	Target water demand reduction goal: 35%.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
HORSESHOE BAY	LLANO	HIGHLAND LAKES and OTHER AQUIFER	(a) Drought year with severe water shortage conditions; (b) Loss or failure of water production or water distribution appurtenances or facility that would decrease water system supply capabilities by 25%; (c) When drought conditions worsen triggering the implementation of additional mandatory water restrictions; (d) Any surface water supplies withdrawal restriction enacted by the LCRA that would entail a reduction of 25% in water supply to the city; or (e) Short-term or long-term situation requiring a reduction of 25% in water consumption.	Target water demand reduction goal: 25%	(a) Critical drought conditions, resulting in emergency water conditions and curtailment of water use; (b) Loss or damage to the city water production or water distribution appurtenance or facility that would decrease water supply system capabilities by 35%; (c) Any other emergency water supply or demand issue the LCRA general manager or the LCRA board determines to warrant the declaration of stage 4; (d) Any surface water supplies withdrawal restriction enacted by the LCRA that would entail a 35% reduction in water supply to the city; or (e) Any short-term or long-term water supply situation requiring a 35% reduction in water consumption.	35% reduction
HURST CREEK MUD	TRAVIS	HIGHLAND LAKES	(a) When total daily water demand equals or exceeds 95% of the total design capacity of the HURST CREEK MUD water treatment plant for three consecutive days, or 97% on a single day; or (b) When combined storage of lakes Buchanan and Travis is less than 700,000 acre-feet.	Water Supply Reduction Target: Achieve a 15% reduction in water use.	(a) Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service, (b) Natural or man-made contamination of the water supply source, or (c) Any other emergency water supply or demand issue the HURST CREEK MUD General Manager or the HURST CREEK MUD Board determine to warrant the declaration of Stage 4. (d) When combined storage of lakes Buchanan and Travis is less than 600,000 acre-feet.	Water Supply Reduction Target: Achieve a 20% reduction in water use.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
JOHNSON CITY	BLANCO	ELLENBURGER-SAN SABA	The city's wells draw-down level is at or below 50% of original capacity, or recharge has slowed and/or when pumping time from wells meets or exceeds 80% of one day (24 hours) or 18.5 hours for three consecutive days.	20% reduction in demand	Draw-down level dropped to 35% of specific capacity and/or when pumping time from wells meets or exceeds 80% of one day (24 hours) or 20.0 hours for three days.	50% reduction in demand
JONESTOWN WSC	TRAVIS	HIGHLAND LAKES	1. Treatment Capacity: • Total daily water demand equals or exceeds 95% of the total operating system treatment capacity for three consecutive days, or 97% on a single day; or 2. Water Supply: • Combined storage of Lakes Travis and Buchanan reaches 600,000 acre-feet, in accordance with the LCRA DCP, or • The LCRA Board declares a drought worse than the Drought of Record or other water supply emergency and orders the mandatory curtailment of firm water supplies.	Minimum 20% reduction in use	1. Treatment Capacity: • Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service. 2. Water Supply: • Natural or man-made contamination of the water supply source; or • Any other emergency water supply or demand conditions that the LCRA general manager or the LCRA Board determines that either constitutes a water supply emergency or is associated with the LCRA Board declaration of a drought worse than the drought of record.	As determined by the LCRA Board

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
KELLY LANE WCID 1	TRAVIS	CARRIZO-WILCOX	a. The average daily water consumption reaches 90% of the District's water supply/distribution capacity and continues for three consecutive days; b. the combined storage of the Highland Lakes falls to 700,000 acre feet; c. a major component of the water system fails; d. the District Manager and/or his/her designees considers it necessary; e. required under any District water supply contract or the Consent Agreement; or f. otherwise approved by the Board.	25% reduction in average daily use	a. the combined storage of the Highland Lakes reaches 600,000 acre feet or Lake Pflugerville is down to its 625 elevation; b. there is a failure of water treating facilities or transmission system affecting the capability of providing water service; c. there is a contamination of water source; d. system demand exceeds pumping capacity; e. the District Manager and/or his/her designees considers it necessary; f. required under any District water supply contract or the Consent Agreement; or g. otherwise approved by the Board.	75% reduction in average daily use
KEMPNER WSC	BURNET	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE	Daily water demand exceeds 100% of treatment or distribution capacity for 3 consecutive days.	30% reduction in use	Major water production or distribution limitations Supply Source Contamination System outage due to failure of major water system components.	Achieve necessary reduction in water use
KINGSLAND WSC	BURNET	HIGHLAND LAKES	When KWSC delivers water at the rate of 85% capacity for seven consecutive days or LCRA declares a Stage 2 drought condition.	Reduce Treated Surface Water by 10-20%.	When the emergency situation in KWSC system is in danger of causing immediate health or safety hazard or LCRA declares Stage 3 drought conditions.	Reduce Treated Surface Water by 20%, or more.
KINGSLAND WSC	LLANO	HIGHLAND LAKES and OTHER AQUIFER	When KWSC delivers water at the rate of 85% capacity for seven consecutive days or LCRA declares a Stage 2 drought condition.	Reduce Treated Surface Water by 10-20%.	When the emergency situation in KWSC system is in danger of causing immediate health or safety hazard or LCRA declares Stage 3 drought conditions.	Reduce Treated Surface Water by 20%, or more.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
LA GRANGE	FAYETTE	QUEEN CITY and SPARTA	(a) Average daily water consumption reaches 110% of production capacity (1,760,000 gpd); (b) Average daily water consumption will not enable storage levels to be maintained; (c) System demand exceeds available high service pump capacity; (d) Any two conditions listed in moderate drought classification occurs at the same time for a 24 hour period; (e) Water system is contaminated either accidentally or intentionally; or (f) Water system fails -- from acts of God (tornadoes, hurricanes, or other natural disasters) or man-made. Severe condition is reached immediately upon detection.	5%	(a) Average daily water consumption reaches 110% of production capacity (1,760,000 gpd); (b) Average daily water consumption will not enable storage levels to be maintained; (c) System demand exceeds available high service pump capacity; (d) Any two conditions listed in moderate drought classification occurs at the same time for a 24 hour period; (e) Water system is contaminated either accidentally or intentionally; or (f) Water system fails -- from acts of God (tornadoes, hurricanes, or other natural disasters) or man-made. Severe condition is reached immediately upon detection.	5%

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
LAGO VISTA	TRAVIS	HIGHLAND LAKES	(i) Treatment Capacity. When total daily water demand equals or exceeds 95% of the total operating system treatment capacity for three consecutive days, or 97% on a single day; or (ii) Water Supply. When combined storage of Lakes Travis and Buchanan reaches 600,000 acre-feet, in accordance with the LCRA DCP, or when the LCRA board declares a drought worse than the drought of record or other water supply emergency and orders the mandatory curtailment of firm water supplies.	Minimum 20% reduction in use	(i) Treatment Capacity. Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in the ability to provide water service. (ii) Water Supply. Natural or manmade contamination of the water supply source; or any other emergency water supply or demand conditions that the LCRA general manager or the LCRA board determines that either constitutes a water supply emergency or is associated with the LCRA Board declaration of a drought worse than the drought of record.	As determined by the LCRA Board

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
LAKEWAY MUD	TRAVIS	HIGHLAND LAKES	1) Treatment Capacity: When total daily water demand equals or exceeds 95% of the total operating system treatment capacity for three consecutive days, or 97% on a single day; or 2) Water Supply: Combined storage of Lakes Travis and Buchanan reaches 900,000 acre-feet, in accordance with the LCRA DCP.	Minimum 15% reduction in use	1) Treatment Capacity: Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service. 2) Water Supply: Combined storage of Lakes Travis and Buchanan reaches 600,000 acre-feet, in accordance with the LCRA DCP. The LCRA Board declares a drought worse than the Drought of Record or other water supply emergency and orders the mandatory curtailment of firm water supplies. Natural or man-made contamination of the water supply source; or Any other emergency water supply or demand conditions that the LCRA general manager or the LCRA Board determines that either constitutes a water supply emergency or is associated with the LCRA Board declaration of a drought worse than the drought of record.	Minimum 20% reduction in use

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
LEANDER	TRAVIS	HIGHLAND LAKES	1. Treatment capacity: (a) When total daily water demand equals or exceeds 95% of the total operating system treatment capacity for three consecutive days, or 97% on a single day; or (b) Pump hours per day of 22 hours. 2. Water supply: (a) Combined storage of Lakes Travis and Buchanan reaches 600,000 acre-feet, in accordance with the LCRA DCP; or (b) The LCRA board declares a drought worse than the drought of record or other water supply emergency and orders the mandatory curtailment of firm water supplies.	20% reduction in water use and 17 pump hours per day	1. Treatment capacity: (a) Major water line breaks or pump system failures that cause substantial loss of ability to provide water service; (b) When total daily water demands equal or exceed 100% of the total operating system treatment capacity; or (c) Pump hours per day of 24 hours. 2. Water supply: (a) Natural or man-made contamination of the water supply source; or (b) Any other emergency water supply or demand conditions that the LCRA general manager or the LCRA board determines that either constitutes a water supply emergency or is associated with the LCRA board declaration of a drought worse than the drought of record.	Water use reduction target is less than or equal to 90% of treatment capacity and less than 22 pump hours per day.
LEE COUNTY WSC	BASTROP	CARRIZO-WILCOX AQUIFER	Continually falling treated water storage levels which do not refill above 70% overnight	20% reduction	Continually falling treated water storage levels which do not refill above 60% overnight	30% reduction
LEE COUNTY WSC	FAYETTE	CARRIZO-WILCOX AQUIFER	Continually falling treated water storage levels which do not refill above 70% overnight	20% reduction	Continually falling treated water storage levels which do not refill above 60% overnight	30% reduction

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
LLANO	LLANO	HIGHLAND LAKES and LLANO LAKE	1. The 7-day moving average daily discharge of Llano River at Llano is equal to or less than 21 cubic feet per second (cfs) and the Stage 3 pumpage goal is exceeded for 4 consecutive days. If Stage 2 has not been initiated, the Stage 3 requirements for initiation shall initiate Stage 2 restrictions for 7 days prior to initiating Stage 3. If the Stage 3 pumpage goal can be met within those 7 days, Stage 2 restrictions remain in effect until both requirements for initiation of this section are met; or 2. The Goal for Stage 2 cannot be met under Stage 2 Restriction.	Limit the daily pumpage at the water treatment plant to 0.8 million gallons per day.	1. The 7-day moving average daily discharge of Llano River at Llano is equal to or less than 10 cubic feet per second (cfs) and the Stage 4 pumpage goal is exceeded for 4 consecutive days. If Stage 3 has not been initiated, the Stage 4 requirements for initiation shall initiate Stage 3 restrictions for 7 days prior to initiating Stage 4. If the Stage 4 pumpage goal can be met within those 7 days, Stage 3 restrictions shall remain in effect until both requirements for initiation of this section are met. If Stage 2 has not been initiated, the Stage 4 requirements for initiation shall initiate Stage 2 restrictions for 7 days. If the Stage 4 pumpage goal cannot be met within those 7 days, Stage 3 restrictions sale be initiated. If the Stage 4 pumpage goal cannot be met within 7 days, Stage 4 shall be initiated. If the Stage 4 pumpage goal can be met with the restrictions of Stage 2 or Stage 3, those restrictions shall remain in effect until both requirements for initiation of this section are met; or 2. The goal for Stage 3 cannot be met under Stage 3 Restriction	Limit the daily pumpage at the water treatment plant to 0.6 million gallons per day.
LOOP 360 WSC	TRAVIS	HIGHLAND LAKES	NA	NA	NA	NA
Lost Pines GCD	BASTROP		GCD monitors rainfall and water level records to determine drought conditions impact on aquifers			

