

## Brazos River Authority

### **Drought Contingency Plan**

April 29, 2019

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### **Drought Contingency Plan**

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#### Brazos River Authority Drought Contingency Plan April 29, 2019

#### 1. Declaration of Policy, Purpose, and Intent

In order to conserve the available water supply and/or protect the integrity of the Brazos River Authority (BRA) water supply system, the BRA adopts this following Drought Contingency Plan (Plan).

The BRA water supply system includes 11 reservoirs: Lakes Possum Kingdom, Granbury, Limestone, Whitney, Belton, Proctor, Somerville, Stillhouse Hollow, Granger, Georgetown and Aquilla, the Williamson County Regional Raw Water Line (WCRRWL) connecting Lake Stillhouse Hollow to Lake Georgetown, and the East Williamson County Regional Water System (EWCRWS) - Public Water System Identification Number: 2460155.

The Plan is developed in conformance with the rules governing drought contingency plans for wholesale water providers set forth by the Texas Commission on Environmental Quality (TCEQ) in *Texas Administrative Code* Title 30, Part 1, Rule §288.22, *Drought Contingency Plans for Wholesale Water Suppliers*. Appendix A includes a copy of the TCEQ rules governing drought contingency plans for wholesale water providers. This Plan, dated April 29, 2019, supersedes the previous plan dated October 29, 2012, and the BRA's EWCRWS Drought Contingency Plan dated April 18, 2011.

Any reference to statutes, rules and/or regulations in this Plan shall mean and be a reference to such statutes, rules and/or regulations as written on the effective date of this Plan or as they are subsequently amended, modified or restated from time to time. In the event any provision or part of this Plan is found to be inconsistent with applicable statutes, rules and/or regulations, that particular provision or part so found will be inoperative, and such statutes, rules and/or regulations shall control.

#### 2. Provisions to Actively Inform the Public and Provide Opportunity for Input

The BRA has taken the following steps to actively inform the public and affirmatively provide opportunity for user input in the preparation of the Plan and to inform wholesale customers about the Plan:

- Placing a draft of the Plan on the BRA's Web site at <u>www.brazos.org</u> and inviting comments on the draft Plan. Discussing the Plan at the BRA customer meeting conducted in March 2019.
- Sending a letter to all wholesale water customers and Regional Water Planning Groups detailing updates to the draft Plan, directing them to where it could be found on the BRA's Web site, offering copies to those who did not wish to access the draft Plan on the Web site, and soliciting comments (Appendix B includes a copy of the letter sent to wholesale customers and Appendix C includes a copy of the letter sent to Regional Water Planning Groups).
- Providing written notice to the public concerning the draft Plan and inviting their comments (written notice is provided by posting with the Secretary of State's office and on the BRA official Web site).

#### 3. Coordination with Regional Water Planning Groups

The BRA has statutory responsibility for conserving and developing the water resources of the Brazos River Basin in Texas and making them available for beneficial use. The Brazos River Basin covers approximately 47,000 square miles, with 44,440 in Texas (all or part of 70 counties) and slightly over 2,500 in New Mexico. The BRA's service area includes the Brazos River Basin in Texas. The BRA

also supplies water outside of the Brazos River Basin to the San Jacinto-Brazos Coastal Basin and a small part of the Trinity Basin.

The BRA has directed each of the Regional Water Planning Groups located within its service area (Region B, Region C, Region F, Region G, Region H, Region K, and Region O) to the draft Plan located on the BRA official Web site. Appendix C includes an example of the letter sent to the Regional Water Planning Groups.

