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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

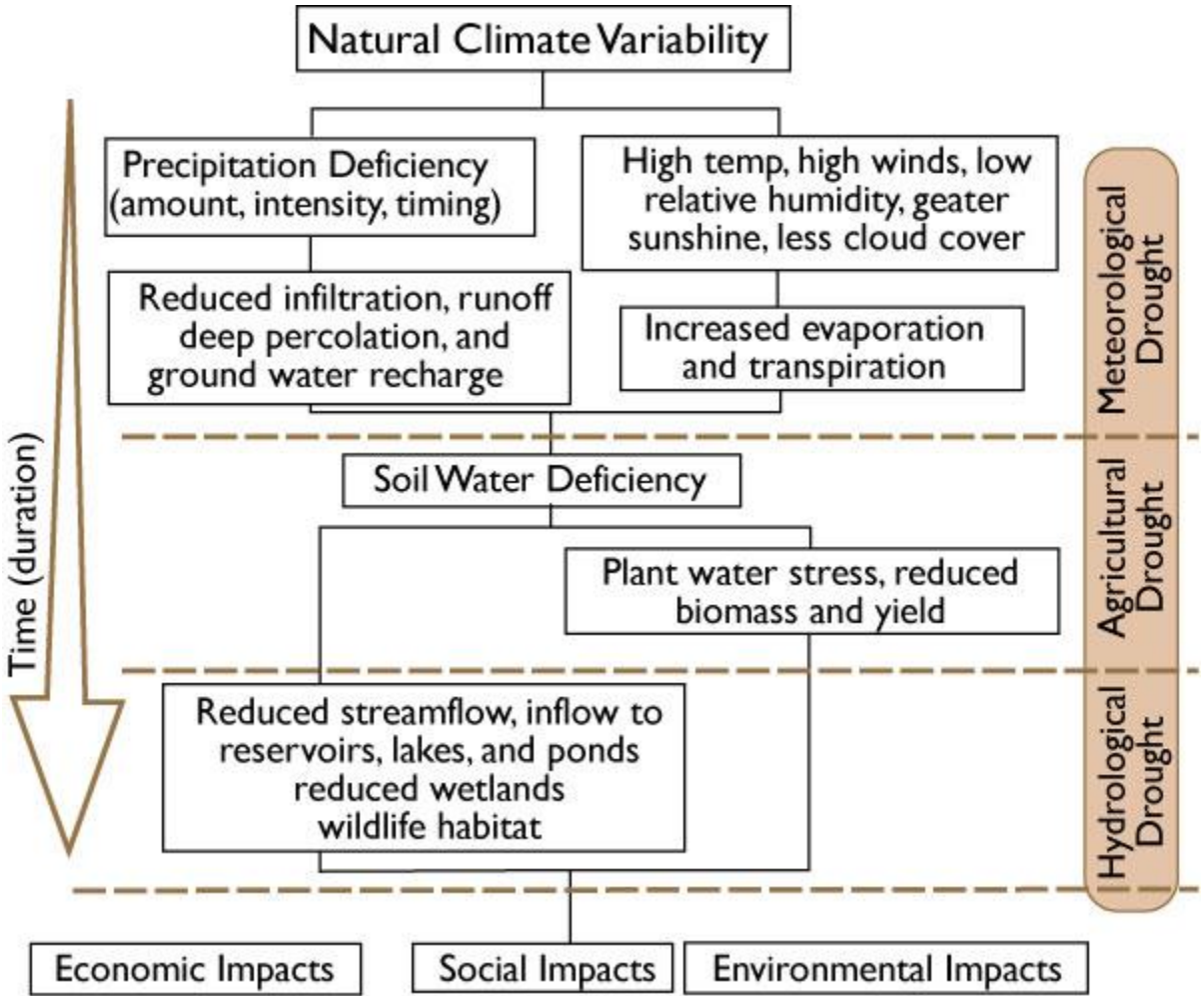
Drought is often referred to as a slow-moving emergency. The impact of droughts can be far-reaching but can be challenging to define due to the gradual and sometimes subtle progression of severity, as well as the tendency for temporal and geographic variations as isolated rain events shift perception 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 measureable 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 natural hydrological conditions 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 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.

7.1.2 Potential New Drought of Record

The Lower Colorado River Basin, at the writing of this report, is experiencing a prolonged drought which is significantly impacting the Highland Lakes. Recent modeling efforts which included hydrology through 2013 indicate that the basin Drought of Record continues to be the period between May 1947 and April 1957. Modeling efforts confirm that 2011 represents the worst single-year drought on record, or the dry year of the basin.

The Lower Colorado River Authority is closely monitoring lake levels and inflows. Inflows to the Highland Lakes have been well below the monthly average since March 2012, and inflows in 2014 were the second lowest for a calendar year since 1942. In February 2015, the Lower Colorado River Authority announced that the drought gripping the Highland Lakes indicates the onset of a new critical period of drought for the region, and that LCRA had lowered its firm yield estimates by about 100,000 acre-feet.

If the combined storage of the Highland Lakes falls to 30 percent of capacity, or 600,000 acre-feet, the LCRA Board of Directors will issue a Drought Worse than the Drought of Record declaration. Following a state-approved plan, LCRA would then require cities, industries and other firm customers to reduce their water use by 20 percent from a baseline year and would cut off all Highland Lakes water to interruptible customers. Should LCRA Board of Directors declare a Drought Worse than the Drought of Record, the termination and full extent of the drought will not be quantifiable until after the Highland Lakes are full again.

In February 2015, LCRA announced that preliminary 2014 data analysis shows the drought gripping the Highland Lakes is now the most severe drought the region has experienced in the period of record.

LCRA's February 18, 2015 Press Release states that:

> "As a direct result of the prolonged record-dry conditions and record-low inflows from the streams and tributaries feeding the Highland Lakes, the "firm yield," or inventory of water LCRA can provide reliably every year, has been decreased by about 100,000 acre-feet, to 500,000 acre-feet per year. (An acre-foot of water is 325,851 gallons.) Further reductions in firm yield are possible as the drought continues."

In a presentation to LCRA's Board the staff reported that "preliminary data shows the Highland Lakes are now in a new "critical period" marking the driest conditions on record, eclipsing the 1947-57 drought that until now was the worst on record".

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 2013. However, since the full and final 2014 data sets are not yet available, analysis of the additional drought data through 2014 and beyond will need to be conducted for future planning analyses. It should be noted that year 2011 drought conditions account for most of the preliminary firm system yield reduction recently estimated by LCRA. Firm yield reduction impacts from inclusion of the 2011 data was also incorporated in the Region K water availability modeling since the data set used was extended through 2013.

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. It should be noted that this plan includes additional new water management strategies including strategies aimed at managing and responding to the on-going drought, especially in light of its severity, even though it has diminished somewhat with recent inflows to the Highland Lakes.

Timeline of Current Central Texas Drought

While not yet considered a new drought of record, because the final naturalized inflow data sets are not yet available to fully analyze the severity of the drought beyond the end of 2013, it is important to note that the Lower Colorado River Basin is currently experiencing an historic drought. In any emergency event, there are a series of benchmarks that provide a valuable perspective of how conditions changed over time. Some of the impacts of the drought that have occurred since the beginning of the 2011-2016 regional planning cycle have been included for documentation purposes.

The drought has caused major impacts to reservoir levels, has helped create conditions to enable large wildfires, and has caused economic impacts to water users throughout the Lower Colorado Basin, including agriculture and recreational interests.

Wildfires occurred across Texas in September of 2011, as a result of the dry conditions. The most devastating one was the Bastrop Complex Fire in Bastrop County, which destroyed over 34,000 acres and more than 1,300 homes, and the loss of two lives. A massive wildfire in the Spicewood or Pedernales area of Burnet and Travis Counties also destroyed homes and property that month. 2011 became the new single driest year on record, replacing 1956 in the Lower Colorado Basin.

In late January of 2012, the wells in Spicewood Beach, Texas ran out of water. The residents had to depend on tanker trucks to deliver water to the town's storage tank. The Lower Colorado River Authority (LCRA) owned the water system at the time and oversaw the emergency water operation. Corix Utilities currently provides Spicewood Beach with retail water treatment.

The low water levels in Central Texas took their toll on rice farmers near the coast. Rice farming relies heavily on stored water from the Highland Lakes on the Colorado River. The low lake levels led to LCRA's request for emergency relief from the LCRA Water Management Plan from providing interruptible stored water to downstream non-Garwood Division irrigators, which was granted by TCEQ in 2012, 2013, 2014, and 2015.

The drought has also affected a wide range of industries and other LCRA firm water customers in Texas. Property values, tourism, and recreational businesses have suffered in the areas surrounding the Highland

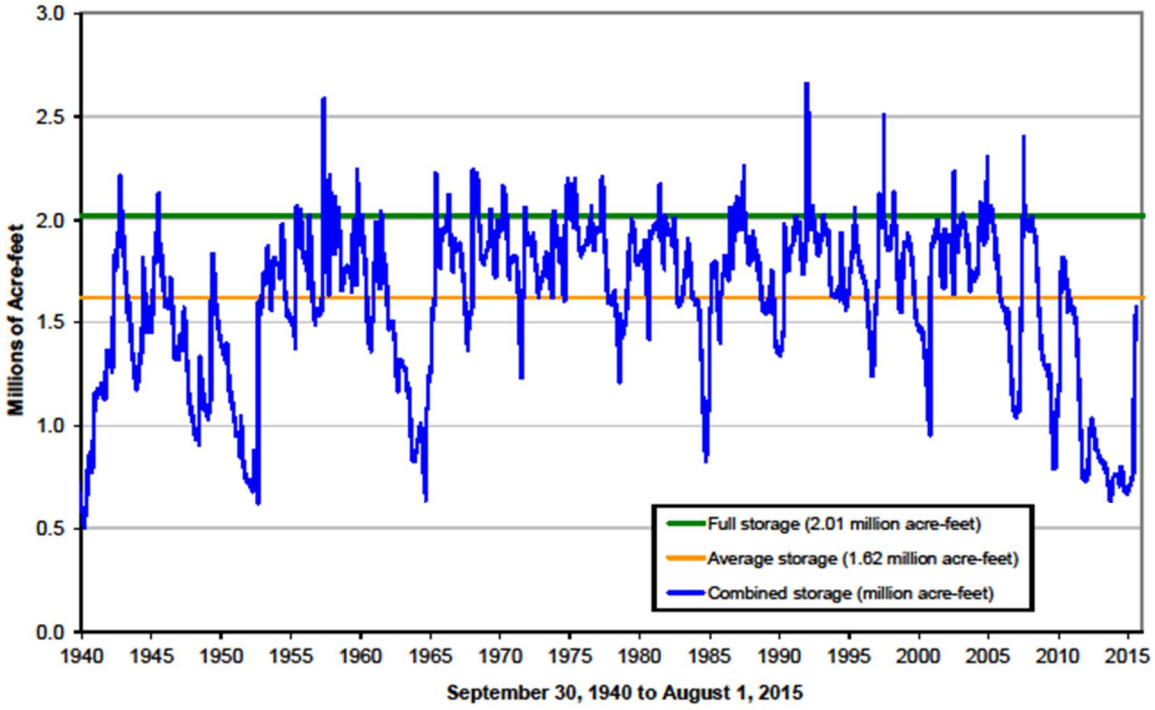
Lakes, and farmers downstream that have had their water supplies curtailed, as well as the industries that support agriculture, have all had major negative economic impacts in the last several years.