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
MANOR	TRAVIS	OTHER AQUIFER, CITY OF AUSTIN - ROR (MUNICIPAL), and HIGHLAND LAKES	NA	NA	(A) If the city manager determines that the available capacity of the Highland Lakes Reservoir is less than the City of Austin's anticipated demand; (B) Whenever water production from the other well fields in Manor drops below 350,000 gallons per day; (C) Whenever the city's ability to take 1,000,000 gallons per day from all sources (including but not limited to the City of Austin, water from the well fields on Gilbert Lane in Manor and other water supply sources) per day drops; and/or (D) The combined water storage levels of Lake Travis and Buchanan are less than 681,000 acre-feet.	NA
MANVILLE WSC	TRAVIS	HIGHLAND LAKES, EDWARDS-BFZ AQUIFER, OTHER AQUIFER, and COLORADO RUN-OF-RIVER	Failure of major component of system or health/safety hazard; or water demand exceeds capacity for 24 hours; or production is 100% and storage tank levels are decreasing at 5% per day; or total production of wells fall by an additional 15%.	15% reduction in use	1. Major water line breaks, or pump or system failures occur, which cause an unprecedented loss of capability to provide water service; or 2. Natural or man-made contamination of the water supply source(s).	To be determined

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
MARBLE FALLS	BURNET	HIGHLAND LAKES	When any of the following condition(s) exist: or as determined by the mayor or his/her designee. (1) When, combined storage of Lakes Travis and Buchanan reaches 600,000 acre-feet in accordance with the LCRA DCP, or the LCRA Board declares a drought worse than the drought of record and a mandatory curtailment of firm water supplies, and notification is received requesting initiation of Stage 3 of the drought contingency plan. (2) When total daily water demands equals or exceeds 95% of plant capacity for two (2) consecutive days of 96% of plant capacity on a single day. (3) Continually falling treated water reservoir levels that do not refill above 75% overnight. (4) Region-wide drought caused by widespread, long term shortages.	Minimum of 20% reduction in daily demand	When the mayor or his/her designee, determines that a water supply emergency exists based on: (1) When, pursuant to requirements specified in the city's wholesale water purchase contract with LCRA notification is received requesting initiation of Stage 4 of the drought contingency plan. (2) Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or (3) Natural or manmade contamination of the water supply source. (4) Region-wide drought caused by widespread, long term shortages.	Minimum 25% reduction in daily demand
MARKHAM MUD	MATAGORDA	GULF COAST AQUIFER	NA	NA	NA	NA
MATAGORDA COUNTY WCID 6	MATAGORDA	GULF COAST AQUIFER	NA	NA	NA	NA
MATAGORDA WASTE DISPOSAL & WSC	MATAGORDA	GULF COAST AQUIFER	NA	NA	NA	NA

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
MEADOWLAKES	BURNET	OTHER LOCAL SUPPLY and HIGHLAND LAKES	1. Treatment Capacity: (a) When total daily demand equals or exceeds 90% of the total operating system treatment capacity for three consecutive days or 95% on a single day; or (b) Continually falling treated water reservoir levels that do not refill above 60% overnight; or 2. Water Supply: When the combined storage level of Lake Travis and Buchanan reaches 600,000 acre-feet, in accordance with the LCRA DCP or when the LCRA Board declares a drought worse than the Drought of Record currently exists.	20% reduction	1. Treatment Capacity: Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or 2. Water Supply: (a) Natural or man-made contamination of the water supply source(s); or (b) Any other emergency water supply or demand conditions that the LCRA or the City determines constitutes a water supply emergency or is associated with the LCRA Board declaration of a drought worse that the drought of record.	70% reduction
NORTH AUSTIN MUD 1	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL)	(a) Daily demand exceeds 95% of supply/distribution or pump capacity for 3 consecutive days; or (b) Other causes as determined by the District Manager or designee.	15% reduction	(a) Failure of water treatment facilities; (b) Natural or man-made contamination of the water supply source; or (c) System outage due to failure of major water system components.	Achieve necessary reduction in daily water demand.
NORTH AUSTIN MUD 1	WILLIAMSON	CITY OF AUSTIN - ROR (MUNICIPAL)	(a) Daily demand exceeds 95% of supply/distribution or pump capacity for 3 consecutive days; or (b) Other causes as determined by the District Manager or designee.	15% reduction	(a) Failure of water treatment facilities; (b) Natural or man-made contamination of the water supply source; or (c) System outage due to failure of major water system components.	Achieve necessary reduction in daily water demand.
NORTH SAN SABA WSC	SAN SABA	ELLENBURGER-SAN SABA	NA	NA	NA	NA

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
NORTHTOWN MUD	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL)	a. system demand exceeds available high service pump capacity; b. water system is contaminated, whether accidentally or intentionally (severe condition is reached immediately upon detection of contamination); c. water system fails due to an act of God (tornadoes, hurricanes) or man (severe condition is reached immediately upon detection of the failure); d. any mechanical failure of pumping equipment which will require more than 12 hours to repair and which causes unprecedented loss of capability to provide water service; e. the District Manager and/or his/her designees considers it necessary; f. required by a Water Supplier or under any District water supply contract; or g. otherwise required by the Board.	15% reduction in use	District may impose additional water restrictions to protect the public health and safety in the event of an unusual water system operational event, catastrophic occurrence or severe weather event, or as otherwise required by the Board or a Water Supplier under any District water supply contract.	To be determined.
OAK SHORES WATER SYSTEM	TRAVIS	TRINITY AQUIFER	NA	NA	NA	NA
PALACIOS	MATAGORDA	GULF COAST AQUIFER	To be determined by Mayor.	To be determined by Mayor.	To be determined by Mayor.	To be determined by Mayor.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
PFLUGERVILLE	TRAVIS	HIGHLAND LAKES	Average daily water consumption reaches 90% of production/distribution capacity for a period of 3 consecutive days; or the combined storage of the Highland Lakes falls to 700,000 acre-feet or the city manager determines that stage 3 implementation is necessary to protect the city's water supply for essential usages.	25% reduction in use	(a) The combined storage of the Highland Lakes reaches 600,000 acre-feet or Lake Pflugerville is down to its 625 elevation; (b) Major water line breaks, or pump or system failures occur, and cause unexpected loss of capability to provide water service; (c) System demand exceeds available high service pump capacity; (d) There is detection of accidental or intentional contamination of the water system; (e) There is detection of water systems failure from acts of God (e.g., tornados, hurricanes, etc.) or man; (f) A mechanical failure of pumping equipment occurs during a moderate drought and will require more than 12 hours to repair; or (g) Implementation is necessary under the city's wholesale water contract with the Lower Colorado River Authority.	30% reduction in average use from a rolling 12-month period

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
POLONIA WSC	BASTROP	CARRIZO-WILCOX AQUIFER	South: a. Total daily water demand equals or exceeds 0.450 million gallons for 3 consecutive days or 0.500 million gallons on a single day (e.g., based on the "safe" operating capacity of water supply facilities). b. The water level in any storage tank cannot be replenished for 4 consecutive days. North: a. Total daily water demand equals or exceeds 1.0 million gallons for 3 consecutive days or 1.080 million gallons on a single day (e.g., based on the "safe" operating capacity of water supply facilities). b. The water level in any storage tank cannot be replenished for 4 consecutive days.	South: Achieve a 20% reduction from the 450,000 gallon daily water demand. North: Achieve a 20% reduction from the 1,080,000 gallon daily water demand.	The President, or his/her designee, determines that a water supply emergency exists based on: a. Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or b. Other unforeseen events, which could cause imminent health or safety risk to the public.	Achieve a reduction in total water use so that public health, safety, and welfare conditions do not exist.
RICHLAND SUD	SAN SABA	ELLENBURGER-SAN SABA	NA	NA	NA	NA
ROLLINGWOOD	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL)	Defer to City of Austin		Defer to City of Austin	