### 4. Information to be Monitored and Criteria for the Initiation and Termination of Drought Response Stages

The BRA's general manager/chief executive officer (GM/CEO) or designee shall monitor water supply and demand conditions. The triggering criteria described below are based on hydrologic analyses and reservoir operations experience, including lessons learned from the 2011 drought. Individual lake elevation triggers apply to Lakes Aquilla, Belton, Granger, Limestone, Proctor, and Somerville. For the Possum Kingdom Lake-Lake Granbury-Lake Whitney sub-system and the Lake Stillhouse Hollow-Lake Georgetown sub-system, drought stage trigger levels are based on their respective combined volumes. Additional triggers associated with the transfer of water from Lake Stillhouse Hollow to Lake Georgetown apply to Lake Georgetown.

Reservoir levels are continuously monitored by the BRA. The BRA, its customers, and other interested parties are all responsible for determining when lake levels approach important elevations associated with specific water supply intake structures. A table of critical elevations for customer water supply intake structures is contained in Appendix D.

The BRA also monitors the seasonal rainfall forecasts provided by the Texas Water Development Board (TWDB), and they are used as an information source for developing drought conditions. The forecasts are issued from January through the end of April and are located at the following website: <a href="https://waterdatafortexas.org/drought/rainfall-forecast">https://waterdatafortexas.org/drought/rainfall-forecast</a>.

Four levels of drought severity, as shown in Table 1, have been identified at which specific actions will be conducted. Each of the four levels includes recommendations for specific drought response actions that may be tailored to conditions as they exist at the time. Details on each of the four drought stages are also discussed. Elevation-Capacity Tables based on estimated 2030 sedimentation conditions are contained in Appendix E.

House Bill 1437, passed by the Texas legislature in 1999, allows the BRA to contract with the Lower Colorado River Authority (LCRA) for up to 25,000 acre-feet of water from the Colorado River Basin (LCRA water) for use in Williamson County. For the LCRA water, drought stage trigger levels are based on the combined conservation storage of Lakes Buchanan and Travis as stipulated in the LCRA Firm Customer Drought Contingency Plan (LCRA Plan), as contained in Appendix F of LCRA's Water Management Plan dated May 20, 2015Pro-rata.Pro-rata

The BRA will comply with the LCRA Plan for water used under the LCRA contract. Target reduction goals for LCRA water can be met by either implementing specific restrictions or utilizing an alternate water source, which may include water sourced from the Brazos Basin. The BRA also owns and operates the EWCRWS adjacent to Lake Granger, which supplies wholesale treated water. Customers of the EWCRWS include the City of Taylor, Jonah Water Special Utility District and Lone Star Regional Water Authority. Criteria specific for initiation and termination of Drought Stages of the EWCRWS are contained within this Plan.

Status	Surface Elevation <sup>4</sup>	Water Storage⁴	Reservoir Drawdown			
	(ft msl)	(acre-feet)	(ft)			
Lake Aquilla						
Top of Conservation (full)	537.5	43,293	0			
Stage 1 Drought Watch	533.6	32,253	3.9			
Stage 2 Drought Warning	530.5	25,189	7.0			
Stage 3 Drought Emergency	526.8	18,125	10.7			
Stage 4 Pro-rata Curtailment	523.7	13,436	13.8			
	Lake Belton		•			
Top of Conservation (full)	594	432,631	0			
Stage 1 Drought Watch	588.1	363,410	5.9			
Stage 2 Drought Warning	578.7	268,231	15.3			
Stage 3 Drought Emergency	566.3	173,052	27.7			
Stage 4 Pro-rata Curtailment	550.2	86,526	43.8			
	Lake Granger		•			
Top of Conservation (full)	504	51,822	0			
Stage 1 Drought Watch	501.8	43,116	2.2			
Stage 2 Drought Warning	498.4	31,935	5.6			
Stage 3 Drought Emergency	494.1	20,754	9.9			
Stage 4 Pro-rata Curtailment	490.0	12,956	14			
L	ake Limestone					
Top of Conservation (full)	363	203,780	0			
Stage 1 Drought Watch	357.6	142,646	5.4			
Stage 2 Drought Warning	354.8	115,136	8.2			
Stage 3 Drought Emergency	351.5	87,625	11.5			
Stage 4 Pro-rata Curtailment	346.9	56,927	16.1			
	Lake Proctor					
Top of Conservation (full)	1162	54,762	0			
Stage 1 Drought Watch	1,158.2	38,388	3.8			
Stage 2 Drought Warning	1,156.1	31,297	5.9			
Stage 3 Drought Emergency	1,153.3	24,206	8.7			
Stage 4 Pro-rata Curtailment	1,150.1	16,976	11.9			
L	ake Somerville		·			
Top of Conservation (full)	238	150,293	0			
Stage 1 Drought Watch	234.9	117,229	3.1			
Stage 2 Drought Warning	231.8	88,673	6.2			
Stage 3 Drought Emergency	228.2	60,117	9.8			
Stage 4 Pro-rata Curtailment	223.9	30,059	14.8			