Until recently, when rains have come, they have been in large part downstream of the watersheds needed to provide inflows to Lake Travis and Lake Buchanan. In October 2013, historic flooding occurred in Austin, including Barton Creek and Onion Creek. The floodwater was not able to be captured and flowed downstream to Matagorda Bay instead. In addition, the drought has caused such extreme dryness in the soils in the Hill Country that even when normal levels of rainfall occur, the inflows to the Highland Lakes have continued to be extremely low.

In September 2014, TWDB authorized funding for construction of a new off-channel reservoir for LCRA along the Colorado River near Lane City in Wharton County. Construction of the reservoir began in late 2014 and is expected to be complete by 2018. A reservoir of this type will be able to catch future flood flows downstream of the Highland Lakes.

The current drought began in 2008 and resulted in persistently low lake levels from 2011 to mid-2015. Although the region's water supply reservoirs benefited from significant rain events in the spring and fall of 2015, reservoir storage has not fully recovered. As of November 2015, combined lake storage is at 78%. *Figure 7.2* shows how the combined storage in the last several years compares to historical storage levels dating back to 1940.

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.

A drought management efforts survey was created and distributed to 104 water systems and entities in October 2013, with 49 entities responding. The survey aimed at collecting information on voluntary and mandatory measures used by each water system. The survey database is included in *Appendix 7A*. As a voluntary measure, nine entities discontinued monthly flushing of water lines, 23 put restrictions on public landscaping irrigation, 24 water systems limited residential landscaping irrigations, and 19 entities implemented commercial irrigations. Additional details on the voluntary and mandatory measures and their implementation in recent years can be found in *Appendix 7A*. Actual survey responses are located on the Region K website at: http://www.regionk.org/?page_id=891.

The Drought Contingency Plans show that a variety of triggers have been specified by the different water supplies 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 7B 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 RWP document. 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."

Based on response rates to a survey (on different subject matter) sent to Region K WUGs earlier in the 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 Drought Committee submitted an information request to the TCEQ for information on emergency interconnects within the counties in Region K. The TCEQ provided an Excel spreadsheet containing data on the potential user of the interconnect, the potential supplier, source information, and contact information. Information on existing and potential interconnect supply capacity and details related to location were not available. The confidential information was provided electronically on a CD, along with a transmittal letter, to the Executive Administrator prior to May 1, 2015.

Additionally, available DCPs for entities within the Region were reviewed to identify establishment or activation of interconnects as a drought response; such measures were not included in any of the DCPs available to the RWPG.

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 2010 population of less than 7,500 and with a sole-source of water, as well as all county-other water user groups.

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 7.1* 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 7.2 on the following pages provides the list of County-Other Water User Groups in Region K, and their potential emergency water supply options.

[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 7-1: Municipal Region K WUGs under 7,500 in population (2010) and with a sole-source of water

Entity						Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	County	2010 Census	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
Barton Creek West WSC	Travis	1,456	1,456	432	Highland Lakes						X		X	1	A		unk	
Bastrop	Bastrop	7,218	9,653	1,957	Other Aquifer			X					X	2				
Bee Cave Village	Travis	3,925	4,740	1,777	Highland Lakes						X		X	1	L		unk	
Briarcliff Village	Travis	1,438	1,736	260	Highland Lakes								X					
Cimarron Park Water Company	Hays	2,055	2,150	249	Edwards BFZ			X					X	2				
Columbus	Colorado	3,655	3,832	1,135	Gulf Coast Aquifer	X		X					X	2,3				
Cottonwood Shores	Burnet	1,123	1,395	227	Highland Lakes			X			X		X	1,2	B		unk	
Eagle Lake	Colorado	3,639	3,816	523	Gulf Coast			X					X	2				
East Bernard	Wharton	2,272	2,411	380	Gulf Coast			X					X	2				
Goldthwaite	Mills	1,878	1,869	361	Trinity Aquifer			X					X	2				
Granite Shoals	Burnet	4,910	6,100	653	Highland Lakes						X		X	1	C		unk	
Horseshoe Bay	Burnet	3,418	1,192	747	Highland Lakes/Direct Reuse			X			X		X	1,2	D		unk	
Johnson City	Blanco	1,656	2,053	354	Trinity Aquifer			X					X	2				
Jonestown	Travis	1,834	1,987	408	Highland Lakes						X		X	1	E		unk	

Entity						Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	County	2010 Census	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
La Grange	Fayette	4,641	5,362	865	Yegua-Jackson	X		X			X		X	2,3			unk	
Lago Vista	Travis	6,041	7,580	1,868	Highland Lakes						X		X		G		unk	
Llano	Llano	3,232	3,565	862	Llano Lake								X					
Loop 360 WSC	Travis	1,900	1,998	1,174	Highland Lakes						X		X	1	H		unk	
Lost Creek MUD	Travis	3,726	4,369	1,092	City of Austin Contract								X	1			unk	
Marble Falls	Burnet	6,077	8,702	2,332	Highland Lakes			X			X		X	1,2	I		unk	
Meadowlakes	Burnet	1,777	2,207	849	Colorado Run-of-River/Highland Lakes			X			X		X	1,2	J		unk	
Mountain City	Hays	504	490	57	Edwards BFZ			X					X	2				
Palacios	Matagorda	4,718	5,035	679	Gulf Coast			X					X	2				
Point Venture	Travis	800	1,181	347	Highland Lakes						X		X	2	N		unk	
Rollingwood	Travis	1,412	1,421	384	City of Austin Contract								X					
Shady Hollow MUD	Travis	4,889	4,889	779	City of Austin Contract								X					
Smithville	Bastrop	3,817	4,913	842	Carrizo Wilcox	X		X					X	2,3				
Sunset Valley	Travis	749	1,134	386	City of Austin Contract, Edwards (partial)			X			X			2	H		unk	

Entity						Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	County	2010 Census	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
The Hills	Travis	2,472	3,000	1,449	Highland Lakes						X		X	2	M			
Travis County MUD #4	Travis	2,578	3,113	2,611	Highland Lakes						X		X		H,K		unk	
Travis County WCID #10	Travis	5,083	6,139	2,128	City of Austin Contract								X					
Travis County WCID #18	Travis	5,512	6,657	1,123	Highland Lakes			X			X		X	1,2	K		unk	
Travis County WCID #19	Travis	716	716	498	Highland Lakes						X		X		H,K		unk	
Travis County WCID #20	Travis	1,140	1,140	590	Highland Lakes						X		X	1	A		unk	
Volente	Travis	520	677	76	Trinity Aquifer			X					X	2				
Weimar	Colorado	2,151	2,256	556	Gulf Coast Aquifer	X		X					X	2,3				
West Lake Hills	Travis	3,063	3,699	1,564	City of Austin Contract						X		X	1	H		unk	

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. not used
G. City of Jonestown
H. City of Austin
I. City of Meadowlakes
J. City of Marble Falls
K. Travis County WCID #20
L. West Travis County PUA
M. Hurst Creek MUD
N. Travis County MUD #1

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Table 7-2: County-Other WUGs in Region K

Entity						Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	**County**	**2010 Census**	**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	8,697	10,290	1,873	Carrizo Wilcox/Queen City/Highland Lakes			X			X		X	well	Aqua WSC			
County-Other	Blanco	6,279	7,786	964	Colorado Other Local Supply/ Ellenburger San Saba Aquifer/Hickory/Trinity/Canyon Lake			X					X	well				
County-Other	Burnet	19,530	22,839	3,506	Ellenburger San Saba/Hickory/ Marble Falls Aquifer/Other Alluvium/Trinity/ Brazos River Authority Purchase from Little River Lake/Edwards BFZ/Highland Lakes			X					X	well				
County-Other	Colorado	11,429	11,980	1,475	Gulf Coast Aquifer			X					X	well				

Entity						Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	**County**	**2010 Census**	**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	9,359	10,817	1,236	Gulf Coast Aquifer/Fayette WSC/Sparta/Yegua-Jackson/Highland Lakes			X					X	well				
County-Other	Gillespie	14,307	15,477	1,823	Edwards-Trinity Plateau/Ellenburger San Saba/Hickory/Trinity/Highland Lakes			X					X	well				
County-Other	Hays	20,249	25,255	3,107	Edwards BFZ/Trinity/Canyon Lake/Highland Lakes			X					X	well				
County-Other	Llano	6,563	5,746	610	Ellenburger-San Saba/Hickory/Other-alluvium/Highland Lakes			X			X		X	well	Horseshoe Bay			
County-Other	Matagorda	14,370	15,334	1,601	Gulf Coast Aquifer			X					X	well				
County-Other	Mills	3,011	2,996	385	Trinity			X					X	well				
County-Other	San Saba	1,917	2,028	316	Ellenburger-San Saba/Hickory/Marble Falls/Highland Lakes			X					X	well				

Entity						Potential Emergency Water Supply Source(s)								Implementation Requirements				
Water User Group Name	**County**	**2010 Census**	**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	Travis	82,569	59,888	8,395	Other Aquifer/Trinity/Colorado Run-of-River/Highland Lakes			X			X		X	well	Lakeway MUD			
County-Other	Wharton	14,489	15,374	1,993	Gulf Coast			X					X	well				
County-Other	Williamson	12,306	16,658	2,586	Colorado Run-of-River, Highland Lakes								X					

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 municipalities including the City of Austin. 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 7.3* below summarizes recommended drought stage triggers and actions as identified in the LCRA's DCP Sample Plan for municipal use. LCRA provides sample drought contingency plans (DCP), and requires all customer DCPs to state the specific combined storage triggers located in its water management plan, and requires customers to update their plans every five years. The City of 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 7-3: Summary of LCRA Recommended Drought Triggers and Responses

Drought Stage	*Trigger*	*Action*
Stage 1	Combined Storage less than 1.4 million acre-feet	5% reduction.
Stage 2 (Severe)	Combined Storage less than 900,000 acre-feet	10-20% reduction
Stage 3 (Critical)	Combined Storage less than 600,000 acre-feet	Minimum 20% reduction.
Stage 4	LCRA general manager or Board determines that conditions constitute a water supply emergency	Determined by LCRA Board.

Based on current LCRA DCP sample plan

The Lower Colorado Regional Water Planning Group (LCRWPG) acknowledges that the Wholesale 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 7B for severe and critical/emergency triggers and responses associated with LCRA and City of Austin customers. 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 sources. 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.

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 7B 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:

http://www.drought.gov/drought/content/productscurrent-drought-and-monitoring-drought-indicators/palmer-drought-severity-index

TCEQ drought information:

http://www.tceq.state.tx.us/response/drought/drought.html

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 7C. Model plans were developed for wholesale water providers and retail public water suppliers. 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.

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 City of Austin, as well as other smaller water providers throughout the Region, have implemented drought contingency measures largely since 2011. As the current Central Texas Drought lengthens and deepens, 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.