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
ROUGH HOLLOW IN TRAVIS COUNTY	TRAVIS	CARRIZO-WILCOX, CITY OF AUSTIN - ROR (MUNICIPAL), EDWARDS-BFZ, HIGHLAND LAKES, and TRINITY	1. Total daily water consumption equals or exceeds 95% of the District's water supply/distribution capacity for three consecutive days, or 97% on a single day; 2. Combined storage of Lakes Travis and Buchanan reaches 600,000 acre-feet in accordance with the LCRA DCP; 3. The LCRA Board declares a drought worse than the Drought of Record or other water supply emergency and orders the mandatory curtailment of firm water supplies; 4. System demand exceeds available high service pump capacity; 5. The water system is contaminated, whether accidentally or intentionally; 6. The water system fails due to an act of God (tornadoes, hurricanes) or human; 7. Any mechanical failure of pumping equipment which will require more than 12 hours to repair and which causes unprecedented loss of capability to provide water service; 8. Required under any District water supply contract; or 9. As otherwise determined by the Board or the District Manager, but in no case in conditions less stringent than provided above.	Limit daily water consumption to no more than 80% of the District's water supply/distribution capacity for three consecutive days, or 85% of the District's water supply/distribution capacity for a single day, and achieve a minimum 20% reduction in water use.	1. There is a failure of water treating facilities; 2. There is a major water line break, loss of distribution pressure, or pump system failure that causes substantial loss in the District's ability to provide water service; 3. There is contamination of the water supply source; 4. Any other emergency water supply or demand condition exists that the LCRA General Manager or the LCRA Board of Directors' declaration of a drought worse than the drought of record; 5. Required under any Dirstrict water supply contract; or 6. As otherwise determined by the Board or the District Manager but in no conditions less stringent than provided above.	Achieve a minimum 25% reduction in water use.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
ROUND ROCK	TRAVIS	EDWARDS-BFZ	1. Supply-based trigger for implementation of stage II is as follows: a. Lake Georgetown Reservoir elevation is below 765 feet above mean sea level (msl) for three consecutive days; or b. The combined storage of Lake Georgetown and Lake Stillhouse Hollow is less than 105,001 acre feet of water. 2. Demand or capacity-based triggers for implementation of stage II are as follows: a. Water treatment capacity has reached 90% for three consecutive days; b. Total daily demand has reached 90% of the raw water pumping capacity for three consecutive days; c. Total daily demand is 90% of storage capacity for three consecutive days; d. Total daily demand is 90% of the treated water pumping capacity for three consecutive days; or e. Production or distribution limitations including, but not limited to system outages or equipment failure. 3. Wholesale water suppliers' triggers: a. Pursuant to requirements specified in the city's wholesale water supply contract(s), notification is received from the city's wholesale water supplier(s) requesting implementation of the stage II restrictions. 4. Public health, safety and welfare triggers: a. The city manager makes a written public announcement that he has reasonably determined that	Stage II regulations are intended to achieve a 25% reduction in daily water consumption.	1. Supply-based trigger for implementation of stage III is as follows: a. The combined storage of Lake Georgetown and Lake Stillhouse Hollow is less than 52,501 acre feet of water. 2. Demand or capacity-based triggers for implementation of stage III are as follows: a. Water treatment capacity has reached 95% for three consecutive days; b. Total daily demand has reached 95% pumping capacity for three consecutive days; c. Total daily demand is 95% of the storage capacity for three consecutive days; or d. Significant production or distribution limitations including, but not limited to, system outages and equipment failure. 3. Wholesale water suppliers' triggers: a. Pursuant to requirements specified in the city's wholesale water supply contract(s), notification is received from the city's wholesale water supplier(s) requesting implementation of the stage III restrictions.	Stage III regulations are intended to achieve a 50% reduction in daily water consumption.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
SAN SABA	SAN SABA	ELLENBURGER-SAN SABA AQUIFER	Average daily consumption 110% of rated capacity or consumption will not let storage levels be maintained; Demand exceeds available high service pump capacity; any two conditions in "moderate drought" occur at the same time for 24 hour period;	50% reduction in demand	System is contaminated; system fails from acts of God	To be determined
SCHULENBURG	FAYETTE	YEGUA-JACKSON and GULF COAST	Total daily water demand equals or exceeds 70% of the total well capacity or firm booster pump capacity, whichever is less, for three (3) consecutive days.	Achieve a reduction in water use to reduce demand to less than 70% of the total well capacity or of firm booster pump capacity.	When mayor, city administrator, or their designee, determines that a water supply emergency exists based on: (i) Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or (ii) Natural or manmade contamination of the water supply source(s).	Achieve a reduction in water use to reduce demand to less than 75% of the total well capacity or of firm booster pump capacity or to reduce water use to prevent more than 50% depletion of stored water volumes at any time.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
SENNA HILLS MUD	TRAVIS	HIGHLAND LAKES	1. Treatment Capacity: For surface water systems, when total daily water demand equals or exceeds 95% of the total operating system treatment capacity for three consecutive days, or 97% on a single day. 2. Water Supply: Combined storage of Lakes Travis and Buchanan reaches 600,000 acre-feet, in accordance with the LCRA DCP, or the LCRA Board declares a drought worse than the Drought of Record or other water supply emergency and orders the mandatory curtailment of firm water supplies.	Minimum 20% reduction in use	1. Treatment Capacity: Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service. 2. Water Supply: Contamination of the water supply source; or any other emergency water supply or demand conditions that the WTCPUA Water Services executive manager, or designee, determines to constitute a water supply emergency more severe than that contemplated in the triggers contained in the LCRA Water Management Plan.	Minimum 30% reduction in use
SHADY HOLLOW MUD	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL)	Defer to City of Austin		Defer to City of Austin	
SMITHVILLE	BASTROP	CARRIZO-WILCOX AQUIFER	When (either, any of) the following condition(s) exist: (ii) When the specific capacity of the city's well is equal to or less than 75% of the well's pumping capability. (iii) When total daily water demand equals or exceeds 1.9 million gallons for 3 consecutive day or 2.0 million gallons on a single day.	20% reduction in demand	The mayor, or his/her designee, determines that a water supply emergency exists based on: (i) Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or (ii) Natural or man-made contamination of the water supply source(s).	30% reduction in use

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
SUNRISE BEACH VILLAGE	LLANO	HIGHLAND LAKES and HICKORY	a. For surface water supply systems, when total daily water demand equals or exceeds 95% of: i. the total design capacity of the SRB water treatment plant for three consecutive days, or 97% on a single day; or ii. the contracted peak day capacity for systems supplied by another provider; or b. For groundwater supply systems, when maximum daily usage equals or exceeds 95% of the pump's or well's rated capacity, whichever is less, for three consecutive days; or c. When the drought contingency measures of the LCRA Water Management Plan require that firm water customers curtail water use on a pro rata basis.	Minimum 20% reduction in use	a. Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service, b. Contamination of the water supply source, c. Any other emergency water supply or demand conditions that the SRB Mayor or designee determines to constitute a water supply emergency more severe than that contemplated in the triggers contained in the SRB Water Management Plan. d. LCRA determination that a drought worse than the drought of record resulting in inflows and lake levels dropping below critical levels exist and warrant emergency procedures be implemented.	As determined by the SRB City Council.
SUNSET VALLEY	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL) and EDWARDS-BFZ	A system failure or contamination of the City Groundwater Well or Water Plant, a declaration of Stage II Drought by the City of Austin, a declaration of Alarm Stage Drought by the Barton Springs Edwards Aquifer District and/or when the drought contingency measures of the LCRA Water Management Plan request that firm water customers voluntarily implement mandatory water restrictions.	20% reduction in monthly water usage per commercial meter based on 3 year rolling average. Achieve a maximum residential monthly consumption of the greater of 12,000 gallons/connection or 4,000 gallons/capita.	A system failure or contamination of the City Groundwater Well or Water Plant and/or a declaration of Stage III Drought by the City of Austin, a declaration of Critical Stage Drought by the Barton Springs Edwards Aquifer District, and/or when the drought contingency measures of the LCRA Water Management Plan require that firm water customers curtail water use on a pro rata basis.	30% reduction in monthly water usage per commercial meter based on 3 year rolling average. Achieve a maximum residential monthly consumption of the greater of 9,000 gallons/connection or 3,000 gallons/capita.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
SWEETWATER COMMUNITY	TRAVIS	HIGHLAND LAKES	(a) Treatment Capacity: -When total daily water demand equals or exceeds 95 percent of the total operating system treatment capacity for three consecutive days, or 97 percent on a single day. (b) Water Supply -Combined storage of Lake Travis and Buchanan reaches 600,000 acre-feet, in accordance with the LCRA DCP, or -The LCRA Board declares a drought worse than the Drought of Record or other water supply emergency and orders the mandatory curtailment of firm water supplies.	System Capacity Reduction Target: Limit daily water demand to no more than 80% capacity for three days or 85% for one day. Water Supply Reduction Target: Achieve a minimum 20% reduction in water use.	(a) Treatment Capacity: -Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service. (b) Water Supply: -Natural or man-made contamination of the water supply source; or -Any other emergency water supply or demand conditions that the LCRA general manager or the LCRA Board determines that either constitutes a water supply emergency or is associated with the LCRA Board declaration of a drought worse that the drought of record.	Demand Management Goals: Reduce demand by ten percent (10%) from Stage 3 goals for a cumulative reduction of 35%.
TRAVIS COUNTY MUD 10	TRAVIS	HIGHLAND LAKES	When the combined storage for Lakes Travis and Buchanan is at or below 900,000 acre-feet, but above 600,000 acre-feet, and/or the LCRA requests reduced water use by firm stored water customers, the District will implement its Drought Response Measures and declare a Stage III (Orange) condition. The water use reduction goal is 25%.	25% reduction in use	When the combined storage for Lakes Travis and Buchanan is at or below 600,000 acre-feet, and/or the LCRA curtails and distributes the available supply of firm stored water among all of its firm stored water supply customers on a pro rata basis according to their historic demand for stored water during a drought determined to be more severe than the Drought of Record, the District will implement its Drought Response Measures and declare a Stage IV (Red) condition. The water use reduction goal is 35%.	35% reduction in use
TRAVIS COUNTY MUD 14	TRAVIS	CARRIZO-WILCOX	NA	NA	NA	NA

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
TRAVIS COUNTY MUD 2	TRAVIS	CARRIZO-WILCOX	a. the water system is contaminated, whether accidentally or intentionally (Stage 3 may be reached immediately upon detection of contamination); b. the water system fails due to an act of God (tornadoes, hurricanes) or man (Stage 3 may be reached immediately upon detection of the failure); c. any mechanical failure of pumping equipment which will require more than 12 hours to repair and which causes unprecedented loss of capability to provide water service; d. required under any District water supply contract; e. the availability of the District's water supply is reduced up to a drought of record; or f. otherwise approved by the Board.	30% reduction in average daily use	a. there is a failure of water supply or distribution facilities; b. there is a contamination of water source; c. required under any District water supply contract; d. the District Manager or his/her designee, in consultation with the Board President or Vice President, considers it necessary; or e. otherwise approved by the Board.	40% reduction in average daily use
TRAVIS COUNTY MUD 4	TRAVIS	HIGHLAND LAKES	The District will declare that a severe water shortage condition exists when average daily water consumption reaches 95% of production/distribution capacity for a period of 3 days.	25% reduction in demand	The District will declare that an emergency water shortage condition exists when the Board of Directors determine that Stage 4 implementation is necessary pursuant to requirements specified in the District's wholesale water purchase contract with the Lower Colorado River Authority or when the Board of Directors declares that Stage 4 implementation is necessary due to a system outage or catastrophic equipment failure.	Additional pro-rata curtailment in total water use specified by LCRA.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
TRAVIS COUNTY WCID 10	TRAVIS	HIGHLAND LAKES	Combined storage of Travis/Buchanan at or below 900,000 ac-ft; or LCRA requests reduced water use	25% reduction	Combined storage of Travis/Buchanan at or below 600,000 ac-ft; or LCRA requests reduced water use	As determined by the LCRA Board
TRAVIS COUNTY WCID 17	TRAVIS	HIGHLAND LAKES	1. Any of the Stage 2 triggers are in effect; and 2. The combined storage in lakes Travis and Buchanan drops below 750,000 acre-feet or the Lake Travis level drops to 629 feet.	25% reduction in demand	1. Daily water consumption reaches 110% of treatment capacity; 2. Daily water consumption will not allow storage levels to be maintained; 3. System demand exceeds available high service pump capacity; 4. The drought contingency measures of the LCRA Water Management Plan trigger the requirement that municipal firm water customers implement mandatory Stage 3 water restrictions; or 5. The combined storage in lakes Travis and Buchanan drops below 600,000 acre-feet or the Lake Travis level drops to 620 feet or DWDOR is declared by the LCRA.	30-50% reduction in demand
TRAVIS COUNTY WCID 18	TRAVIS	HIGHLAND LAKES	When continually falling water reservoirs in the District result in ground storage tank levels of less than 35% capacities during periods of peak flow or the levels in the ground storage tanks are such as they only provide minimum water pressures at the upper ends of the pressure planes. Stage 3 may also be requested by the wholesale water supplier in periods of supply emergency.	30% reduction in demand	When continually falling levels in any ground storage tank falls below 25% of capacity which results in low pressure in any pressure plane, or as requested by the wholesale water supplier during periods of drought emergency.	40% reduction in demand