Table 1 Continued. Drought Severity Triggers <sup>1</sup>					
Status	Surface Elevation <sup>2</sup>	Water Storage <sup>2</sup>	Reservoir Drawdown		
	(ft msl)	(acre-feet)	(ft)		
Lake Possum Kingdo	m, Lake Granbui	ry, Lake Whitney	3		
Top of Conservation (full)	N/A <sup>4</sup>	724,0225	N/A <sup>4</sup>		
Stage 1 Drought Watch	N/A <sup>4</sup>	564,737 <sup>5</sup>	N/A <sup>4</sup>		
Stage 2 Drought Warning	N/A <sup>4</sup>	427,173 <sup>5</sup>	N/A <sup>4</sup>		
Stage 3 Drought Emergency	N/A <sup>4</sup>	289,609 <sup>5</sup>	N/A <sup>4</sup>		
Stage 4 Pro-rata Curtailment	N/A <sup>4</sup>	144,804 <sup>5</sup>	N/A <sup>4</sup>		
Lake Georgeto	wn, Lake Stillhou	ise Hollow			
Top of Conservation (full)	N/A <sup>4</sup>	267,949 <sup>6</sup>	N/A <sup>4</sup>		
Stage 1 Drought Watch	N/A <sup>4</sup>	222,398 <sup>6</sup>	N/A <sup>4</sup>		
Stage 2 Drought Warning	N/A <sup>4</sup>	164,789 <sup>6</sup>	N/A <sup>4</sup>		
Stage 3 Drought Emergency	N/A <sup>4</sup>	107,180 <sup>6</sup>	N/A <sup>4</sup>		
Stage 4 Pro-rata Curtailment	N/A <sup>4</sup>	53,590 <sup>6</sup>	N/A <sup>4</sup>		
Brazos Ri	ver Authority Sy	stem			
Top of Conservation (full)	N/A <sup>4</sup>	1,928,552	N/A <sup>4</sup>		
Stage 1 Drought Watch	N/A <sup>4</sup>	1,524,177	N/A <sup>4</sup>		
Stage 2 Drought Warning	N/A <sup>4</sup>	1,152,423	N/A <sup>4</sup>		
Stage 3 Drought Emergency	N/A <sup>4</sup>	780,668	N/A <sup>4</sup>		
Stage 4 Pro-rata Curtailment	N/A <sup>4</sup>	415,273	N/A <sup>4</sup>		