As such, the Planning Group reviewed each municipal Water User Group's Drought Contingency Plan and survey responses to determine what, if any, drought management WMS would be considered reasonable and effective in reducing water demands. 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 15% demand reduction was recommended.
- The demand reduction percentages listed above were modified based on available Drought Contingency Plans for individual WUGs to reflect the communities 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 municipality 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, Section 5.2.4.8* for additional details.

Total water savings for drought management strategies within the Region reach approximately 157,000 AFY by the year 2070, with the largest portion of that coming from irrigation.

Other recommended drought-related strategies that may be implemented specifically to help manage drought and extend water supplies include two strategies for the City of Austin. The two City of 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, Section 5.2.3.2*.

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.

The Lower Colorado Regional Water Planning Group (LCRWPG) reviewed and considered recommendations from the Drought Preparedness Council with regards to following the outline template provided by the Texas Water Development Board, making an effort to fully address the assessment of current drought preparations and planned responses, and evaluating the drought preparedness impacts of unanticipated population growth or industrial growth within the region over the planning horizon. The LCRWPG recommended conservation and drought management as water management strategies for municipalities, which will aid in buffering any unanticipated population growth. With respect to industrial growth, the LCRWPG has recommended several water management strategies for the wholesale water providers in the region to enhance supplies that may be needed to meet future growth not accounted for in the plan.

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

Drought Contingency Survey Results

Water System	1. Voluntary Measures															
	2011 Water Savings		Annual Water Savings		a. Discontinuation of monthly flushing of water mains			b. Public landscaping irrigation restrictions			c. Residential landscaping irrigation limits			d. Commercial irrigation limits		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
TOTAL					9	9	9	18	23	13	19	24	13	15	19	12
AQUA WATER SUPPLY CORPORATION							1	Sep-11	1	1	Sep-11	1	1			
AUSTIN, CITY OF - AUSTIN WATER UTILITY							1									
BARTON CREEK WEST WATER SUPPLY CO																
BASTROP COUNTY WCID NO 2																
BASTROP, CITY OF																
BAY CITY, CITY OF	0	GPD	0	GPD			1			1			1			1
BEE CAVE, CITY OF																
BERTRAM, CITY OF								Jan - Dec	1							
BLANCO, CITY OF																
BROOKSMITH SUD																
BRUSHY CREEK MUD								Jan-Dec	1	1	Jan-Dec	1	1	Jan-Dec	1	1
BUDA, CITY OF								Jan - Dec	1		Jan - Dec	1		Jan - Dec	1	

Water System	1. Voluntary Measures															
	2011 Water Savings		Annual Water Savings		a. Discontinuation of monthly flushing of water mains			b. Public landscaping irrigation restrictions			c. Residential landscaping irrigation limits			d. Commercial irrigation limits		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
BURNET COUNTY																
BURNET, CITY OF							1			1	1			1		
CAMP OF THE HILLS																
CANYON LAKE WSC	0.75	mg	1	mg		1	1					1				
CAPITOL AGGREGATES, LTD.																
CEDAR PARK, CITY OF																
CHISHOLM TRAIL S U D																
CIMARRON PARK WATER COMPANY INC					May-Dec	1		May-Dec	1		May-Dec	1		May-Dec	1	
COLUMBUS, CITY OF							1			1			1			1
COTTONWOOD SHORES, CITY OF	15,000 gals/d	1	5.4	mg	1	1		1	1		1	1		1	1	
CREEDMOOR-MAHA WATER SUPPLY CORP																
DRIPPING SPRINGS , CITY OF																
DRIPPING SPRINGS WATER SUPPLY CORP	0		5%	39 AF	No			Nov	1		Nov	1		Nov	1	

Water System	1. Voluntary Measures															
	2011 Water Savings		Annual Water Savings		a. Discontinuation of monthly flushing of water mains			b. Public landscaping irrigation restrictions			c. Residential landscaping irrigation limits			d. Commercial irrigation limits		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
EAGLE LAKE, CITY OF																
EAST BERNARD, CITY OF																
EL CAMPO, CITY OF						1	1		1	1		1	1		1	1
ELGIN, CITY OF																
ELLIOT RANCH WATER SYSTEM																
EQUISTAR CHEMICALS																
FARMERS CANAL COMPANY																
FAYETTE W S C																
FLATONIA, CITY OF																
FREDERICKSBURG, CITY OF																
GOFORTH SUD																
GOLDTHWAITE, CITY OF					1			1			1			1		
GRANITE SHOALS, CITY OF																
H & L NEW GULF, INC.																

Water System	2011 Water Savings		Annual Water Savings		a. Discontinuation of monthly flushing of water mains			b. Public landscaping irrigation restrictions			c. Residential landscaping irrigation limits			d. Commercial irrigation limits		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
HIGHLAND HAVEN, CITY OF											May-Dec	1	1			
HORSESHOE BAY, CITY OF			10	ac/ft	Reduction	1	1	Dec	1	1	Dec	1	1	Dec	1	1
HURST CREEK MUD					May-Sept	1	1		1	1		1	1		1	1
JOHNSON CITY, CITY OF																
JONESTOWN, CITY OF																
KEMPNER WSC																
KINGSLAND WATER SUPPLY CORPORATION																
KYLE, CITY OF								1	1		1	1		1	1	
LA GRANGE, CITY OF					1			1			1					1
LAGO VISTA, CITY OF																
LAKE LBJ MUNICIPAL UTILITY DISTRICT																
LAKEWAY, CITY OF																
LAKEWAY MUD									1	1		1	1		1	1
LEANDER, CITY OF								1	1	1	1	1	1	1	1	1

Water System	1. Voluntary Measures															
	2011 Water Savings		Annual Water Savings		a. Discontinuation of monthly flushing of water mains			b. Public landscaping irrigation restrictions			c. Residential landscaping irrigation limits			d. Commercial irrigation limits		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
LEE COUNTY WATER SUPPLY CORPORATION																
LLANO, CITY OF																
LOOP 360 WATER SUPPLY CORP																
LOST CREEK MUNICIPAL UTILITY DIST								Oct-11	1		Oct-11	1		Oct-11	1	
LOWER COLORADO RIVER AUTHORITY (LCRA)								Sep-11	1		Sep-11	1		Sep-11	1	
MANOR, CITY OF																
MANVILLE WATER SUPPLY CORPORATION																
MARBLE FALLS, CITY OF																
MEADOWLAKES, CITY OF	11	Acre-feet		21			1	Jun-Dec	1	1	Jun-Dec	1	1	Jun-Dec	1	1
MEADOWLAKES MUD																
MOUNTAIN CITY																
MUNICIPAL GROUNDWATER																

Water System	1. Voluntary Measures															
	2011 Water Savings		Annual Water Savings		a. Discontinuation of monthly flushing of water mains			b. Public landscaping irrigation restrictions			c. Residential landscaping irrigation limits			d. Commercial irrigation limits		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
SOLUTIONS																
MUSTANG RIDGE																
NORTH AUSTIN MUD NO 1																
NORTHTOWN MUD																
PALACIOS, CITY OF																
PFLUGERVILLE, CITY OF			335.75	mg					1			1			1	
PLUM CREEK WATER COMPANY																
POINT VENTURE																
POLONIA WSC																
RICHLAND SPECIAL UTILITY DISTRICT																
RIVERCREST WATER SYSTEM																
RIVER PLACE MUD							1		1			1			1	
ROLLINGWOOD, CITY OF																
ROUND ROCK, CITY OF																

Water System	1. Voluntary Measures															
	2011 Water Savings		Annual Water Savings		a. Discontinuation of monthly flushing of water mains			b. Public landscaping irrigation restrictions			c. Residential landscaping irrigation limits			d. Commercial irrigation limits		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
SAN SABA, CITY OF			300,000 - 400,000	gpd	1	1	1	1	1	1	1	1	1	1	1	1
SCHULENBURG, CITY OF																
SHADY HOLLOW MUD																
SMITHVILLE, CITY OF																
STP NUCLEAR OPERATING COMPANY																
SUNRISE BEACH VILLAGE																
SUNSET VALLEY, CITY OF									1			1			1	
TEXAS BRINE CO. LLC																
TRAVIS CO WCID NO 10																
TRAVIS CO WCID NO 17								Jan - Dec	1		Jan - Dec	1		Jan - Dec	1	
TRAVIS CO WCID NO 18																

Water System	1. Voluntary Measures															
	2011 Water Savings		Annual Water Savings		a. Discontinuation of monthly flushing of water mains			b. Public landscaping irrigation restrictions			c. Residential landscaping irrigation limits			d. Commercial irrigation limits		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
TRAVIS CO WCID NO 19																
TRAVIS CO WCID NO 20																
TRAVIS COUNTY MUD NO 4																
VILLAGE OF BRIARCLIFF	70	Acre-feet	60	ac/ft	April - Dec	1		April - Dec	1		April - Dec	1				
VILLAGE OF THE HILLS																
VISTA DEL RIO WATER UTILITY									1			1				
VOLENTE, CITY OF																
WEIMAR, CITY OF																
WEIR WATER WORKS																
WELLS BRANCH MUD NO 1																
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	LCRA	Owned System 2011			Unknown			Unknown			Unknown			Unknown		

Water System	1. Voluntary Measures															
	2011 Water Savings		Annual Water Savings		a. Discontinuation of monthly flushing of water mains			b. Public landscaping irrigation restrictions			c. Residential landscaping irrigation limits			d. Commercial irrigation limits		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
WESTLAKE HILLS, CITY OF																
WHARTON, CITY OF							1			1			1			1
WHARTON CO WCID #2					July - Sep	1	1									
WILLIAMSON-TRAVIS CO MUD NO 1																

Water System	2. Mandatory Measures												
	2011 Water Savings		Annual Water Savings		a. Residential landscaping irrigation restrictions								
					1) Twice a week watering			2) Once a week watering			3) No outdoor spraying, drip application only		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
TOTAL					17	19	12	11	16	12	3	5	9
AQUA WATER SUPPLY CORPORATION							1						
AUSTIN, CITY OF - AUSTIN WATER UTILITY	2.5 billion	Gal	4.22 billion	Gal	Jan - Dec	1	1	Jan - Aug	1	1			1
BARTON CREEK WEST WATER SUPPLY CO													
BASTROP COUNTY WCID NO 2													
BASTROP, CITY OF													
BAY CITY, CITY OF	0	GPD	0	GPD			1			1			1
BEE CAVE, CITY OF													
BERTRAM, CITY OF													
BLANCO, CITY OF													
BROOKSMITH SUD													
BRUSHY CREEK MUD	90	MG			Nov-Dec	1					Oct		
BUDA, CITY OF					May - Dec	1	1						