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
TRAVIS COUNTY WCID 19	TRAVIS	HIGHLAND LAKES	1. The District Operator is notified by MUD 4 that it is requiring Stage 3 requirements and constrictions which will be when: 1. the average daily water consumption reaches 90% of NruD No. 4's production/distribution capacity for a period of three consecutive days; or 2. the LCRA Board determines that the river system is experiencing a drought more severe than the Drought of Record; or 3. LCRA requires mandatory irrigation restrictions more stringent that Even/Odd Schedules.	Reduce demand by 10-20% and maintain maximum daily water demand at or below 90% of the MUD 4 system capacity.	1. Combined storage in the Highland Lakes falls below 600,000 acre-feet; 2. Daily water consumption reaches 95% of MUD No. 4's production/distribution capacity for a period of three consecutive days; 3. Daily water consumption will not enable storage levels to be maintained; 4. System demand exceeds available high service pump capacity; 5. Water system is contaminated whether accidentally or intentionally. Severe condition is reached immediately upon detection; 6. Water system fails from acts of God (tornadoes, hurricanes) or man. Severe condition is reached immediately upon detection; and/or 7. Any mechanical failure of pumping equipment which will require more than twelve hours to repair which causes unprecedented loss of capability to provide water service; or 8. LCRA requires the MUD No.4 to prohibit all use of permanently installed irrigation system or hose-end irrigation.	The goal for Stage 4 of the Plan is to reduce demand by a minimum of 20% and maintain maximum daily water demand at or below 95% of the MUD 4 system capacity.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
TRAVIS COUNTY WCID 20	TRAVIS	HIGHLAND LAKES	1. Combined storage in the Highland Lakes falls below 600,000 acre-feet; 2. The average daily water consumption reaches 90% of production/distribution capacity for a period of three consecutive days; 3. The LCRA Board of Directors declares a "Drought Worse than Drought of Record" and orders the mandatory curtailment of firm water supplies; 4. LCRA requires mandatory irrigation restrictions more stringent than Even/Odd Schedules; or 5. Required under any District water supply contract	Reduce demand by 10-20% and maintain maximum daily water demand at or below 90% of system capacity.	1. The combined storages in Lakes Buchanan and Travis continues to decrease after the declaration of a Drought Worse than Drought of Record, and the LCRA Board increases the mandatory curtailment of firm water supplies; 2. Daily water consumption reaches 95% of production/distribution capacity for a period of three consecutive days; 3. Daily water consumption will not enable storage levels to be maintained; 4. System demand exceeds available high service pump capacity; 5. Water system is contaminated whether accidentally or intentionally. Severe condition is reached immediately upon detection; 6. Water system fails - from acts of God (tornadoes, hurricanes) or man. Severe condition is reached immediately upon detection; 7. Any mechanical failure of pumping equipment which will require more than twelve hours to repair which causes unprecedented loss of capability to provide water service; or 8. LCRA requires the District to prohibit all use of permanently installed irrigation system or hose-end irrigation; or 9. Required under any District water supply contract.	Reduce demand by a minimum of 20% and maintain maximum daily water demand at or below 95% of system capacity.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
TRAVIS COUNTY WCID POINT VENTURE	TRAVIS	HIGHLAND LAKES	1. Treatment Capacity: The water treatment plant capacity condition listed above as a triggering event for Stage 3 has ceased to exist for five consecutive days; or 2. Water Supply: LCRA announces that mandatory water restrictions for firm water customers are no longer required in accordance with the LCRA DCP.	Water Supply Reduction Target: Achieve a minimum 20% reduction in water use.	1. Treatment Capacity: Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service. 2. Water Supply: Natural or man-made contamination of the water supply source; or Any other emergency water supply or demand conditions that the LCRA general manager or the LCRA Board determines that either constitutes a water supply emergency or is associated with the LCRA Board declaration of a drought worse than the drought of record.	Water Supply Reduction Target: As determined by the LCRA Board.
WEIMAR	COLORADO	GULF COAST AQUIFER	NA	NA	NA	NA
WELLS BRANCH MUD	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL)	Defer to City of Austin	15% reduction in total water use	Defer to City of Austin	Achieve necessary reduction in total water use
WELLS BRANCH MUD	WILLIAMSON	CITY OF AUSTIN - ROR (MUNICIPAL)	Defer to City of Austin	15% reduction in total water use	Defer to City of Austin	Achieve necessary reduction in total water use.
WEST END WSC	FAYETTE	YEGUA-JACKSON and GULF COAST	NA	NA	NA	NA

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	HAYS	HIGHLAND LAKES	Either of the following criteria is met: a. For surface water supply systems, when total daily water demand equals or exceeds 85% of: (a) The total design capacity of a WTCPUA water treatment plant for three consecutive days; or (b) The LCRA Board determines a drought worse than the drought of record.	Minimum 20% reduction in use	Include, but are not limited to, the following: (a) Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service; (b) Contamination of the water supply source; or (c) Any other emergency water supply or demand conditions that the WTCPUA General Manager or designee, determines to constitute a water supply emergency more severe than that contemplated in the triggers contained in the LCRA Water Management Plan	As determined by the WTCPUA Board.
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	TRAVIS	HIGHLAND LAKES	Either of the following criteria is met: a. For surface water supply systems, when total daily water demand equals or exceeds 85% of: (a) The total design capacity of a WTCPUA water treatment plant for three consecutive days; or (b) The LCRA Board determines a drought worse than the drought of record.	Minimum 20% reduction in use	Include, but are not limited to, the following: (a) Major water line breaks, loss of distribution pressure, or pump system failures that cause substantial loss in its ability to provide water service; (b) Contamination of the water supply source; or (c) Any other emergency water supply or demand conditions that the WTCPUA General Manager or designee, determines to constitute a water supply emergency more severe than that contemplated in the triggers contained in the LCRA Water Management Plan	As determined by the WTCPUA Board.

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
WHARTON	WHARTON	GULF COAST AQUIFER	Total daily for three consecutive days 3.75 MGD or 4.0 MGD on a single day.	20% reduction in demand	1. Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or 2. Natural or manmade contamination of the water supply source(s).	25% reduction in demand
WHARTON COUNTY WCID 2	WHARTON	GULF COAST AQUIFER	NA	NA	NA	NA
WILLIAMSON COUNTY WSID 3	TRAVIS	EDWARDS-BFZ	1. Failure of a major component of the system or an events that would cause an immediate health or safety hazard; 2. Water consumption exceeds the District's water supply/distribution capacity for more than 24 hours; 3. Production of Manville's water wells is at 100% and storage tank levels are decreasing at a rate exceeding 5% per day; 4. Total production of Manvillle's water well drops by an additional 15%; or 5. Otherwise required under the District's agreements with Manville.	15% reduction in use	1. Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; 2. Natural or man-made contamination of the water supply source(s); or 3. When required under the District's agreements with Manville.	75% reduction in use

Existing Drought Trigger Summary for 2021 Region K Water Plan (Updated November 2019)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
WILLIAMSON TRAVIS COUNTIES MUD 1	TRAVIS	HIGHLAND LAKES	1. Daily water consumption exceeds 95% of operating system capacity for three consecutive days; and/or the combined storage is less than 750,000 acre feet but greater than 550,000 acre feet, which typically corresponds to an elevation in Lake Travis of 618 feet; 2. Required under the District‘s wholesale water contract with the City of Cedar Park.	Minimum 20% reduction in use	1. Daily water consumption reaches 95% of production/distribution capacity for three consecutive days; and/or the combined storage reaches 200,000 acre-feet, which typically corresponds to an elevation in Lake Travis of 578 feet; 2. Daily water consumption will not enable storage levels to be maintained; 3. System demands exceed available high service pump capacity; 4. Water system is contaminated whether accidentally or intentionally. Severe condition is reached immediately upon detection; 5. Water system fails from acts of God (tornadoes, hurricanes) or man. Severe condition is reached immediately upon detection; 6. Any mechanical failure of pumping equipment which will require more than 12 hours to repair which causes unprecedented loss of capability to provide water service. 7. Required under the District’s Wholesale Water Contract with the City of Cedar Park.	Minimum 30% reduction in use
WINDERMERE UTILITY	TRAVIS	EDWARDS-BFZ	If the system meets supply or demand triggers identified in Section 9 of this plan or critical system capacities are threatened, the Utility will activate Stage II.	Reduce water consumption and usage by 20% through mandatory restrictions.	If the system meets supply or demand triggers identified in Section 9 of this plan or critical system capacities are threatened or system failures are imminent, the Utility will activate Stage III.	Reduce water consumption and usage by 30% through mandatory restrictions.

APPENDIX 7B

REGION-SPECIFIC MODEL DROUGHT CONTINGENCY PLANS

THIS PAGE LEFT INTENTIONALLY BLANK

Model Region K Drought Contingency Plan Template

Utility/Water Supplier

THIS PAGE LEFT INTENTIONALLY BLANK

Model Drought Contingency Plan Template (Utility / Water Supplier)

Brief Introduction and Background

Include information such as

- Name of Utility
- Address, City, Zip Code
- CCN#
- PWS #s

Section I: Declaration of Policy, Purpose, and Intent

In order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the _____ (name of your water supplier) hereby adopts the following regulations and restrictions on the delivery and consumption of water through an ordinance/or resolution.

Water uses regulated or prohibited under this Drought Contingency Plan (the Plan) are considered to be non-essential and continuation of such uses during times of water shortage or other emergency water supply condition are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Section XI of this Plan.

Section II: Public Involvement

Opportunity for the public to provide input into the preparation of the Plan was provided by the _____ (name of your water supplier) by means of _____ (describe methods used to inform the public about the preparation of the plan and provide opportunities for input; for example, scheduling and providing public notice of a public meeting to accept input on the Plan).

Section III: Public Education

The _____ (name of your water supplier) will periodically provide the public 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 _____ (describe methods to be used to provide information to the public about the Plan; for example, public events, press releases or utility bill inserts).

Section IV: Coordination with the Lower Colorado Regional Water Planning Group

The service area of the _____ (name of your water supplier) is located within the Lower Colorado Regional Water Planning Area and _____ (name of your water supplier) has provided a copy of this Plan to the Lower Colorado Regional Water Planning Group.

Section V: Authorization

The _____ (designated official; for example, the mayor, city manager, utility director, general manager, etc.), or his/her designee is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. The _____, (designated official) or his/her designee shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

Section VI: Application

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by the _____ (name of your water supplier). The terms person and customer as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

Section VII: Definitions

For the purposes of this Plan**,** the following definitions shall apply:

Aesthetic water use: water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

Commercial and institutional water use: water use which is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

Conservation: those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water or increase the recycling and reuse of water so that a supply is conserved and made available for future or alternative uses.

Customer: any person, company, or organization using water supplied by _____ (name of your water supplier).