- Triggers were derived using a water availability tool specifically developed to simulate the BRA water supply system. Assumptions for developing the triggers include:
  - Estimated year 2030 sedimentation conditions and 2030 demands;
  - Previous 3 year (2015 through 2017) average return flows;
  - · Operation of Lake Whitney hydropower;
  - Excluded water rights above Possum Kingdom Lake; and
  - included required environmental flow releases and assumed leakage through the dams
- 2. Elevation-Capacity Tables are contained in Appendix E.
- In deriving the triggers, balancing factors established in the Possum Kingdom-Granbury Water Management Study were incorporated.
- 4. Surface elevation and reservoir drawdown are not applicable because reservoirs are operated as a system. Their combined storage is a better drought indicator than individual elevations because elevations in each reservoir can be influenced by other reservoirs within the system. For example, water can be transferred from Lake Stillhouse Hollow to Lake Georgetown through a pipeline that connects the two lakes. Stillhouse Hollow could be completely full while Lake Georgetown was 15 feet low, or Georgetown could be completely full with Stillhouse Hollow being 2.5 feet low, and in both cases, the collective capacity of the reservoirs is 94% full. Using combined storage instead of individual reservoir elevations for the trigger levels allows the operation of the pipeline to be taken into account.
- 5. Storages shown are for the combined conservation pool storage volume of Lakes Possum Kingdom, Granbury, and Whitney; BRA storage in Lake Whitney is limited to 51,987 acre-feet.
- 6. Storages shown are for the combined conservation pool storage volume of Lakes Stillhouse Hollow and Georgetown.

#### Stage 1 – Drought Watch Condition

Requirements for Initiation – The BRA's GM/CEO or his/her designee may initiate a Drought Watch Condition in one or more of the following circumstances:

- For a reservoir/reservoir sub-system, when the Palmer Hydrologic Drought Index (PHDI) is equal to or less than -2.4. The PHDI for each reservoir/reservoir sub-system is derived monthly.
- For a reservoir/reservoir sub-system, when the content of that reservoir/reservoir sub-system is at or below its corresponding Stage 1 Trigger (Table 1) and reasonable estimates of current annual demands, coupled with inflows and evaporation representative of the drought of record, indicate that the content could be reduced to the Stage 2 Trigger or less during the next 12 months.
- For a reservoir, group of reservoirs, or the entire BRA System, when the combined storage
  of the BRA System is below the Stage 1 System Storage Trigger (Table 1) and reasonable
  estimates of current annual demands, coupled with inflows and evaporation
  representative of the drought of record, indicate that the combined system storage could
  be reduced to the Stage 2 System Storage Trigger or less during the next 12 months.
- For Lake Georgetown (in addition to triggers shown in Table 1),
  - When sustained pumping operations through the WCRRWL continue for longer than six months.
  - o As deemed appropriate due to disruption in WCRRWL pumping operations.
- For LCRA water, when the combined storage of Lakes Buchanan and Travis drops below 1.4 million acre-feet and interruptible stored water supplies to the irrigation operations are being curtailed.
- For EWCRWS (in addition to triggers shown in Table 1 for Lake Granger), when the total daily
  water consumption reaches eighty-five (85) percent of production capacity for a period of thirty
  (30) consecutive days. Currently, this would equate to 9.1 million gallons a day based on a
  maximum output of 13.0 million gallons a day production.
- For a reservoir, group of reservoirs, or the entire BRA System, when an unexpected condition has the potential to adversely affect the public health, welfare or safety.

Requirements for Termination – The BRA's GM/CEO or his/her designee may terminate a Drought Watch Condition when any of the reasons for initiation have ceased to exist for a period of 30 consecutive days or other relevant factors determined by the BRA's GM/CEO or designee.

To terminate a Drought Watch Condition for LCRA water, the BRA will comply with the LCRA Plan.

#### Stage 2 – Drought Warning Condition

<u>Requirements for Initiation</u> – The BRA's GM/CEO or his/her designee may initiate a Drought Warning Condition in one or more of the following circumstances:

- For a reservoir/reservoir sub-system, when the content of that reservoir/reservoir sub-system is at or below its corresponding Stage 2 Trigger (Table 1) and reasonable estimates of current annual demands, coupled with inflows and evaporation representative of the drought of record, indicate that the content could be reduced to the Stage 3 Trigger or less during the next 12 months.
- For a reservoir, group of reservoirs, or the entire BRA System, when the combined storage
  of the BRA System is below the Stage 2 System Storage Trigger (Table 1) and reasonable
  estimates of current annual demands, coupled with inflows and evaporation
  representative of the drought of record, indicate that the combined system storage could
  be reduced to the Stage 3 System Storage Trigger or less during the next 12 months.
- For Lake Georgetown (in addition to triggers shown in Table 1),
  - When sustained WCRRWL pumping operations continue for longer than 18 months.
  - As deemed appropriate due to disruption in WCRRWL pumping operations.
- For LCRA water, when the combined storage of Lakes Buchanan and Travis is below 900,000 acre-feet and interruptible stored water supplies to the irrigation operations are being curtailed.
- For EWCRWS (in addition to triggers shown in Table 1 for Lake Granger), when the total daily
  water consumption reaches ninety (90) percent of production capacity for a period of 30
  consecutive days. Currently this would equate to 10.4 million gallons a day based on a
  maximum output of 13.0 million gallons a day production.
- For a reservoir, group of reservoirs, or the entire BRA System, when an unexpected condition has the potential to adversely affect the public health, welfare or safety.

Requirements for Termination – The BRA's GM/CEO or his/her designee may terminate a Drought Warning Condition when any of the reasons for initiation have ceased to exist for a period of 30 consecutive days or other relevant factors determined by the BRA's GM/CEO or designee. Upon termination of a Drought Warning, a Drought Watch may become operative depending on conditions at the time.

To terminate a Drought Warning Condition for LCRA water, the BRA will comply with the LCRA Plan.

#### Stage 3 – Drought Emergency Condition

<u>Requirements for Initiation</u> – The BRA's GM/CEO or his/her designee may initiate a Drought Emergency Condition in one or more of the following circumstances:

- For a reservoir/reservoir sub-system, when the content of that reservoir/reservoir sub-system is at or below its corresponding Stage 3 Trigger (Table 1) and reasonable estimates of current annual demands, coupled with inflows and evaporation representative of the drought of record, indicate that the content could be reduced to the Stage 4 Trigger within the next 12 months.
- For a reservoir, group of reservoirs, or the entire BRA System, when the combined storage
  of the BRA System is below the Stage 3 System Storage Trigger (Table 1) and reasonable
  estimates of current annual demands, coupled with inflows and evaporation
  representative of the drought of record, indicate that the combined system storage could
  be reduced to the Stage 4 System Storage Trigger within the next 12 months.
- For a reservoir/reservoir sub-system, when critical water supply infrastructure is damaged
  or otherwise rendered unable to meet projected demands due to natural disaster, power
  outage, structural failure, sabotage, or other reasons.
- For Lake Georgetown (in addition to triggers shown in Table 1),
  - When the GM/CEO or his/her designee determines that hydrologic conditions (inflow and/or evaporation) are as severe as or worse than the driest 24-month period on record.
  - o As deemed appropriate due to disruption in WCRRWL pumping operations.
- For LCRA water, when LCRA, in accordance with its Water Management Plan, declares a Drought Worse than the Drought of Record.
- For EWCRWS (in addition to triggers shown in Table 1 for Lake Granger), when the total daily water consumption reaches ninety-five (95) percent of production/distribution capacity for a period of 30 consecutive days. Currently this would equate to 11.05 million gallons a day based on a maximum output of 13.0 million gallons a day production.
- For a reservoir, group of reservoirs, or the entire BRA System, when an unexpected condition has the potential to adversely affect the public health, welfare or safety.

Requirements for Termination – The BRA's GM/CEO or his/her designee may terminate a Drought Emergency Condition when any of the reasons for initiation have ceased to exist for a period of 30 consecutive days or other relevant factors determined by the BRA's GM/CEO or designee. Upon termination of a Drought Emergency, a Drought Warning or a Drought Watch may become operative depending on conditions at the time.

To terminate a Drought Emergency Condition for LCRA water, the BRA will comply with the LCRA Plan.