Water System	2. Mandatory Measures												
	2011 Water Savings		Annual Water Savings		a. Residential landscaping irrigation restrictions								
					1) Twice a week watering			2) Once a week watering			3) No outdoor spraying, drip application only		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
BURNET COUNTY													
BURNET, CITY OF						1			1			1	
CAMP OF THE HILLS													
CANYON LAKE WSC						1	1			1			1
CAPITOL AGGREGATES, LTD.													
CEDAR PARK, CITY OF													
CHISHOLM TRAIL S U D													
CIMARRON PARK WATER COMPANY INC								May-Dec	1		May-Dec	1	
COLUMBUS, CITY OF							1			1			
COTTONWOOD SHORES, CITY OF	1000 gals/d	Gal	3.6 mg	Gal				1	1				
CREEDMOOR-MAHA WATER SUPPLY CORP													
DRIPPING SPRINGS , CITY OF													
DRIPPING SPRINGS WATER SUPPLY CORP			10%	78 AF	Nov				1				1

Water System	2. Mandatory Measures												
	2011 Water Savings		Annual Water Savings		a. Residential landscaping irrigation restrictions								
					1) Twice a week watering			2) Once a week watering			3) No outdoor spraying, drip application only		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
EAGLE LAKE, CITY OF													
EAST BERNARD, CITY OF													
EL CAMPO, CITY OF						1	1						
ELGIN, CITY OF													
ELLIOT RANCH WATER SYSTEM													
EQUISTAR CHEMICALS													
FARMERS CANAL COMPANY													
FAYETTE W S C													
FLATONIA, CITY OF													
FREDERICKSBURG, CITY OF													
GOFORTH SUD													
GOLDTHWAITE, CITY OF											1		
GRANITE SHOALS, CITY OF													
H & L NEW GULF, INC.													
HIGHLAND HAVEN, CITY OF								May-Dec	1	1			

Water System	2. Mandatory Measures													
	2011 Water Savings		Annual Water Savings		a. Residential landscaping irrigation restrictions									
					1) Twice a week watering			2) Once a week watering			3) No outdoor spraying, drip application only			
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
HORSESHOE BAY, CITY OF			10	acre-feet	Feb	1	1			1			
HURST CREEK MUD					2011	1	1	Sep-11	1	1			1
JOHNSON CITY, CITY OF					1			1					
JONESTOWN, CITY OF													
KEMPNER WSC													
KINGSLAND WATER SUPPLY CORPORATION					Aug-11								
KYLE, CITY OF					1	1							
LA GRANGE, CITY OF					1			1					1
LAGO VISTA, CITY OF													
LAKE LBJ MUNICIPAL UTILITY DISTRICT													
LAKEWAY, CITY OF													
LAKEWAY MUD						1	1		1	1			
LEANDER, CITY OF					1		1			1		1	
LEE COUNTY WATER													

Water System	2. Mandatory Measures												
	2011 Water Savings		Annual Water Savings		a. Residential landscaping irrigation restrictions								
					1) Twice a week watering			2) Once a week watering			3) No outdoor spraying, drip application only		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
SUPPLY CORPORATION													
LLANO, CITY OF													
LOOP 360 WATER SUPPLY CORP													
LOST CREEK MUNICIPAL UTILITY DIST								Oct-11	1				
LOWER COLORADO RIVER AUTHORITY (LCRA)					Sep-11	1				1			1
MANOR, CITY OF													
MANVILLE WATER SUPPLY CORPORATION					June	1							
MARBLE FALLS, CITY OF													
MEADOWLAKES, CITY OF	20	acre-feet	70	acre-feet			1			1			1
MEADOWLAKES MUD													
MOUNTAIN CITY													
MUNICIPAL GROUNDWATER SOLUTIONS													

Water System	2. Mandatory Measures												
	2011 Water Savings		Annual Water Savings		a. Residential landscaping irrigation restrictions								
					1) Twice a week watering			2) Once a week watering			3) No outdoor spraying, drip application only		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
MUSTANG RIDGE													
NORTH AUSTIN MUD NO 1													
NORTHTOWN MUD													
PALACIOS, CITY OF													
PFLUGERVILLE, CITY OF						1			1				
PLUM CREEK WATER COMPANY													
POINT VENTURE					July	1		Aug - Dec	1				
POLONIA WSC													
RICHLAND SPECIAL UTILITY DISTRICT													
RIVERCREST WATER SYSTEM													
RIVER PLACE MUD						1			1			1	
ROLLINGWOOD, CITY OF													
ROUND ROCK, CITY OF													
SAN SABA, CITY OF					1	1							1

Water System	2. Mandatory Measures												
	2011 Water Savings		Annual Water Savings		a. Residential landscaping irrigation restrictions								
					1) Twice a week watering			2) Once a week watering			3) No outdoor spraying, drip application only		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
SCHULENBURG, CITY OF													
SHADY HOLLOW MUD													
SMITHVILLE, CITY OF													
STP NUCLEAR OPERATING COMPANY													
SUNRISE BEACH VILLAGE													
SUNSET VALLEY, CITY OF						1			1				
TEXAS BRINE CO. LLC													
TRAVIS CO WCID NO 10													
TRAVIS CO WCID NO 17					Jan - Dec	1		July - Oct	1				
TRAVIS CO WCID NO 18													
TRAVIS CO WCID NO 19													
TRAVIS CO WCID NO 20													
TRAVIS COUNTY MUD NO 4													
VILLAGE OF BRIARCLIFF					April - Dec	1		April - Dec	1			1	

Water System	2. Mandatory Measures												
	2011 Water Savings		Annual Water Savings		a. Residential landscaping irrigation restrictions								
					1) Twice a week watering			2) Once a week watering			3) No outdoor spraying, drip application only		
	Amount	Units	Amount	Units	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
VILLAGE OF THE HILLS													
VISTA DEL RIO WATER UTILITY									1				
VOLENTE, CITY OF													
WEIMAR, CITY OF													
WEIR WATER WORKS													
WELLS BRANCH MUD NO 1													
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY													
WESTLAKE HILLS, CITY OF													
WHARTON, CITY OF										1			
WHARTON CO WCID #2													
WILLIAMSON-TRAVIS CO MUD NO 1													

Water System	2. Mandatory Measures (Cont.) b. Limits on other outdoor water use											
	1) No water features, unless water is recycled			2) No water features			3) Golf course water use restrictions			4) Prohibition on watering golf courses unless from water source other than provided by the city		
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
TOTAL	6	15	13	3	7	8	4	5	10	1	1	6
AQUA WATER SUPPLY CORPORATION			1									
AUSTIN, CITY OF - AUSTIN WATER UTILITY		1	1	Sept - Dec	1	1	Sept - Dec	1	1			1
BARTON CREEK WEST WATER SUPPLY CO												
BASTROP COUNTY WCID NO 2												
BASTROP, CITY OF												
BAY CITY, CITY OF			1			1			1			1
BEE CAVE, CITY OF												
BERTRAM, CITY OF												
BLANCO, CITY OF												
BROOKSMITH SUD												
BRUSHY CREEK MUD	Oct-Dec	1		Oct-Dec	`							
BUDA, CITY OF	Jan - Dec	1	1			1	May - Dec	1				1
BURNET COUNTY												
BURNET, CITY OF		1			1						1	
CAMP OF THE HILLS												
CANYON LAKE WSC			1			1						

Water System	2. Mandatory Measures (Cont.) b. Limits on other outdoor water use											
	1) No water features, unless water is recycled			2) No water features			3) Golf course water use restrictions			4) Prohibition on watering golf courses unless from water source other than provided by the city		
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
CAPITOL AGGREGATES, LTD.												
CEDAR PARK, CITY OF												
CHISHOLM TRAIL S U D												
CIMARRON PARK WATER COMPANY INC				May-Dec	1							
COLUMBUS, CITY OF									1			
COTTONWOOD SHORES, CITY OF												
CREEDMOOR-MAHA WATER SUPPLY CORP												
DRIPPING SPRINGS , CITY OF												
DRIPPING SPRINGS WATER SUPPLY CORP		1				1						
EAGLE LAKE, CITY OF												
EAST BERNARD, CITY OF												
EL CAMPO, CITY OF												
ELGIN, CITY OF												
ELLIOT RANCH WATER SYSTEM												
EQUISTAR CHEMICALS												
FARMERS CANAL COMPANY												
FAYETTE W S C												
FLATONIA, CITY OF												

Water System	2. Mandatory Measures (Cont.)											
	b. Limits on other outdoor water use											
	1) No water features, unless water is recycled			2) No water features			3) Golf course water use restrictions			4) Prohibition on watering golf courses unless from water source other than provided by the city		
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
FREDERICKSBURG, CITY OF												
GOFORTH SUD												
GOLDTHWAITE, CITY OF												
GRANITE SHOALS, CITY OF												
H & L NEW GULF, INC.												
HIGHLAND HAVEN, CITY OF												
HORSESHOE BAY, CITY OF	Feb	1	1									
HURST CREEK MUD		1	1			1			1			
JOHNSON CITY, CITY OF												
JONESTOWN, CITY OF												
KEMPNER WSC												
KINGSLAND WATER SUPPLY CORPORATION												
KYLE, CITY OF	1											
LA GRANGE, CITY OF			1			1			1	1		
LAGO VISTA, CITY OF												
LAKE LBJ MUNICIPAL UTILITY DISTRICT												
LAKEWAY, CITY OF												
LAKEWAY MUD		1	1					1	1			
LEANDER, CITY OF			1				1	1	1			
LEE COUNTY WATER												

Water System	2. Mandatory Measures (Cont.) b. Limits on other outdoor water use											
	1) No water features, unless water is recycled			2) No water features			3) Golf course water use restrictions			4) Prohibition on watering golf courses unless from water source other than provided by the city		
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identifed for your system in the 2016 Regional Water Plan?
SUPPLY CORPORATION												
LLANO, CITY OF												
LOOP 360 WATER SUPPLY CORP												
LOST CREEK MUNICIPAL UTILITY DIST												
LOWER COLORADO RIVER AUTHORITY (LCRA)									1			
MANOR, CITY OF												
MANVILLE WATER SUPPLY CORPORATION												
MARBLE FALLS, CITY OF												
MEADOWLAKES, CITY OF			1			1	Jun-Dec	1	1			1
MEADOWLAKES MUD												
MOUNTAIN CITY												
MUNICIPAL GROUNDWATER SOLUTIONS												
MUSTANG RIDGE												
NORTH AUSTIN MUD NO 1												
NORTHTOWN MUD												
PALACIOS, CITY OF												
PFLUGERVILLE, CITY OF		1										
PLUM CREEK WATER												

Water System	2. Mandatory Measures (Cont.)											
	b. Limits on other outdoor water use											
	1) No water features, unless water is recycled			2) No water features			3) Golf course water use restrictions			4) Prohibition on watering golf courses unless from water source other than provided by the city		
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identifed for your system in the 2016 Regional Water Plan?
COMPANY												
POINT VENTURE	Aug - Dec	1										
POLONIA WSC												
RICHLAND SPECIAL UTILITY DISTRICT												
RIVERCREST WATER SYSTEM												
RIVER PLACE MUD		1			1							
ROLLINGWOOD, CITY OF												
ROUND ROCK, CITY OF												
SAN SABA, CITY OF	1	1	1									1
SCHULENBURG, CITY OF												
SHADY HOLLOW MUD												
SMITHVILLE, CITY OF												
STP NUCLEAR OPERATING COMPANY												
SUNRISE BEACH VILLAGE												
SUNSET VALLEY, CITY OF					1							
TEXAS BRINE CO. LLC												
TRAVIS CO WCID NO 10												
TRAVIS CO WCID NO 17		1			1							
TRAVIS CO WCID NO 18												