Domestic water use: water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

Even number address: street addresses, box numbers, or rural postal route numbers ending in 0, 2, 4, 6, or 8 and locations without addresses.

Industrial water use: the use of water in processes designed to convert materials of lower value into forms having greater usability and value.

Landscape irrigation use: water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-way and medians.

Non-essential water use: water uses that are not essential nor required for the protection of public, health, safety, and welfare, including:

(a) irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
(b) use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;
(c) use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
(d) use of water to wash down buildings or structures for purposes other than immediate fire protection;
(e) flushing gutters or permitting water to run or accumulate in any gutter or street;
(f) use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi-type pools;
(g) use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
(h) failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
(i) use of water from hydrants for construction purposes or any other purposes other than fire fighting.

Odd numbered address: street addresses, box numbers, or rural postal route numbers ending in 1, 3, 5, 7, or 9.

Section VIII: Criteria for Initiation and Termination of Drought Response Stages

The _____ (designated official) or his/her designee shall monitor water supply and/or demand conditions on a _____ (example: daily, weekly, monthly) basis and shall determine when conditions warrant initiation or termination of each stage of the Plan, that is, when the specified triggers are reached.

The triggering criteria described below are based on _____
_____
(*provide a brief description of the rationale for the triggering criteria; for example, triggering criteria / trigger levels based on a statistical analysis of the vulnerability of the water source under drought of record conditions, or based on known system capacity limits*).

Stage 1 Triggers -- MILD Water Shortage Conditions

Requirements for initiation

Customers shall be requested to voluntarily conserve water and adhere to the prescribed restrictions on certain water uses, defined in Section VII Definitions, when

_____

(*Describe triggering criteria / trigger levels; see examples below*).

Following are examples of the types of triggering criteria that might be used in one or more successive stages of a drought contingency plan. One or a combination of such criteria must be defined for each drought response stage, but usually not all will apply. Select those appropriate to your system:

Example 1: *Annually, beginning on May 1 through September 30.*

Example 2: *When the water supply available to the _____ (name of your water supplier) is equal to or less than _____ (acre-feet, percentage of storage, etc.).*

Example 3: *When, pursuant to requirements specified in the _____(name of **your** water supplier) wholesale water purchase contract with _____ (name of your wholesale water supplier), notification is received requesting initiation of Stage 1 of the Drought Contingency Plan.*

Example 4: *When flows in the _____ (name of stream or river) are equal to or less than ____cubic feet per second.*

Example 5: *When the static water level in the _____ (name of your water supplier) well(s) is equal to or less than _____feet above/below mean sea level.*

Example 6: *When the specific capacity of the _____ (name of your water supplier) well(s) is equal to or less than _____ percent of the well's original specific capacity.*

Example 7: *When total daily water demand equals or exceeds _____ million gallons for ___consecutive days of ____ million gallons on a single day (example: based on the safe operating capacity of water supply facilities).*

Example 8: *Continually falling treated water reservoir levels which do not refill above __ percent overnight (example: based on an evaluation of minimum treated water storage required to avoid system outage).*

The public water supplier may devise other triggering criteria which are tailored to its system.

Requirements for termination

Stage 1 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of ___ (e.g. 3) consecutive days.

Stage 2 Triggers -- MODERATE Water Shortage Conditions

Requirements for initiation
Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses provided in Section IX of this Plan when _____ (*describe triggering criteria; see examples in Stage 1*).

Requirements for termination
Stage 2 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of ___ (example: 3) consecutive days. Upon termination of Stage 2, Stage 1 becomes operative.

Stage 3 Triggers -- SEVERE Water Shortage Conditions

Requirements for initiation
Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this Plan when _____ (*describe triggering criteria; see examples in Stage 1*).

Requirements for termination
Stage 3 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of ___ (example: 3) consecutive days. Upon termination of Stage 3, Stage 2 becomes operative.

Stage 4 Triggers -- CRITICAL Water Shortage Conditions

Requirements for initiation
Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 4 of this Plan when _____ (*describe triggering criteria; see examples in Stage 1*).

Requirements for termination
Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of ___ (example: 3) consecutive days. Upon termination of Stage 4, Stage 3 becomes operative.

Stage 5 Triggers -- EMERGENCY Water Shortage Conditions

Requirements for initiation
Customers shall be required to comply with the requirements and restrictions for Stage 5 of this Plan when _____ (designated official), or his/her designee, determines that a water supply emergency exists based on:

1. Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; **or**

2. Natural or man-made contamination of the water supply source(s).

Requirements for termination
Stage 5 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of ___ (example: 3) consecutive days.

Stage 6 Triggers -- WATER ALLOCATION

Requirements for initiation
Customers shall be required to comply with the water allocation plan prescribed in Section IX of this
Plan and comply with the requirements and restrictions for Stage 5 of this Plan when _____ (describe triggering criteria, see examples in Stage 1).

Requirements for termination - Water allocation may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of ___ (example: 3) consecutive days.

> *Note: The inclusion of WATER ALLOCATION as part of a drought contingency plan may not be required in all cases. For example, for a given water supplier, an analysis of water supply availability under drought of record conditions may indicate that there is essentially no risk of water supply shortage. Hence, a drought contingency plan for such a water supplier might only address facility capacity limitations and emergency conditions (example: supply source contamination and system capacity limitations).*

Section IX: Drought Response Stages

The _____ (designated official), or his/her designee, shall monitor water supply and/or demand conditions on a daily basis and, in accordance with the triggering criteria set forth in Section VIII of this Plan, shall determine that a mild, moderate, severe, critical, emergency or water shortage condition exists and shall implement the following notification procedures:

Notification
Notification of the Public:
The _____ (designated official) or his/ her designee shall notify the public by means of:

Examples:
publication in a newspaper of general circulation,
direct mail to each customer,
public service announcements,
signs posted in public places
take-home fliers at schools.

Additional Notification:

The _____ (designated official) or his/ her designee shall notify directly, or cause to be notified directly, the following individuals and entities:

Examples:
Mayor / Chairman and members of the City Council / Utility Board
Fire Chief(s)
City and/or County Emergency Management Coordinator(s)
County Judge & Commissioner(s)
State Disaster District / Department of Public Safety
TCEQ *(required when* mandatory *restrictions are imposed)*
Major water users
Critical water users, i.e. hospitals
Parks / street superintendents & public facilities managers

Note: The plan should specify direct notice only as appropriate to respective drought stages.

Stage 1 Response -- MILD Water Shortage Conditions

Target: Achieve a voluntary ___ percent reduction in _____(example: total water use, daily water demand, etc.).

Best Management Practices for Supply Management:

D*escribe additional measures, if any, to be implemented directly by (name of your water supplier) to manage limited water supplies and/or reduce water demand. Examples include: reduced or discontinued flushing of water mains, activation and use of an alternative supply source(s); use of reclaimed water for non-potable purposes.*

Voluntary Water Use Restrictions for Reducing Demand :

(a) Water customers are requested to voluntarily limit the irrigation of landscaped areas to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and to irrigate landscapes only between the hours of midnight and 10:00 a.m. and 8:00 p.m. to midnight on designated watering days.

(b) All operations of the _____ (name of your water supplier) shall adhere to water use restrictions prescribed for Stage 2 of the Plan.

(c) Water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential purposes.

Stage 2 Response -- MODERATE Water Shortage Conditions

Target: Achieve a ___ percent reduction in _____ (example: total water use, daily water demand, etc.).

Best Management Practices for Supply Management:

Describe additional measures, if any, to be implemented directly by _____ (name of your water supplier) to manage limited water supplies and/or reduce water demand. Examples include: reduced or discontinued flushing of water mains, reduced or discontinued irrigation of public landscaped areas; use of an alternative supply source(s); use of reclaimed water for non-potable purposes.

Water Use Restrictions for Demand Reduction:
Under threat of penalty for violation, the following water use restrictions shall apply to all persons:

(a) Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems shall be limited to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8), and Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9), and irrigation of landscaped areas is further limited to the hours of 12:00 midnight until 10:00 a.m. and between 8:00 p.m. and 12:00 midnight on designated watering days. However, irrigation of landscaped areas is permitted at anytime if it is by means of a hand-held hose, a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system.

(b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight. Such washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rises. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.

(c) Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or Jacuzzi-type pools is prohibited except on designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight.

(d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

(e) Use of water from hydrants shall be limited to fire fighting, related activities, or other activities necessary to maintain public health, safety, and welfare, except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from the _____ (name of your water supplier).

(f) Use of water for the irrigation of golf course greens, tees, and fairways is prohibited except on designated watering days between the hours 12:00 midnight

and 10:00 a.m. and between 8 p.m. and 12:00 midnight. However, if the golf course utilizes a water source other than that provided by the _____ (name of your water supplier), the facility shall not be subject to these regulations.

(g) All restaurants are prohibited from serving water to patrons except upon request of the patron.

(h) The following uses of water are defined as non-essential and are prohibited:

1. wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
2. use of water to wash down buildings or structures for purposes other than immediate fire protection;
3. use of water for dust control;
4. flushing gutters or permitting water to run or accumulate in any gutter or street; and
5. failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

Stage 3 Response -- SEVERE Water Shortage Conditions

<u>Target</u>: Achieve a ___ percent reduction in _____ (example: total water use, daily water demand, etc.).

<u>Best Management Practices for Supply Management</u>:

Describe additional measures, if any, to be implemented directly by _____ (name of your water supplier) to manage limited water supplies and/or reduce water demand. Examples include: reduced or discontinued flushing of water mains, reduced or discontinued irrigation of public landscaped areas; use of an alternative supply source(s); use of reclaimed water for non-potable purposes.

<u>Water Use Restrictions for Demand Reduction</u>:
All requirements of Stage 2 shall remain in effect during Stage 3 except:

(a) Irrigation of landscaped areas shall be limited to designated watering days between the hours of 12:00 midnight and 10:00 a.m. and between 8 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, drip irrigation, or permanently installed automatic sprinkler system only. The use of hose-end sprinklers is prohibited at all times.

(b) The watering of golf course tees is prohibited unless the golf course utilizes a water source other than that provided by the _____ (name of your water supplier).

(c) The use of water for construction purposes from designated fire hydrants under special permit is to be discontinued.

Stage 4 Response -- CRITICAL Water Shortage Conditions

Target: Achieve a ___ percent reduction in _____ (example: total water use, daily water demand, etc.).

Best Management Practices for Supply Management:

Describe additional measures, if any, to be implemented directly by _____ (name of your water supplier) to manage limited water supplies and/or reduce water demand. Examples include: reduced or discontinued flushing of water mains, reduced or discontinued irrigation of public landscaped areas; use of an alternative supply source(s); use of reclaimed water for non-potable purposes.

Water Use Restrictions for Reducing Demand:. All requirements of Stage 2 and 3 shall remain in effect during Stage 4 except:

(a) Irrigation of landscaped areas shall be limited to designated watering days between the hours of 6:00 a.m. and 10:00 a.m. and between 8:00 p.m. and 12:00 midnight and shall be by means of hand-held hoses, hand-held buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems are prohibited at all times.

(b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle not occurring on the premises of a commercial car wash and commercial service stations and not in the immediate interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial car washes and commercial service stations shall occur only between the hours of 6:00 a.m. and 10:00 a.m. and between 6:00 p.m. and 10 p.m.

(c) The filling, refilling, or adding of water to swimming pools, wading pools, and Jacuzzi-type pools is prohibited.

(d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

(e) No application for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as this drought response stage or a higher-numbered stage shall be in effect.

Stage 5 Response -- EMERGENCY Water Shortage Conditions

Target: Achieve a ___ percent reduction in _____ (example: total water use, daily water demand, etc.).

Best Management Practices for Supply Management:

Describe additional measures, if any, to be implemented directly by _____ (name of your water supplier) to manage limited water supplies and/or reduce water demand. Examples include: reduced or discontinued flushing of water mains, reduced or discontinued irrigation of public landscaped areas; use of an alternative supply source(s); use of reclaimed water for non-potable purposes.

Water Use Restrictions for Reducing Demand. All requirements of Stage 2, 3, and 4 shall remain in effect during Stage 5 except:

(a) Irrigation of landscaped areas is absolutely prohibited.

(b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is absolutely prohibited.

Section X: Enforcement

(a) No person shall knowingly or intentionally allow the use of water from the _____ (name of your water supplier) for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by _____(designated official), or his/her designee, in accordance with provisions of this Plan.

(b) Any person who violates this Plan is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not less than _____ dollars ($__) and not more than _____ dollars ($__). Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person is convicted of three or more distinct violations of this Plan, the _____ (designated official) shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of a re-connection charge, hereby established at $_____, and any other costs incurred by the _____ (name of your water supplier) in discontinuing service. In addition, suitable assurance must be given to the _____ (designated official) that the same action shall not be repeated while the Plan is in effect. Compliance with this plan may also be sought through injunctive relief in the district court.

(c) Any person, including a person classified as a water customer of the _____ (name of your water supplier), in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she

did not commit the violation. Parents shall be presumed to be responsible for violations of their minor children and proof that a violation, committed by a child, occurred on property within the parents' control shall constitute a rebuttable presumption that the parent committed the violation, but any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this Plan and that the parent could not have reasonably known of the violation.

(d) Any employee of the _____ (name of your water supplier), police officer, or other _____ employee designated by the _____ (designated official), may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall direct him/her to appear in the _____ (example: municipal court) on the date shown on the citation for which the date shall not be less than 3 days nor more than 5 days from the date the citation was issued. The alleged violator shall be served a copy of the citation. Service of the citation shall be complete upon delivery of the citation to the alleged violator, to an agent or employee of a violator, or to a person over 14 years of age who is a member of the violator's immediate family or is a resident of the violator's residence. The alleged violator shall appear in _____ (example: municipal court) to enter a plea of guilty or not guilty for the violation of this Plan. If the alleged violator fails to appear in _____ (example: municipal court), a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant. These cases shall be expedited and given preferential setting in _____ (example: municipal court) before all other cases.

Section XI: Variances

The _____ (designated official), or his/her designee, may, in writing, grant temporary variance for existing water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance and if one or more of the following conditions are met:

(a) Compliance with this Plan cannot be technically accomplished during the duration of the water supply shortage or other condition for which the Plan is in effect.
(b) Alternative methods can be implemented which will achieve the same level of reduction in water use.

Persons requesting an exemption from the provisions of this Ordinance shall file a petition for variance with the _____ (name of your water supplier) within 5 days after the Plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the _____ (designated official), or his/her designee, and shall include the following:

(a) Name and address of the petitioner(s).
(b) Purpose of water use.
(c) Specific provision(s) of the Plan from which the petitioner is requesting relief.
(d) Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
(e) Description of the relief requested.

(f) Period of time for which the variance is sought.
(g) Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
(h) Other pertinent information.

EXAMPLE RESOLUTION FOR ADOPTION OF A

DROUGHT CONTINGENCY PLAN

RESOLUTION NO. _____

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE _____ (name of water supplier) ADOPTING A DROUGHT CONTINGENCY PLAN.

WHEREAS, the Board recognizes that the amount of water available to the _____ (name of water supplier) and its water utility customers are limited and subject to depletion during periods of extended drought;

WHEREAS, the Board recognizes that natural limitations due to drought conditions and other acts of God cannot guarantee an uninterrupted water supply for all purposes;

WHEREAS, Section 11.1272 of the *Texas Water Code* and applicable rules of the Texas Commission on Environmental Quality require all public water supply systems in Texas to prepare a drought contingency plan; and

WHEREAS, as authorized under law, and in the best interests of the customers of the _____ (name of water supply system), the Board deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE _____ (name of water supplier):

SECTION 1. That the Drought Contingency Plan attached hereto as Exhibit "A" and made part hereof for all purposes be, and the same is hereby, adopted as the official policy of the _____ (name of water supplier).

SECTION 2. That the _____ (e.g., general manager) is hereby directed to implement, administer, and enforce the Drought Contingency Plan.

SECTION 3. That this resolution shall take effect immediately upon its passage.

DULY PASSED BY THE BOARD OF DIRECTORS OF THE _____, ON THIS __ day of _____, 20__.

_____

President, Board of Directors
ATTESTED TO:

_____
Secretary, Board of Directors

Model Region K Drought Contingency Plan Template

Irrigation Uses

THIS PAGE LEFT INTENTIONALLY BLANK

Model Drought Contingency Plan Template (Irrigation Uses)

DROUGHT CONTINGENCY PLAN
FOR
(Name of irrigation district)
(Address)
(Date)

Section I: Declaration of Policy, Purpose, and Intent

The Board of Directors of the _____ (name of irrigation district) deems it to be in the interest of the District to adopt Rules and Regulations governing the equitable and efficient allocation of limited water supplies during times of shortage. These Rules and Regulations constitute the District's drought contingency plan required under Section 11.1272, Texas Water Code, *Vernon's Texas Codes Annotated*, and associated administrative rules of the Texas Commission on Environmental Quality (Title 30, Texas Administrative Code, Chapter 288).

Section II: User Involvement

Opportunity for users of water from the _____ (name of irrigation district) was provided by means of _____ (describe methods used to inform water users about the preparation of the plan and opportunities for input; for example, scheduling and providing notice of a public meeting to accept user input on the plan).

Section III: User Education

The _____ (name of irrigation district) will periodically provide water users with information about the Plan, including information about the conditions under which water allocation is to be initiated or terminated and the district's policies and procedures for water allocation. This information will be provided by means of _____ (e.g. describe methods to be used to provide water users with information about the Plan; for example, by providing copies of the Plan and by posting water allocation rules and regulations on the district's public bulletin board).

Section IV: Authorization

The _____ (e.g., general manager) is hereby authorized and directed to implement the applicable provision of the Plan upon determination by the Board that such implementation is necessary to ensure the equitable and efficient allocation of limited water supplies during times of shortage.

Section V: Application

The provisions of the Plan shall apply to all persons utilizing water provided by the _____ (name of irrigation district). The term "person" as used in the Plan includes individuals, corporations, partnerships, associations, and all other legal entities.

Section VI: Initiation of Water Allocation

The _____ (designated official) shall monitor water supply conditions on a _____ (e.g. weekly, monthly) basis and shall make recommendations to the Board regarding irrigation of water allocation. Upon approval of the Board, water allocation will become effective when _____ (describe the criteria and the basis for the criteria):

Below are examples of the types of triggering criteria that might be used; singly or in combination, in an irrigation district's drought contingency plan:

Example 1: Water in storage in the _____ (name of reservoir) is equal to or less than _____ (acre-feet and/or percentage of storage capacity).

Example 2: Combined storage in the _____ (name or reservoirs) reservoir system is equal to or less than _____ (acre-feet and/or percentage of storage capacity).

Example 3: Flows as measured by the U.S. Geological Survey gage on the _____ (name of reservoir) near _____ _____, Texas reaches ____ cubic feet per second (cfs).

Example 4: The storage balance in the district's irrigation water rights account reaches _____ acre-feet.

Example 5: The storage balance in the district's irrigation water rights account reaches an amount equivalent to _____ (number) irrigations for each flat rate acre in which all flat rate assessments are paid and current.

Example 6: The _____ (name of entity supplying water to the irrigation district) notifies the district that water deliveries will be limited to _____ acre-feet per year (i.e. a level below that required for unrestricted irrigation).

Section VII: Termination of Water Allocation

The district's water allocation policies will remain in effect until the conditions defined in Section IV of the Plan no longer exist and the Board deems that the need to allocate water no longer exists.

Section VIII: Notice

Notice of the initiation of water allocation will be given by notice posted on the District's public bulletin board and by mail to each _____ (e.g. landowner, holders of active irrigation accounts, etc.).

Section IX: Water Allocation

(a) In identifying **specific, quantified targets** for water allocation to be achieved during periods of water shortages and drought, each irrigation user shall be allocated _____ irrigations or _____ acre-feet of water each flat rate acre on

which all taxes, fees, and charges have been paid. The water allotment in each irrigation account will be expressed in acre-feet of water.

Include explanation of water allocation procedure. For example, in the Lower Rio Grande Valley, an "irrigation" is typically considered to be equivalent to eight (8) inches of water per irrigation acre; consisting of six (6) inches of water per acre applied plus two (2) inches of water lost in transporting the water from the river to the land. Thus, three irrigations would be equal to 24 inches of water per acre or an allocation of 2.0 acre-feet of water measured at the diversion from the river.

(b) As additional water supplies become available to the District in an amount reasonably sufficient for allocation to the District's irrigation users, the additional water made available to the District will be equally distributed, on a pro rata basis, to those irrigation users having _____.

Example 1: An account balance of less than _____ irrigations for each flat rate acre (i.e. ____ acre-feet).

Example 2: An account balance of less than _____ acre-feet of water for each flat rate acre.

Example 3: An account balance of less than _ ___ acre-feet of water. (c) The amount of water charged against a user's water allocation will be ____ (e.g. eight inches) per irrigation, or one allocation unit, unless water deliveries to the land are metered. Metered water deliveries will be charges based on actual measured use. In order to maintain parity in charging use against a water allocation between non-metered and metered deliveries, a loss factor of ____ percent of the water delivered in a metered situation will be added to the measured use and will be charged against the user's water allocation. Any metered use, with the loss factor applied, that is less than eight (8) inches per acre shall be credited back to the allocation unit and will be available to the user. It shall be a violation of the Rules and Regulations for a water user to use water in excess of the amount of water contained in the users irrigation account.

(d) Acreage in an irrigation account that has not been irrigated for any reason within the last two (2) consecutive years will be considered inactive and will not be allocated water. Any landowner whose land has not been irrigated within the last two (2) consecutive years, may, upon application to the District expressing intent to irrigate the land, receive future allocations. However, irrigation water allocated shall be applied only upon the acreage to which it was allocated and such water allotment cannot be transferred until there have been two consecutive years of use.