Water System	2. Mandatory Measures (Cont.)											
	b. Limits on other outdoor water use											
	1) No water features, unless water is recycled			2) No water features			3) Golf course water use restrictions			4) Prohibition on watering golf courses unless from water source other than provided by the city		
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
TRAVIS CO WCID NO 19												
TRAVIS CO WCID NO 20												
TRAVIS COUNTY MUD NO 4												
VILLAGE OF BRIARCLIFF		1			1							
VILLAGE OF THE HILLS												
VISTA DEL RIO WATER UTILITY		1										
VOLENTE, CITY OF												
WEIMAR, CITY OF												
WEIR WATER WORKS												
WELLS BRANCH MUD NO 1												
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY												
WESTLAKE HILLS, CITY OF												
WHARTON, CITY OF			1						1			1
WHARTON CO WCID #2												
WILLIAMSON-TRAVIS CO MUD NO 1												

Water System	2. Mandatory Measures (Cont.)														
	b. Limits on other outdoor water use												c. Prohibition of applications for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind		
	5) Prohibition of washing down sidewalks, parking lots and other hard-surface areas			6) Prohibition of flushing gutters			7) Prohibition of water use for washing vehicles			8) Prohibition of water use for pool maintenance					
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
TOTAL	14	20	13	8	12	12	8	15	13	2	4	6	2	3	6
AQUA WATER SUPPLY CORPORATION			1			1			1			1			1
AUSTIN, CITY OF - AUSTIN WATER UTILITY	Sept - Dec	1	1			1									
BARTON CREEK WEST WATER SUPPLY CO															
BASTROP COUNTY WCID NO 2															
BASTROP, CITY OF															
BAY CITY, CITY OF			1			1			1			1			1
BEE CAVE, CITY OF															
BERTRAM, CITY OF															
BLANCO, CITY OF															
BROOKSMITH SUD															
BRUSHY CREEK MUD	Oct			Oct			Oct			Oct					
BUDA, CITY OF	Jan - Dec	1	1	May - Dec	1	1	May - Dec	1	1						

Water System	2. Mandatory Measures (Cont.)														
	b. Limits on other outdoor water use												c. Prohibition of applications for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind		
	5) Prohibition of washing down sidewalks, parking lots and other hard-surface areas			6) Prohibition of flushing gutters			7) Prohibition of water use for washing vehicles			8) Prohibition of water use for pool maintenance					
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
BURNET COUNTY															
BURNET, CITY OF		1			1			1			1				
CAMP OF THE HILLS															
CANYON LAKE WSC			1						1			1			
CAPITOL AGGREGATES, LTD.															
CEDAR PARK, CITY OF															
CHISHOLM TRAIL S U D															
CIMARRON PARK WATER COMPANY INC	May-Dec	1		May-Dec	1		May-Dec	1					May-Dec	1	
COLUMBUS, CITY OF									1						
COTTONWOOD SHORES, CITY OF	1	1													
CREEDMOOR-MAHA WATER SUPPLY CORP															
DRIPPING SPRINGS , CITY OF															
DRIPPING SPRINGS WATER SUPPLY CORP		1				1		1				1			1
EAGLE LAKE, CITY OF															

Water System	2. Mandatory Measures (Cont.) — b. Limits on other outdoor water use — 5) Prohibition of washing down sidewalks, parking lots and other hard-surface areas: Was this Drought Management Measure used in 2011? If so, what month(s)?	5) Has this Measure been implemented since 2011?	5) Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	6) Prohibition of flushing gutters: Was this Drought Management Measure used in 2011? If so, what month(s)?	6) Has this Measure been implemented since 2011?	6) Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	7) Prohibition of water use for washing vehicles: Was this Drought Management Measure used in 2011? If so, what month(s)?	7) Has this Measure been implemented since 2011?	7) Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	8) Prohibition of water use for pool maintenance: Was this Drought Management Measure used in 2011? If so, what month(s)?	8) Has this Measure been implemented since 2011?	8) Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	c. Prohibition of applications for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind: Was this Drought Management Measure used in 2011? If so, what month(s)?	c. Has this Measure been implemented since 2011?	c. Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
EAST BERNARD, CITY OF															
EL CAMPO, CITY OF														1	1
ELGIN, CITY OF															
ELLIOT RANCH WATER SYSTEM															
EQUISTAR CHEMICALS															
FARMERS CANAL COMPANY															
FAYETTE W S C															
FLATONIA, CITY OF															
FREDERICKSBURG, CITY OF															
GOFORTH SUD															
GOLDTHWAITE, CITY OF															
GRANITE SHOALS, CITY OF															
H & L NEW GULF, INC.															
HIGHLAND HAVEN, CITY OF	May-Dec	1	1				May-Dec	1	1						

Water System	2. Mandatory Measures (Cont.)														
	b. Limits on other outdoor water use												c. Prohibition of applications for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind		
	5) Prohibition of washing down sidewalks, parking lots and other hard-surface areas			6) Prohibition of flushing gutters			7) Prohibition of water use for washing vehicles			8) Prohibition of water use for pool maintenance					
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
HORSESHOE BAY, CITY OF	Feb	1	1			1	Feb	1	1						
HURST CREEK MUD		1	1			1		1	1			1			1
JOHNSON CITY, CITY OF	1						1								
JONESTOWN, CITY OF															
KEMPNER WSC															
KINGSLAND WATER SUPPLY CORPORATION															
KYLE, CITY OF	1	1													
LA GRANGE, CITY OF	1			1			1			1			1		
LAGO VISTA, CITY OF															
LAKE LBJ MUNICIPAL UTILITY DISTRICT															
LAKEWAY, CITY OF															
LAKEWAY MUD		1	1		1	1		1	1						
LEANDER, CITY OF	1	1	1	1	1	1			1						
LEE COUNTY WATER SUPPLY CORPORATION															
LLANO, CITY OF															

Water System	2. Mandatory Measures (Cont.)														
	b. Limits on other outdoor water use												c. Prohibition of applications for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind		
	5) Prohibition of washing down sidewalks, parking lots and other hard-surface areas			6) Prohibition of flushing gutters			7) Prohibition of water use for washing vehicles			8) Prohibition of water use for pool maintenance					
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
LOOP 360 WATER SUPPLY CORP															
LOST CREEK MUNICIPAL UTILITY DIST															
LOWER COLORADO RIVER AUTHORITY (LCRA)															
MANOR, CITY OF															
MANVILLE WATER SUPPLY CORPORATION															
MARBLE FALLS, CITY OF															
MEADOWLAKES, CITY OF			1			1			1			1			
MEADOWLAKES MUD															
MOUNTAIN CITY															
MUNICIPAL GROUNDWATER SOLUTIONS															
MUSTANG RIDGE															
NORTH AUSTIN MUD NO 1															

Water System	2. Mandatory Measures (Cont.)														
	b. Limits on other outdoor water use												c. Prohibition of applications for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind		
	5) Prohibition of washing down sidewalks, parking lots and other hard-surface areas			6) Prohibition of flushing gutters			7) Prohibition of water use for washing vehicles			8) Prohibition of water use for pool maintenance					
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
NORTHTOWN MUD															
PALACIOS, CITY OF															
PFLUGERVILLE, CITY OF		1			1			1							
PLUM CREEK WATER COMPANY															
POINT VENTURE	Aug - Dec	1		Aug - Dec	1										
POLONIA WSC															
RICHLAND SPECIAL UTILITY DISTRICT															
RIVERCREST WATER SYSTEM															
RIVER PLACE MUD		1			1			1			1			1	
ROLLINGWOOD, CITY OF															
ROUND ROCK, CITY OF															
SAN SABA, CITY OF	1	1	1	1	1	1	1	1	1						
SCHULENBURG, CITY OF															
SHADY HOLLOW MUD															
SMITHVILLE, CITY OF															

Water System	2. Mandatory Measures (Cont.)														
	b. Limits on other outdoor water use												c. Prohibition of applications for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind		
	5) Prohibition of washing down sidewalks, parking lots and other hard-surface areas			6) Prohibition of flushing gutters			7) Prohibition of water use for washing vehicles			8) Prohibition of water use for pool maintenance					
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
STP NUCLEAR OPERATING COMPANY															
SUNRISE BEACH VILLAGE															
SUNSET VALLEY, CITY OF		1			1			1							
TEXAS BRINE CO. LLC															
TRAVIS CO WCID NO 10															
TRAVIS CO WCID NO 17	July - Oct	1		July - Oct	1										
TRAVIS CO WCID NO 18															
TRAVIS CO WCID NO 19															
TRAVIS CO WCID NO 20															
TRAVIS COUNTY MUD NO 4															
VILLAGE OF BRIARCLIFF		1			1			1							
VILLAGE OF THE HILLS															
VISTA DEL RIO WATER UTILITY		1						1			1				1
VOLENTE, CITY OF															

Water System	2. Mandatory Measures (Cont.)														
	b. Limits on other outdoor water use												c. Prohibition of applications for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind		
	5) Prohibition of washing down sidewalks, parking lots and other hard-surface areas			6) Prohibition of flushing gutters			7) Prohibition of water use for washing vehicles			8) Prohibition of water use for pool maintenance					
	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
WEIMAR, CITY OF															
WEIR WATER WORKS															
WELLS BRANCH MUD NO 1															
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY															
WESTLAKE HILLS, CITY OF															
WHARTON, CITY OF			1			1		1	1		1				
WHARTON CO WCID #2															
WILLIAMSON-TRAVIS CO MUD NO 1															

Water System	3. Other											
	2011 Water Savings		Annual Water Savings		a.				b.			
	Amount	Units	Amount	Units	a.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	b.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
TOTAL												
AQUA WATER SUPPLY CORPORATION												
AUSTIN, CITY OF – AUSTIN WATER UTILITY												
BARTON CREEK WEST WATER SUPPLY CO												
BASTROP COUNTY WCID NO 2												
BASTROP, CITY OF												
BAY CITY, CITY OF												
BEE CAVE, CITY OF												
BERTRAM, CITY OF												
BLANCO, CITY OF												
BROOKSMITH SUD												
BRUSHY CREEK MUD												
BUDA, CITY OF												
BURNET COUNTY												
BURNET, CITY OF					Reuse water used for golf courses		1					
CAMP OF THE HILLS												

Water System	3. Other											
	2011 Water Savings		Annual Water Savings		a.				b.			
	Amount	Units	Amount	Units	a.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	b.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
CANYON LAKE WSC												
CAPITOL AGGREGATES, LTD.												
CEDAR PARK, CITY OF												
CHISHOLM TRAIL S U D												
CIMARRON PARK WATER COMPANY INC												
COLUMBUS, CITY OF												
COTTONWOOD SHORES, CITY OF												
CREEDMOOR-MAHA WATER SUPPLY CORP												
DRIPPING SPRINGS , CITY OF												
DRIPPING SPRINGS WATER SUPPLY CORP												
EAGLE LAKE, CITY OF												
EAST BERNARD, CITY OF												
EL CAMPO, CITY OF												
ELGIN, CITY OF												
ELLIOT RANCH WATER SYSTEM												
EQUISTAR CHEMICALS												
FARMERS CANAL COMPANY												
FAYETTE W S C												