Section X: Transfers of Allotments

(a) A water allocation in an active irrigation account may be transferred within the boundaries of the District from one irrigation account to another. The transfer of water can only be made by the landowner's agent who is authorized in writing to act on behalf of the landowner in the transfer of all or part of the water allocation from the described land of the landowner covered by the irrigation account.

(b) A water allocation may not be transferred to land owned by a landowner outside the District boundaries.

or

A water allocation may be transferred to land outside the District's boundaries by paying the current water charge as if the water was actually delivered by the District to the land covered by an irrigation account. The amount of water allowed to be transferred shall be stated in terms of acre-feet and deducted from the landowner's current allocation balance in the irrigation account. Transfers of water outside the District shall not affect the allocation of water under Section VII of these Rules and Regulations.

(c) Water from outside the District may not be transferred by a landowner for use within the District.

or

Water from outside the District may be transferred by a landowner for use within the District. The District will divert and deliver the water on the same basis as District water is delivered, except that a ___ percent conveyance loss will be charged against the amount of water transferred for use in the District as the water is delivered.

Section XI: Penalties

Any person who willfully opens, closes, changes or interferes with any headgate or uses water in violation of these Rules and Regulations, shall be considered in violation of Section 11.0083, Texas Water Code, *Vernon's Texas Codes Annotated*, which provides for punishment by fine of not less than $10.00 nor more than $200.00 or by confinement in the county jail for not more than thirty (30) days, or both, for each violation, and these penalties provided by the laws of the State and may by enforced by complaints filed in the appropriate court jurisdiction in _____ County, all in accordance with Section 11.083; and in addition, the District may pursue a civil remedy in the way of damages and/or injunction against the violation of any of the foregoing Rules and Regulations.

Section XII: Severability

It is hereby declared to be the intention of the Board of Directors of the _____ (name of irrigation district) that the sections, paragraphs, sentences, clauses, and phrases of this Plan shall be declared unconstitutional by the valid judgment or decree of any court of competent

jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Plan, since the same would not have been enacted by the Board without the incorporation into this Plan of any such unconstitutional phrase, clause, sentence, paragraph, or section.

Section XIII: Authority

The foregoing rules and regulations are adopted pursuant to and in accordance with Sections 11.039, 11.083, 11.1272; Section 49.004; and Section 58.127-130 of the Texas Water Code, *Vernon's Texas Codes Annotated.*

Section XIV: Effective Date of Plan

The effective date of this Rule shall be five (5) days following the date of Publication hereof and ignorance of the Rules and Regulations is not a defense for a prosecution for enforcement of the violation of the Rules and Regulations.

EXAMPLE RESOLUTION FOR ADOPTION OF A DROUGHT CONTINGENCY PLAN

RESOLUTION NO. _____

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE _____ (name of water supplier) ADOPTING A DROUGHT CONTINGENCY PLAN.

WHEREAS, the Board recognizes that the amount of water available to the _____ (name of water supplier) and its water utility customers is limited and subject to depletion during periods of extended drought;

WHEREAS, the Board recognizes that natural limitations due to drought conditions and other acts of God cannot guarantee an uninterrupted water supply for all purposes;

WHEREAS, Section 11.1272 of the Texas Water Code and applicable rules of the Texas Commission on Environmental Quality require all public water supply systems in Texas to prepare a drought contingency plan; and

WHEREAS, as authorized under law, and in the best interests of the customers of the _____(name of water supply system), the Board deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE _____ (name of water supplier):

SECTION 1. That the Drought Contingency Plan attached hereto as Exhibit A and made part hereof for all purposes be, and the same is hereby, adopted as the official policy of the _____ (name of water supplier).

SECTION 2. That the _____ (e.g., general manager) is hereby directed to implement, administer, and enforce the Drought Contingency Plan.

SECTION 3. That this resolution shall take effect immediately upon its passage.

DULY PASSED BY THE BOARD OF DIRECTORS OF THE _____, ON THIS __ day of _____, 20__.

_____

President, Board of Directors

ATTESTED TO:

_____Secretary, Board of Director

Model Region K Drought Contingency Plan Template

Wholesale Water Providers

THIS PAGE LEFT INTENTIONALLY BLANK

Model Drought Contingency Plan Template (**Wholesale Public Water Suppliers**)

DROUGHT CONTINGENCY PLAN
FOR THE
(Name of wholesale water supplier)
(address)
(CCN)
(PWS)
(Date)

Section I: Declaration of Policy, Purpose, and Intent

In order to conserve the available water supply and/or to protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other water supply emergency conditions, the _____ (name of your water supplier) adopts the following Drought Contingency Plan (the Plan).

Section II: Public Involvement

Opportunity for the public and wholesale water customers to provide input into the preparation of the Plan was provided by _____ (name of your water supplier) by means of _____ (describe methods used to inform the public and wholesale customers about the preparation of the plan and opportunities for input; for example, scheduling and proving public notice of a public meeting to accept input on the Plan).

Section III: Wholesale Water Customer Education

The _____ (name of your water supplier) will periodically provide wholesale 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 _____ (e.g., describe methods to be used to provide customers with information about the Plan; for example, providing a copy of the Plan or periodically including information about the Plan with invoices for water sales).

Section IV: Coordination with the Lower Colorado Regional Water Planning Group

The service area of the _____ (name of your water supplier) is located within the Lower Colorado Regional Water Planning Area and _____ (name of your water supplier) has provided a copy of this Plan to the Lower Colorado Regional Water Planning Group.

Section V: Authorization

The _____ (designated official; for example, the general manager or executive director), or his/her designee, is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. The _____, or his/her designee, shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

Section VI: Application

The provisions of this Plan shall apply to all customers utilizing water provided by the _____ (name of your water supplier). The terms person and customer as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

Section VII: Criteria for Initiation and Termination of Drought Response Stages

The _____ (designated official), or his/her designee, shall monitor water supply and/or demand conditions on a (e.g., weekly, monthly) basis and shall determine when conditions warrant initiation or termination of each stage of the Plan. Customer notification of the initiation or termination of drought response stages will be made by mail or telephone. The news media will also be informed.

The triggering criteria described below are based on:

_____
_____ (provide a brief description of the rationale for the triggering criteria; for example, triggering criteria are based on a statistical analysis of the vulnerability *of the water source under drought of record conditions).*

Stage 1 Triggers -- MILD Water Shortage Conditions

Requirements for initiation: The _____ (name of your water supplier) will recognize that a mild water shortage condition exists when_____(*describe triggering criteria, see examples below).*

Below are examples of the types of triggering criteria that might be used in a wholesale water supplier's drought contingency plan. One or a combination of such criteria may be defined for each drought response stage:

Example 1: Water in storage in the _____ (name of reservoir) is equal to or less than _____ (acre-feet and/or percentage of storage capacity).

Example 2: ***When the combined storage in the _____ (name of reservoirs) is equal to or less than _____ (acre-feet and/or percentage of storage capacity).***

Example 3: ***Flows as measured by the U.S. Geological Survey gage on the _____ (name of river) near _____, Texas reaches ___ cubic feet per second (cfs).***

Example 4: ***When total daily water demand equals or exceeds _____ million gallons for ___consecutive days or ____ million gallons on a single day.***

Example 5: ***When total daily water demand equals or exceeds ___ percent of the safe operating capacity of _____ million gallons per day for ___consecutive days or ___ percent on a single day.***

Requirements for termination: Stage 1 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of ___ (e.g., 30) consecutive days. The _____ (name of water supplier) will notify its wholesale customers and the media of the termination of Stage 1 in the same manner as the notification of initiation of Stage 1 of the Plan.

Stage 2 Triggers -- MODERATE Water Shortage Conditions

Requirements for initiation: The _____ (name of your water supplier) will recognize that a moderate water shortage condition exists when_____(describe triggering criteria).

Requirements for termination**:** Stage 2 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of ___ (e.g., 30) consecutive days. Upon termination of Stage 2, Stage 1 becomes operative. The _____ (name of your water supplier) will notify its wholesale customers and the media of the termination of Stage 2 in the same manner as the notification of initiation of Stage 1 of the Plan.

Stage 3 Triggers -- SEVERE Water Shortage Conditions

Requirements for initiation: The _____ (name of your water supplier) will recognize that a severe water shortage condition exists when_____(*describe triggering criteria; see examples in Stage 1*).

Requirements for termination**:** Stage 3 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of ___ (e.g., 30) consecutive days. Upon termination of Stage 3, Stage 2 becomes operative. The _____ (name of your water supplier)

will notify its wholesale customers and the media of the termination of Stage 2 in the same manner as the notification of initiation of Stage 3 of the Plan.

Stage 4 Triggers -- CRITICAL Water Shortage Conditions

Requirements for initiation - The _____ (name of your water supplier) will recognize that an emergency water shortage condition exists when_____(*describe triggering criteria*; *see examples below*).

Example 1. ***Major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or***

Example 2. ***Natural or man-made contamination of the water supply source(s).***

Requirements for termination**:** Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period of ___ (e.g., 30) consecutive days. The _____ (name of your water supplier) will notify its wholesale customers and the media of the termination of Stage 4.

Section VIII: Drought Response Stages

The _____ (designated official), or his/her designee, shall monitor water supply and/or demand conditions and, in accordance with the triggering criteria set forth in Section VI, shall determine that mild, moderate, or severe water shortage conditions exist or that an emergency condition exists and shall implement the following actions:

Stage 1 Response -- MILD Water Shortage Conditions

Target: Achieve a voluntary __ percent reduction in _____ (e.g., total water use, daily water demand, etc.).

Best Management Practices for Supply Management:

Describe additional measures, if any, to be implemented directly by _____ (designated official), or his/her designee(s), to manage limited water supplies and/or reduce water demand. Examples include modifying reservoir operations procedures, interconnection with another water system, and use of reclaimed water for non-potable purposes.

Water Use Restrictions for Reducing Demand:

(a) The _____ (designated official), or his/her designee(s), will contact wholesale water customers to discuss water supply and/or demand conditions and will

request that wholesale water customers initiate voluntary measures to reduce water use (e.g., implement Stage 1 of the customer's drought contingency plan).

(b) The _____ (designated official), or his/her designee(s), will provide a weekly report to news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 2 Response -- MODERATE Water Shortage Conditions

Target: Achieve a ___ percent reduction in _____ (e.g., total water use, daily water demand, etc.).

Best Management Practices for Supply Management:

Describe additional measures, if any, to be implemented directly by _____ (designated official), or his/her designee(s), to manage limited water supplies and/or reduce water demand. Examples include modifying reservoir operations procedures, interconnection with another water system, and use of reclaimed water for non-potable purposes.

Water Use Restrictions for Reducing Demand:

(a) The _____ (designated official), or his/her designee(s), will initiate weekly contact with wholesale water customers to discuss water supply and/or demand conditions and the possibility of pro rata curtailment of water diversions and/or deliveries.

(b) The _____ (designated official), or his/her designee(s), will request wholesale water customers to initiate mandatory measures to reduce non-essential water use (e.g., implement Stage 2 of the customer's drought contingency plan).

(c) The _____ (designated official), or his/her designee(s), will initiate preparations for the implementation of pro rata curtailment of water diversions and/or deliveries by preparing a monthly water usage allocation baseline for each wholesale customer according to the procedures specified in Section VI of the Plan.

(d) The _____ (designated official), or his/her designee(s), will provide a weekly report to news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 3 Response -- SEVERE Water Shortage Conditions

Target: Achieve a ___ percent reduction in _____ (e.g., total water use, daily water demand, etc.).

Best Management Practices for Supply Management:

Describe additional measures, if any, to be implemented directly by _____ (designated official), or his/her designee(s), to manage limited water supplies and/or reduce water demand. Examples include modifying reservoir operations procedures, interconnection with another water system, and use of reclaimed water for non-potable purposes.

Water Use Restrictions for Reducing Demand:

(a) The _____ (designated official), or his/her designee(s), will contact wholesale water customers to discuss water supply and/or demand conditions and will request that wholesale water customers initiate additional mandatory measures to reduce non-essential water use (e.g., implement Stage 2 of the customer's drought contingency plan).

(b) The _____ (designated official), or his/her designee(s), will initiate pro rata curtailment of water diversions and/or deliveries for each wholesale customer according to the procedures specified in Section VI of the Plan.

(c) The _____ (designated official), or his/her designee(s), will provide a weekly report to news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 4 Response -- EMERGENCY Water Shortage Conditions

Whenever emergency water shortage conditions exist as defined in Section VII of the Plan, the _____ (designated official) shall:

1. Assess the severity of the problem and identify the actions needed and time required to solve the problem.

2. Inform the utility director or other responsible official of each wholesale water customer by telephone or in person and suggest actions, as appropriate, to alleviate problems (e.g., notification of the public to reduce water use until service is restored).

3. If appropriate, notify city, county, and/or state emergency response officials for assistance.

4. Undertake necessary actions, including repairs and/or clean-up as needed.

5. Prepare a post-event assessment report on the incident and critique of emergency response procedures and actions.

Section IX: Pro Rata Water Allocation

In the event that the triggering criteria specified in Section VII of the Plan for Stage 3 Severe Water Shortage Conditions have been met, the _____ (designated official) is hereby authorized initiate allocation of water supplies on a pro rata basis in accordance with Texas Water Code Section 11.039.

Section X: Enforcement

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:

____ times the normal water charge per acre-foot for water diversions and/or deliveries in excess of the monthly allocation up through 5 percent above the monthly allocation.

____ times the normal water charge per acre-foot for water diversions and/or deliveries in excess of the monthly allocation from 5 percent through 10 percent above the monthly allocation.

____ times the normal water charge per acre-foot for water diversions and/or deliveries in excess of the monthly allocation from 10 percent through 15 percent above the monthly allocation.

____ times the normal water charge per acre-foot for water diversions and/or deliveries more than 15 percent above the monthly allocation.

The above surcharges shall be cumulative.

Section XI: Variances

The _____ (designated official), or his/her designee, may, in writing, grant a temporary variance to the pro rata water allocation policies provided by this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the public health, welfare, or safety and if one or more of the following conditions are met:

(a) Compliance with this Plan cannot be technically accomplished during the duration of the water supply shortage or other condition for which the Plan is in effect.

(b) Alternative methods can be implemented which will achieve the same level of reduction in water use.

Persons requesting an exemption from the provisions of this Plan shall file a petition for variance with the _____ (designated official) within 5 days after pro rata allocation has been invoked. All petitions for variances shall be reviewed by the _____ (governing body), and shall include the following:

(a) Name and address of the petitioner(s).
(b) Detailed statement with supporting data and information as to how the pro rata allocation of water under the policies and procedures established in the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
(c) Description of the relief requested.
(d) Period of time for which the variance is sought.
(e) Alternative measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
(f) Other pertinent information.

Variances granted by the _____ (governing body) shall be subject to the following conditions, unless waived or modified by the _____ (governing body) or its designee:

(a) Variances granted shall include a timetable for compliance.
(b) Variances granted shall expire when the Plan is no longer in effect, unless the petitioner has failed to meet specified requirements.

No variance shall be retroactive or otherwise justify any violation of this Plan occurring prior to the issuance of the variance.

Section XII: Severability

It is hereby declared to be the intention of the _____ (governing body of your water supplier) that the sections, paragraphs, sentences, clauses, and phrases of this Plan are severable and, if any phrase, clause, sentence, paragraph, or section of this Plan shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Plan, since the same would not have been enacted by the _____ (governing body of your water supplier) without the incorporation into this Plan of any such unconstitutional phrase, clause, sentence, paragraph, or section.

EXAMPLE RESOLUTION FOR ADOPTION OF A

DROUGHT CONTINGENCY PLAN

RESOLUTION NO. _____

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE _____ (name of water supplier) ADOPTING A DROUGHT CONTINGENCY PLAN.

WHEREAS, the Board recognizes that the amount of water available to the _____ (name of water supplier) and its water utility customers is limited and subject to depletion during periods of extended drought;

WHEREAS, the Board recognizes that natural limitations due to drought conditions and other acts of God cannot guarantee an uninterrupted water supply for all purposes;

WHEREAS, Section 11.1272 of the *Texas Water Code* and applicable rules of the Texas Commission on Environmental Quality require all public water supply systems in Texas to prepare a drought contingency plan; and

WHEREAS, as authorized under law, and in the best interests of the customers of the _____(name of water supply system), the Board deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during drought and other water supply emergencies;

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE _____ (name of water supplier):

SECTION 1. That the Drought Contingency Plan attached hereto as "Exhibit A" and made

part hereof for all purposes be, and the same is hereby, adopted as the official policy of the _____ (name of water supplier).

SECTION 2. That the _____ (e.g., general manager) is hereby directed to implement, administer, and enforce the Drought Contingency Plan.

SECTION 3. That this resolution shall take effect immediately upon its passage.

DULY PASSED BY THE BOARD OF DIRECTORS OF THE _____, ON THIS __ day of _____, 20__.

_____

President, Board of Directors

ATTESTED TO:

_____

Secretary, Board of Directors

THIS PAGE LEFT INTENTIONALLY BLANK

Model Region K Drought Contingency Plan Template

Steam-Electric Water Users

THIS PAGE LEFT INTENTIONALLY BLANK

Model Drought Contingency Plan Template (Steam-Electric Uses)

DROUGHT CONTINGENCY PLAN
FOR
(Name of Facility)
(Address)
(Date)

Section I: Declaration of Policy, Purpose, and Intent

In cases of extreme drought, periods of abnormally high usage, system contamination, or extended reduction in ability to supply water due to equipment failure, temporary restrictions may be instituted to limit non-essential water usage. The purpose of this Drought Contingency Plan (the Plan), adopted by _____ (*name of your facility)* is to encourage a reduction of water use in order to maintain adequate supply to ensure the safe and reliable operation of _____ (*name of your facility),* and to protect the fresh water resources available.

Section II: Facility Staff Education

Management at _____ (*name of your facility*) will periodically provide the employees of the facility with information about the Plan, including the importance of the Plan, 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 _____ (*example: describe methods to be used to provide employees with information about the Plan; for example, providing a copy of the Plan or holding staff meetings*).

Section III: Coordination with Regional Water Planning Groups

The water service area of the _____ (name of your facility) is located within the Lower Colorado Regional Water Planning Area (Region K) and the _____ (*name of your facility*) has provided a copy of the Plan to the Lower Colorado Regional Water Planning Group.

Section IV: Authorization

The _____ (*designated representative; for example, the plant manager*), or his/her designee, is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. The _____ or his/her designee, shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan.

Section V: Criteria for Initiation and Termination of Drought Response Stages

The _____ (*designated representative*), or his/her designee, shall monitor water supply and/or demand conditions and shall determine when conditions warrant initiation or termination of each stage of the Plan.

Stage 1 – Year-Round Water Conservation

Action: Implement the facility's Water Conservation Plan (example)

Reduction Target: None (operation under normal conditions); Include definition of year-round conservation in Water Conservation Plan. (examples)

Initiation: Ongoing

Termination: None

Water Use Reduction Response Measures (examples):

1. Irrigation of landscaped areas with hose-end sprinklers or in-ground irrigation systems is limited to no more than twice weekly. Water hours will be limited to between midnight and 10 a.m. and 7 p.m. and midnight.
2. _____ (Other measures, as needed.)

Stage 2 -- MODERATE Water Shortage Conditions

Action: Curtail outdoor use of water for irrigation of landscape. (example)

Reduction Target: Achieve a _____ percent reduction in _____ (e.g. percent of non-cooling water use)

Initiation: The _____ (*name of your facility*) will recognize that a moderate water shortage condition exists when _____ (*describe triggering criteria*).

Termination: Stage 2 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased. Upon termination of Stage 2, Stage 1, becomes operative.

Water Use Reduction Response Measures (examples):

1. Prohibit irrigation of landscape, except by hand-held hose, bucket, or drip irrigation.
2. Discontinue irrigation of lawns.
3. Discontinue washing and rinsing of vehicles and other equipment unless required for operation of the facility or to reduce hazards.
4. _____ (Other measures, as needed.)

Stage 3 -- SEVERE Water Shortage Conditions

Action: Curtail consumptive water uses. (example)

Reduction Target: Achieve a _____ percent reduction in _____ (e.g. percent of consumed water)

Initiation: The _____ (*name of your facility*) will recognize that a severe water shortage condition exists when _____ (*describe triggering criteria*).

Termination: Stage 3 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased. Upon termination of Stage 3, Stage 2 or another appropriate Stage, becomes operative.

Water Use Reduction Response Measures (examples):

1. All water use for washing and rinsing of vehicles and other equipment will be stopped unless an alternative water source is used.
2. Reduce pumping from water source as directed by water supplier and/or based on ERCOT requirements.
3. _____ (Other measures, as needed.)

Stage 4 – CRITICAL/EMERGENCY Water Shortage Conditions

Action: Further curtail consumptive water uses. (example)

Reduction Target: Achieve a _____ percent reduction in _____ (e.g. percent of consumed water)

Initiation: The _____ (*name of your facility*) will recognize that a critical/emergency water shortage condition exists when _____ (*describe triggering criteria*).

Termination: Stage 4 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased. Upon termination of Stage 4, Stage 3 or another appropriate Stage, becomes operative.

Water Use Reduction Response Measures (examples):

1. Reduce pumping from water source as directed by water supplier and/or based on ERCOT requirements.
2. _____ (Other measures, as needed.)

Section VI: Notification

Notification of the implementation of any mandatory provision of the Plan shall be made to _____ (e.g. water supplier; entity requiring the Plan)_____(method of notification) within_____ (number of days) business days of implementation.