Water System	3. Other											
	2011 Water Savings		Annual Water Savings		a.				b.			
	Amount	Units	Amount	Units	a.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	b.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
FLATONIA, CITY OF												
FREDERICKSBURG, CITY OF												
GOFORTH SUD												
GOLDTHWAITE, CITY OF					No outdoor use during 2011 drought	1						
GRANITE SHOALS, CITY OF												
H & L NEW GULF, INC.												
HIGHLAND HAVEN, CITY OF												
HORSESHOE BAY, CITY OF												
HURST CREEK MUD												
JOHNSON CITY, CITY OF												
JONESTOWN, CITY OF												
KEMPNER WSC												
KINGSLAND WATER SUPPLY CORPORATION												
KYLE, CITY OF												
LA GRANGE, CITY OF												
LAGO VISTA, CITY OF												
LAKE LBJ MUNICIPAL UTILITY												

Water System	3. Other											
	2011 Water Savings		Annual Water Savings		a.				b.			
	Amount	Units	Amount	Units	a.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	b.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
DISTRICT												
LAKEWAY, CITY OF												
LAKEWAY MUD												
LEANDER, CITY OF												
LEE COUNTY WATER SUPPLY CORPORATION												
LLANO, CITY OF												
LOOP 360 WATER SUPPLY CORP												
LOST CREEK MUNICIPAL UTILITY DIST												
LOWER COLORADO RIVER AUTHORITY (LCRA)												
MANOR, CITY OF												
MANVILLE WATER SUPPLY CORPORATION												
MARBLE FALLS, CITY OF												
MEADOWLAKES, CITY OF												
MEADOWLAKES MUD												
MOUNTAIN CITY												
MUNICIPAL GROUNDWATER SOLUTIONS												
MUSTANG RIDGE												

Water System	3. Other											
	2011 Water Savings		Annual Water Savings		a.				b.			
	Amount	Units	Amount	Units	a.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	b.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
NORTH AUSTIN MUD NO 1												
NORTHTOWN MUD												
PALACIOS, CITY OF												
PFLUGERVILLE, CITY OF												
PLUM CREEK WATER COMPANY												
POINT VENTURE												
POLONIA WSC												
RICHLAND SPECIAL UTILITY DISTRICT												
RIVERCREST WATER SYSTEM												
RIVER PLACE MUD												
ROLLINGWOOD, CITY OF												
ROUND ROCK, CITY OF												
SAN SABA, CITY OF												
SCHULENBURG, CITY OF												
SHADY HOLLOW MUD												
SMITHVILLE, CITY OF												
STP NUCLEAR OPERATING COMPANY												
SUNRISE BEACH VILLAGE												

Water System	3. Other											
	2011 Water Savings		Annual Water Savings		a.				b.			
	Amount	Units	Amount	Units	a.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	b.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
SUNSET VALLEY, CITY OF					No filling or refilling of pools (except to repair leaks)		1		No filling or refilling of spas		1	
TEXAS BRINE CO. LLC												
TRAVIS CO WCID NO 10												
TRAVIS CO WCID NO 17												
TRAVIS CO WCID NO 18												
TRAVIS CO WCID NO 19												
TRAVIS CO WCID NO 20												
TRAVIS COUNTY MUD NO 4												
VILLAGE OF BRIARCLIFF												
VILLAGE OF THE HILLS												
VISTA DEL RIO WATER UTILITY												
VOLENTE, CITY OF												
WEIMAR, CITY OF												
WEIR WATER WORKS												
WELLS BRANCH MUD NO 1												

Water System	3. Other											
	2011 Water Savings		Annual Water Savings		a.				b.			
	Amount	Units	Amount	Units	a.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?	b.	Was this Drought Management Measure used in 2011? If so, what month(s)?	Has this Measure been implemented since 2011?	Would you consider using this Measure if a water shortage is identified for your system in the 2016 Regional Water Plan?
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY												
WESTLAKE HILLS, CITY OF												
WHARTON, CITY OF												
WHARTON CO WCID #2												
WILLIAMSON-TRAVIS CO MUD NO 1												

APPENDIX 7B

Existing Drought Triggers and Reduction Goals

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

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).	Achieve a minimum of 20% reduction in daily water 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).	Achieve a minimum of 20% reduction in daily water demand
BASTROP	BASTROP	OTHER AQUIFER	Daily water demand exceeds 95% of total production capability for 3 consecutive days and that 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 an unprecedented 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 Capacity for three (3) consecutive days.	Achieve reduction in daily demand sufficient to assure the water system for the protection of public health and safety
BASTROP COUNTY WCID #2	BASTROP	CARRIZO-WILCOX AQUIFER	NA	NA	NA	NA
COUNTY-OTHER	BASTROP	CARRIZO- WILCOX, OTHER AQUIFER	NA	NA	NA	NA
CREEDMOOR-MAHA WSC	BASTROP	CARRIZO-WILCOX AQUIFER	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
ELGIN	BASTROP	CARRIZO-WILCOX AQUIFER	Average daily consumption is 95% of capacity for 24-hour period; aquifer level drops to critical level or average consumption will not enable storage levels to be maintained; and system demand exceeds available high service pump capacity; detection of water system failure from act of God; delivery capability is reduced due to mechanical failure requiring more than 12 hours to repair	not defined	Average daily consumption is 95% of capacity for 24-hour period; aquifer level drops to critical level or average consumption will not enable storage levels to be maintained; and system demand exceeds available high service pump capacity; detection of water system failure from act of God; delivery capability is reduced due to mechanical failure requiring more than 12 hours to repair	not defined
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
POLONIA WSC	BASTROP	CARRIZO-WILCOX AQUIFER	NA	NA	NA	NA
SMITHVILLE	BASTROP	CARRIZO-WILCOX AQUIFER	NA	NA	NA	NA
BLANCO	BLANCO	BLANCO LAKE/CANYON LAKE/TRINITY AQUIFER	Director of Public Works determines severe conditions are present	15-30% reduction in water use	Director of Public Works determines critical conditions are present	15-30% reduction in water use

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CANYON LAKE WATER SERVICE COMPANY	BLANCO	CANYON LAKE	Failure of major system component resulting in system pressure below 20psi for 24 hours or more; consumption is 95% or more of max capacity for 3 consecutive days; consumption of 100% of max production capacity and storage levels unable to recover in one 24 hour period; other unforeseen events; Canyon Reservoir drops to or below 880 ft msl	25% reduction in water use	Failure of major system component resulting in system pressure below 20psi for 24 hours or more; consumption is 95% or more of max capacity for 3 consecutive days; consumption of 100% of max production capacity and storage levels unable to recover in one 24 hour period; other unforeseen events; Canyon Reservoir drops to or below 880 ft msl	25% reduction in water use
COUNTY-OTHER	BLANCO	ELLENBURGER- SAN SABA, HICKORY, OTHER LOCAL SUPPLY, TRINITY, and EDWARDS- TRINITY (PLATEAU)	NA	NA	NA	NA
JOHNSON CITY	BLANCO	ELLENBURGER SAN-SABA	Well drawdown 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 or 18.5 hours for three consecutive days.	20% reduction in demand	Well drawdown level is at or below 35% of original capacity; or recharge has slowed and/or when pumping time from wells meets or exceeds 80% of one day or 20 hours for three consecutive days.	50% reduction in demand
BERTRAM	BURNET	ELLENBURGER-SAN SABA	Static water well is 75 feet or greater below surface, total demand trigger, falling treated reservoir levels	11% reduction in demand	Static water well is 85 feet or greater below surface, total demand trigger, falling treated reservoir levels	20% reduction in demand

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
BURNET	BURNET	ELLENBURGER-SAN SABA	Multiple conditions listed covering different scenarios	not defined	Multiple conditions listed covering different scenarios	not defined
CHISHOLM TRAIL SUD	BURNET	EDWARDS-TRINITY and BRAZOS RIVER AUTHORITY	Multiple triggers, Domel Well No. 1 declines to or stabilizes below 23 feet above pump suction (10psi) for 3 consecutive days and/or Domel Well No. 2 declines below 14 feet above pump suction (6psi) for 3 days; Lake Georgetown drops to 760 feet and no rainfall /inflow from Williamson County Regional Raw Water Line expected within 30 days; or daily demand equals or exceeds safe capabilities; Georgetown institutes delivery curtailment other failures	Peak demand of 1.3 times annual average daily demand	Daily demand equals or exceeds safe capabilities; Georgetown institutes delivery curtailment other failures; event occurs or District system component fail that warrants critical conservation measures.	Peak demand equal to or less than average annual daily demand.
COTTONWOOD SHORES	BURNET	HIGHLAND LAKES	Combined storage of Travis/Buchanan at or below 900,000 ac-ft; or LCRA requests reduced water use	10-20% reduction in total use or other LCRA reduction targets	Major water line breaks, or pump or system failures occur; or natural or man-made contaminant of the water supply source(s)	Water use will be prohibited until further notice
COUNTY-OTHER	BURNET	ELLENBURGER-SAN SABA, TRINITY, HICKORY, HIGHLAND LAKES, and MARBLE FALLS	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
GRANITE SHOALS	BURNET	HIGHLAND LAKES	NA	NA	NA	NA
HORSESHOE BAY	BURNET	HIGHLAND LAKES	Drought year with severe water shortage, or loss/failure of water production/distribution that decrease supply by 10-25%; or drought conditions worsen; or LCRA enacts surface water withdrawal restrictions up to 10-25%; or short/long-term situation requiring reduction of 10-25% consumption	10-25% reduction	1. Critical drought conditions resulting in emergency water conditions and curtailment of water use; 2. Loss or damage to Horseshoe Bay water production or water distribution appurtenance or facility that would decrease water supply system capabilities by 35%; 3. Any other emergency water supply or demand issue the LCRA General Manager or the LCRA Board determines to warrant the declaration of Stage 4; 4. Any surface water supplies withdrawal restriction enacted by the LCRA that would entail a 35% reduction in water supply to the City of Horseshoe Bay; 5. Any short term or long term water supply situation requiring a 35% reduction in water consumption	35% reduction

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
KEMPNER WSC	BURNET	BRAZOS RIVER AUTHORITY LITTLE RIVER LAKE	Failure of major component or event which reduces minimum pressure in system below 20 psi for 24 hours or more; water consumption 95% or more of maximum available for 3 days; water consumption of 100% or maximum available and storage levels in system drop during one 24 hour period; an unforeseen event that would risk health and public safety	not defined	Failure of major component or event which reduces minimum pressure in system below 20 psi for 24 hours or more; water consumption 95% or more of maximum available for 3 days; water consumption of 100% or maximum available and storage levels in system drop during one 24 hour period; an unforeseen event that would risk health and public safety	not defined
KINGSLAND WSC	BURNET	HIGHLAND LAKES	Defer to LCRA		Defer to LCRA	
MARBLE FALLS	BURNET	HIGHLAND LAKES	Storage of Highland Lakes is 600,000 acre-feet or less or LCRA declares drought worse than DOR; or total daily demand equals/exceeds 95% of plant capacity for 2 days or 96% for one day; or continually falling treated reservoir levels that do not refill above 75% overnight; or region wide drought.	20% minimum reduction in daily demand	LCRA notification of Stage 4; major water line breaks or pump or system failures; natural or man-made contamination of water supply; region-wide drought	25% minimum reduction in daily demand

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
MEADOWLAKES	BURNET	OTHER LOCAL SUPPLY and HIGHLAND LAKES	90% treatment capacity or Highland Lakes storage 600,000 acre-feet	20% reduction	Major water line breaks, or pump or system failures occur; or natural or man-made contaminant of the water supply source(s); or LCRA or City determination of emergency	70% reduction
COLUMBUS	COLORADO	GULF COAST	Multiple conditions listed covering different scenarios	not defined	Multiple conditions listed covering different scenarios	not defined
COUNTY-OTHER	COLORADO	GULF COAST	NA	NA	NA	NA
EAGLE LAKE	COLORADO	GULF COAST	When production exceeds 1.2 MGD for three consecutive days	not defined	When production exceeds 1.3 MGD for three consecutive days	not defined
WEIMAR	COLORADO	GULF COAST	NA	NA	NA	NA
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).	Achieve a minimum of 20% reduction in daily water 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).	Achieve a minimum of 20% reduction in daily water demand
COUNTY-OTHER	FAYETTE	GULF COAST, QUEEN CITY, SPARTA, and HIGHLAND LAKES	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
FAYETTE WSC	FAYETTE	QUEEN CITY and GULF COAST	NA	NA	NA	NA
FLATONIA	FAYETTE	YEGUA-JACKSON and GULF COAST	NA	NA	NA	NA
LA GRANGE	FAYETTE	QUEEN CITY and SPARTA	Multiple conditions listed covering different scenarios	5%	Multiple conditions listed covering different scenarios	5%
LEE COUNTY WSC	FAYETTE	CARRIZO-WILCOX AQUIFER	Continually falling treated water storage levels which do not refill above 70% overnight	20%	Continually falling treated water storage levels which do not refill above 60% overnight	30% reduction
SCHULENBURG	FAYETTE	GULF COAST	NA	NA	NA	NA
COUNTY-OTHER	GILLESPIE	COLORADO and GUADALUPE	NA	NA	NA	NA
FREDERICKSBURG	GILLESPIE	ELLENBURGER- SAN SABA and HICKORY	Multiple conditions listed covering different scenarios	15% reduction in average daily demand; 25% reduction in Max daily demand	When City Manager determines that Stage 3 (Severe) conditions are exceeded.	20% reduction in average daily demand; 40% reduction in Max daily demand
AUSTIN	HAYS	HIGHLAND LAKES/RESERVOIR SYSTEM/COLORADO RUN-OF-RIVER	Demand 260 mgd for 3 consecutive days; Combined Lake storage less than 900,000 acft;	Reduce water use by 15% to 20%	Combined Lake storage less than 600,000 acft; As determined by City Manager - system outage, equipment failure, contamination, etc	Reduce water use to levels deemed necessary

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
BUDA	HAYS	EDWARDS-BFZ and CANYON LAKE	BSEACD declares exceptional stage; BSEACD declares Alarm stage or greater and GBRA declaring Stage III; Daily demand reaches 85% of available supply; quality/supply/distribution system or other emergency exists per city Manager	Reduce overall use by 20% and reduce pumping from BSEACD by 40%		
CIMARRON PARK WATER COMPANY	HAYS	EDWARDS-BFZ	BSEACD declares exceptional stage; BSEACD declares Alarm stage or greater and GBRA declaring Stage III; Daily demand reaches 85% of available supply; quality/supply/distribution system or other emergency exists per city Manager	20% reduction of overall water use; 40% pumping reduction from BSEACD	BSEACD declares emergency response stage; BSEACD declares Critical stage or greater and GBRA declaring Stage IV; Daily demand reaches 90% of available supply; quality/supply/distribution system or other emergency exists per city Manager	20% reduction of overall water use; 40% pumping reduction from BSEACD
COUNTY-OTHER	HAYS	HIGHLAND LAKES and EDWARDS-BFZ	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
DRIPPING SPRINGS	HAYS	HIGHLAND LAKES	The static water level in DSWSC Well No. 4 is 225 feet or greater below the surface of the ground, the total daily water demand equals or exceeds 950,000 gallons for four(4) consecutive days, the total daily water demand equals or exceeds 1,200,000 gallons on a single day, continually falling water reservoir levels do not refill above 50 percent overnight, notice is given by the LCRA that total daily water demand equals or exceeds 95 percent of the total operating surface water treatment capacity for (3) consecutive days, or 97 percent on a single day, combined storage of Lakes Travis and Buchanan reaches 600,000 acre-feet, in accordance with the LCRA DCP, and 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).	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.

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
DRIPPING SPRINGS WSC	HAYS	HIGHLAND LAKES/TRINITY AQUIFER	Static well level in DSWSC Well No 4 is 225 feet or greater below ground surface; or daily demand equals/exceeds 950,000 gallons for 4 days; or total daily demand exceeds 1.2mgd for a single day; or continually falling reservoir levels do not refill above 50% overnight; or LCRA gives notice that total daily demand equals or exceeds 95% for 3 consecutive days or 97% of single day of total operation surface water treatment capacity; combined storage of Travis/Buchanan is 600,000 acre/feet; or LCRA declares a drought worse that drought of record	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).	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.
GOFORTH SUD	HAYS	CANYON LAKE/EDWARDS-BFZ	Any of Goforth's providers initiates Stage II; or consumption reaches 90% of daily maximum supply for 3 days; water level in any storage tanks cannot be replenished for 3 days	25% reduction in total use		
MOUNTAIN CITY	HAYS	EDWARDS-BFZ	Defer to BSEACD		Defer to BSEACD	

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
PLUM CREEK WATER COMPANY	HAYS		NA	NA	NA	NA
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	HAYS	HIGHLAND LAKES	For surface, daily demand exceeds 95% of total capacity for LCRA treatment plant for 3 consecutive days or 97% on a single day; or contracted peak day capacity for systems supplied by non-LCRA provider; groundwater when maximum daily use equals/exceeds 95% of pump capacity for three days; Highland lakes are 600,000 acre-feet; LCRA Board determines drought or record	20% 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).	Customers are required to eliminate non-essential water uses during an emergency.
COUNTY-OTHER	LLANO	ELLENBURGER- SAN SABA, HICKORY, and HIGHLAND LAKES	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
HORSESHOE BAY	LLANO		Drought year with severe water shortage, or loss/failure of water production/distribution that decrease supply by 10-25%; or drought conditions worsen; or LCRA enacts surface water withdrawal restrictions up to 10-25%; or short/long-term situation requiring reduction of 10-25% consumption	10-25% reduction	1. Critical drought conditions resulting in emergency water conditions and curtailment of water use; 2. Loss or damage to Horseshoe Bay water production or water distribution appurtenance or facility that would decrease water supply system capabilities by 35%; 3. Any other emergency water supply or demand issue the LCRA General Manager or the LCRA Board determines to warrant the declaration of Stage 4; 4. Any surface water supplies withdrawal restriction enacted by the LCRA that would entail a 35% reduction in water supply to the City of Horseshoe Bay; 5. Any short term or long term water supply situation requiring a 35% reduction in water consumption	35% reduction
KINGSLAND WSC	LLANO	HIGHLAND LAKES, and OTHER AQUIFER	Based on LCRA drought plan		Based on LCRA drought plan	

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
LLANO	LLANO	HIGHLAND LAKES/LLANO LAKE	1. The 7-day moving average daily discharge of the median flow between the LIano River at Llano and the Llano River at Mason is equal to or less than 19 cfs. 2. The Goal for Stage 2 cannot be met under Stage 2 Restriction.	Limit the daily pumpage at the water treatment plant to 0.88 million gallons per day.	1. The 7-day moving average daily discharge of the median flow between the LIano River at Llano and the Llano River at Mason is equal to or less than 7 cfs. 2. The Goal for Stage 3 cannot be met under Stage 3 Restriction.	Limit the daily pumpage at the water treatment plant to 0.66 million gallons per day.
SUNRISE BEACH VILLAGE	LLANO	HIGHLAND LAKES, and HICKORY	Defer to LCRA		Defer to LCRA	
BAY CITY	MATAGORDA	GULF COAST	Total daily demand equals or exceeds 90% of City's water well pumping capacity for 7 consecutive days	20% reduction in 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).	40% reduction in demand
COUNTY-OTHER	MATAGORDA	HIGHLAND LAKES, and GULF COAST	NA	NA	NA	NA
PALACIOS	MATAGORDA	GULF COAST	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 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
BROOKESMITH SUD	MILLS	BROWNWOOD LAKE	1. The imminent or actual failure of a major component of the system, which would cause an immediate health or safety hazard. 2. Water demand is exceeding 75% of system capacity or 3.375 mgd for three consecutive days. 3. Failure of BCWID No. 1 to deliver water contracted for. 4. All available water supply is so low that the pumps cannot pump the daily water demand.	To be determined by Manager	1. The imminent or actual failure of a major component of the system, which would cause an immediate health or safety hazard. 2. Water demand is exceeding 75% of system capacity or 3.375 mgd for three consecutive days. 3. Failure of BCWID No. 1 to deliver water contracted for. 4. All available water supply is so low that the pumps cannot pump the daily water demand.	To be determined by Manager
COUNTY-OTHER	MILLS	TRINITY	NA	NA	NA	NA
GOLDTHWAITE	MILLS	TRINITY, and GOLDTHWAITE RESERVOIR	NA	NA	NA	NA
COUNTY-OTHER	SAN SABA	ELLENBURGER- SAN SABA, HICKORY, MARBLE FALLS, and HIGHLAND LAKES	NA	NA	NA	NA
RICHLAND SUD	SAN SABA	ELLENBURGER-SAN SABA	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

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
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).	Achieve a minimum of 20% reduction in daily water 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).	Achieve a minimum of 20% reduction in daily water demand
AUSTIN	TRAVIS	HIGHLAND LAKES/RESERVOIR SYSTEM/COLORADO RUN-OF-RIVER	Demand 260 mgd for 3 consecutive days; Combined Lake storage less than 900,000 acft;	Reduce water use by 15% to 20%	Combined Lake storage less than 600,000 acft; As determined by City Manager - system outage, equipment failure, contamination, etc	Reduce water use to levels deemed necessary
BARTON CREEK WEST WSC	TRAVIS	HIGHLAND LAKES	NA	NA	NA	NA
BEE CAVE	TRAVIS	HIGHLAND LAKES	NA	NA	NA	NA
BRIARCLIFF	TRAVIS	HIGHLAND LAKES	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
CEDAR PARK	TRAVIS	HIGHLAND LAKES/RESERVOIR SYSTEM	(i) Daily water consumption equals or exceeds 95% of operating capacity for 3 days; (ii) Combined storage of Highland lakes are less than 750,000 AF but greater than 600,000 AF (iii) Water system is contaminated whether accidentally or intentionally. Severe condition is reached immediately upon detection; (iv) City Manager discretion	Achieve a minimum of 20% reduction in daily water demand	To be determined by City Manager	Achieve a minimum of 30% reduction in daily water demand
COUNTY-OTHER	TRAVIS	CARRIZO-WILCOX, CITY OF AUSTIN - ROR (MUNICIPAL), EDWARDS-BFZ, HIGHLAND LAKES, and TRINITY	NA	NA	NA	NA
CREEDMOOR-MAHA WSC	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL) and EDWARDS-BFZ	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
ELGIN	TRAVIS	CARRIZO-WILCOX AQUIFER	Average daily consumption is 95% of capacity for 24-hour period; aquifer level drops to critical level or average consumption will not enable storage levels to be maintained; and system demand exceeds available high service pump capacity; detection of water system failure from act of God; delivery capability is reduced due to mechanical failure requiring more than 12 hours to repair	not defined	Average daily consumption is 95% of capacity for 24-hour period; aquifer level drops to critical level or average consumption will not enable storage levels to be maintained; and system demand exceeds available high service pump capacity; detection of water system failure from act of God; delivery capability is reduced due to mechanical failure requiring more than 12 hours to repair	not defined
GOFORTH SUD	TRAVIS	CANYON LAKE/EDWARDS-BFZ	Any of Goforth's providers initiates Stage II; or consumption reaches 90% of daily maximum supply for 3 days; water level in any storage tanks cannot be replenished for 3 days	Up to 40% reduction in total use, dependent on source of water	Any of Goforth's providers initiates Stage III; or consumption reaches 95% of daily maximum supply for 3 days; water level in any storage tanks cannot be replenished for 5 days	Up to 40% reduction in total use, dependent on source of water

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
JONESTOWN	TRAVIS	HIGHLAND LAKES	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 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.	Achieve a minimum 20% reduction in water 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). 3. Any other emergency condition or LCRA determination.	As determined by the LCRA Board.
LAGO VISTA	TRAVIS	HIGHLAND LAKES	Demand equals or exceeds 95% treatment capacity for 3 consecutive days or a single day; or supply reaches 600,000 acre-feet	Achieve a minimum 20% reduction in water 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). 3. Any other emergency condition or LCRA determination.	As determined by the LCRA Board.

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
LAKEWAY	TRAVIS	HIGHLAND LAKES	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 Combined storage of Lakes Travis and Buchanan reaches 750,000 acre-feet, in accordance with the LCRA DCP, or	Achieve a minimum 20% reduction in water use.	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 Major water line breaks, or pump or system failures occur, which cause an unprecedented loss of capability to provide water service; or Combined storage of Lakes Travis and Buchanan reaches 600,000 acre-feet, in accordance with the LCRA DCP	As determined by the LCRA Board.
LEANDER	TRAVIS	HIGHLAND LAKES	Defer to LCRA		Defer to LCRA	
LOOP 360 WSC	TRAVIS	HIGHLAND LAKES	NA	NA	NA	NA
LOST CREEK MUD	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL)	900,000 ac-ft or less of storage in highland lakes	Reduce water use by 15% to 20%	600,000 ac-ft or less of storage in highland lakes	Reduce water use to levels deemed necessary
MANOR	TRAVIS	OTHER AQUIFER, CITY OF AUSTIN - ROR (MUNICIPAL), and HIGHLAND LAKES	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
MANVILLE WSC	TRAVIS	HIGHLAND LAKES/EDWARDS-BFZ AQUIFER/OTHER AQUIFER/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 stroage tank levels are decreasing at 5% per day; or total production of wells fall by an additional 15%.	15% reduction of average daily water 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
MUSTANG RIDGE	TRAVIS	OTHER AQUIFER	NA	NA	NA	NA
NORTH AUSTIN MUD #1	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL)	Daily consumption 95% of the District's supply/distribution capacity; demand exceeds availablehigh service pump capacity; system is contaminated; system fails due to act of God; mechanical failure of pumping equipment; required under contract	15% reduction	a. there is a failure of water treating facilities; b. there is a contamination of water source; or c. required under any District water supply contract.	20% reduction

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
NORTHTOWN MUD	TRAVIS		Demand exceeds available high service pump capacity; system is contaminated; system fails due to act of God; mechanical failure; District Manager deems it necessary; required by Water Supplier under District supply contract; otherwise determined by the Board.	15% reduction	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

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
PFLUGERVILLE	TRAVIS	HIGHLAND LAKES	Average consumption reaches 90% production/distribution for 3 consecutive days; or Highland Lakes fall to 700,000; or City Manager determines implementation is necessary	25% reduction in usage	(1) The combined storage of the Highland Lakes reaches 600,000 acre feet or Lake Pflugerville is down to its 625 elevation. (2) Major water line breaks, or pump or system failures occur, and cause unexpected loss of capability to provide water service; (3) System demand exceeds available high service pump capacity; (4) There is detection of accidental or intentional contamination of the water system; (5) There is detection of water systems failure from acts of God (e.g., tornados, hurricanes, etc.) or man; (6) A mechanical failure of pumping equipment occurs during a moderate drought and will require more than 12 hours to repair; or (7) Implementation is necessary under the city's wholesale water contract with the Lower Colorado River Authority.	75% reduction in usage
POINT VENTURE	TRAVIS	HIGHLAND LAKES	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
ROLLINGWOOD	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL)	Defer to City of Austin		Defer to City of Austin	
ROUND ROCK	TRAVIS	EDWARDS - BFZ	Defer to Brazos River Authority Plan; storage/reservoir is at or below stage 3 trigger as shown in plan; reservoir, group of reservoirs, or entire BRA system is below stage 3; critical infrastructure is damaged	7% reduction	Defer to Brazos River Authority Plan	
SHADY HOLLOW MUD	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL)	Defer to City of Austin		Defer to City of Austin	
SUNSET VALLEY	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL); EDWARDS - BFZ	System failure or contamination of City groundwater; or declaration of Stage II by City of Austin or alarm stage by BSEACD; or LCRA requires firm customers to implement mandatory water restrictions.	20% reduction	System failure or contamination of City groundwater; or declaration of Stage III by City of Austin or critical stage by BSEACD; or LCRA requires firm customers to curtail use on a pro rata basis	30% reduction
THE HILLS	TRAVIS	HIGHLAND LAKES	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
TRAVIS COUNTY MUD #4	TRAVIS	HIGHLAND LAKES	Notification by the District that Stage 3 requirements and constrictions are in place	Reduce and maintain maximum daily water demand at or below ninety five percent (90%) of MUD 4 system capacity.	Notification by the District that Stage 4 requirements and constrictions are in place	Reduce and maintain maximum daily water demand at or below ninety five percent (95%) of MUD 4 system capacity.
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	Combined storage of Travis/Buchanan above 600,000 AFY and below 750,000 ac-ft; or LCRA requests reduced water use	25% reduction in daily demand	Combined storage of Travis/Buchanan at or below 600,000 ac-ft; or LCRA requests reduced water use	30-40% reduction in daily demand

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
TRAVIS COUNTY WCID #18	TRAVIS	HIGHLAND LAKES	Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this Plan 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 daily demand	Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 4 of this Plan 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 daily demand
TRAVIS COUNTY WCID #19	TRAVIS	HIGHLAND LAKES	When District's Operator is notified by MUD 4 that it is implementing Stage 3	Reduce and maintain maximum daily demand at or below 90% of MUD 4 system capacity	When District's Operator is notified by MUD 4 that it is implementing Stage 4	Reduce and maintain maximum daily demand at or below 95% of MUD 4 system capacity
TRAVIS COUNTY WCID #20	TRAVIS	HIGHLAND LAKES	Defer to LCRA		Defer to LCRA	
VOLENTE	TRAVIS		NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
WELLS BRANCH MUD	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL)	Defer to City of Austin		Defer to City of Austin	
WEST LAKE HILLS	TRAVIS	CITY OF AUSTIN - ROR (MUNICIPAL)	Defer to City of Austin		Defer to City of Austin	
WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY	TRAVIS	HIGHLAND LAKES	Surface water daily demand equals 95% of either the total design of LCRA WTP for 3 consecutive days (or 97% on single day) or contracted peak day capacity of systems supplied by non-LCRA provider. Groundwater daily usage equals 95% of pump/well rated capacity for 3 consecutive days; or wen combine storage of Travis/Buchanan are 600,000 ac-ft; or LCRA Board determines a drought worse than the drought of record	20% reduction in water 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).	Customers are required to eliminate non-essential water uses during an emergency.
WILLIAMSON-TRAVIS COUNTY MUD #1	TRAVIS	HIGHLAND LAKES	NA	NA	NA	NA
COUNTY-OTHER	WHARTON	GULF COAST	NA	NA	NA	NA
EAST BERNARD	WHARTON	GULF COAST	NA	NA	NA	NA

Existing Drought Trigger Summary for 2016 Region K Water Plan (Updated July 30, 2013)

WUG Name	County	Source Name	Severe Water Shortage		Critical/Emergency Water Shortage	
			Trigger	Goal	Trigger	Goal
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	Achieve a 15% reduction in daily water pumpage	Total daily demand equals or exceeds 5.0MGD for 3 consecutive days or 5.5 MGD on a single day	Achieve a 20% reduction in daily water pumpage
WHARTON	WHARTON	GULF COAST	Total daily demand equals or exceeds 3.5 MGD for 3 consecutive days or 3.75 MGD on a single day	Achieve a 15% reduction in daily water pumpage	Total daily demand equals or exceeds 3.75 MGD for 3 consecutive days or 4.0 MGD on a single day	Achieve a 20% reduction in daily water pumpage
AUSTIN	WILLIAMSON	HIGHLAND LAKES/RESERVOIR SYSTEM/COLORADO RUN-OF-RIVER	Demand 260 mgd for 3 consecutive days; Combined Lake storage less than 900,000 acft;	Reduce water use by 15% to 20%	Combined Lake storage less than 600,000 acft; As determined by City Manager - system outage, equipment failure, contamination, etc	Reduce water use to levels deemed necessary
COUNTY-OTHER	WILLIAMSON	CITY OF AUSTIN - ROR (MUNICIPAL), TRINITY, and EDWARDS - BFZ	NA	NA	NA	NA
NORTH AUSTIN MUD #1	WILLIAMSON	CITY OF AUSTIN - ROR (MUNICIPAL)	Daily consumption 95% of the District's supply/distribution capacity; demand exceeds available high service pump capacity; system is contaminated; system fails due to act of God; mechanical failure of pumping equipment; required under contract	15% reduction	a. there is a failure of water treating facilities; b. there is a contamination of water source; or c. required under any District water supply contract.	20% reduction
WELLS BRANCH MUD	WILLIAMSON	CITY OF AUSTIN - ROR (MUNICIPAL)	Defer to City of Austin		Defer to City of Austin	

APPENDIX 7C

Region-Specific Model Drought Contingency Plans

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Model Region K Drought Contingency Plan Template

Utility/Water Supplier

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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

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:
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

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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

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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