#### Stage 4 – Pro-rata Curtailment Condition

<u>Requirements for Initiation</u> – The BRA's GM/CEO or his/her designee may initiate a pro-rata Curtailment Condition in one or more of the following circumstances:

- For a reservoir/reservoir sub-system, when the content of that reservoir/reservoir sub-system is at or below its corresponding Stage 4 Trigger (Table 1).
- For a reservoir, group of reservoirs, or the entire BRA System, when the combined storage of the BRA System is below the Stage 4 System Storage Trigger (Table 1).
- For Lake Georgetown (in addition to triggers shown in Table 1), as deemed appropriate
  by the BRA's GM/CEO or his/her designee due to disruption in WCRRWL pumping
  operations.
- For EWCRWS (in addition to triggers shown in Table 1 for Lake Granger), as deemed appropriate by the BRA's GM/CEO or his/her designee due to a major water line break or pump or system failures, which cause unprecedented loss of capacity to provide water service, or natural or man-made contamination of the water supply source.
- For a reservoir, group of reservoirs, or the entire BRA System, when an unexpected condition has the potential to adversely affect the public health, welfare or safety.

Requirements for Termination – The BRA's GM/CEO or his/her designee may terminate a prorata Curtailment Condition when any of the reasons for initiation have ceased to exist for a period of 30 consecutive days or other relevant factors determined by the BRA's GM/CEO or designee. Upon termination of a Pro-rata Curtailment, a Drought Emergency, a Drought Warning or a Drought Watch may become operative depending on conditions at the time.

#### 5. Procedures to be followed for Initiation and Termination of Drought Response Stages

#### Initiation of a Drought Response Stage

The BRA's GM/CEO or his/her designee may order the implementation of a Drought Response Stage when the trigger conditions for that stage are met. The following actions will be taken when a drought stage is initiated:

- The public will be notified through the appropriate media and the BRA Web site.
- Customers will be notified by telephone with a follow-up letter/fax or e-mail.
- Meetings will be held with customers as appropriate.
- The Executive Director of the TCEQ will be notified within five (5) business days.

The BRA's GM/CEO or his/her designee may decide not to order the implementation of a Drought Response Stage even though the trigger criteria for the stage are met. Factors which could influence such a decision include, but are not limited to, the time of the year, weather conditions,

the anticipation of replenished water supplies or the anticipation that additional facilities will become available to meet needs. The reason for this decision should be documented.

#### Termination of a Drought Response Stage

The BRA's GM/CEO or his/her designee may order the termination of a drought response stage when the conditions for termination are met or at his/her discretion. The following actions will be taken when a drought stage is terminated:

- The public will be notified through local media and the BRA Web site.
- Wholesale customers will be notified by telephone with a follow-up letter/fax or e-mail.
- The Executive Director of the TCEQ will be notified within five (5) business days.

The BRA's GM/CEO or his/her designee may decide not to order the termination of a drought response stage even though the conditions for termination of the stage are met. Factors which could influence such a decision include, but are not limited to, the time of the year, weather conditions or the anticipation of potential changed conditions that warrant the continuation of the drought stage. The reason for this decision should be documented.

#### 6. Drought Response Stages, Measures to be Implemented and Goals for Use Reduction

The BRA will notify the Executive Director of the TCEQ within five (5) business days when any Drought Stage is declared under this plan. In turn and in compliance with Title 30, *Texas Administrative Code*, Chapter 288, Subchapter B, Rule §288.22 (b) (included in Appendix A), the BRA's customers are required to notify the Executive Director of the TCEQ within five (5) business days of any mandatory actions that are subsequently implemented under their respective drought contingency plans.

In order to demonstrate compliance with requested water use reductions, BRA may require documentation of specific actions taken to reduce water use from customers that have irregular water use patterns that restrict the ability to establish a baseline amount to which water use restrictions will be applied.

#### <u>Stage 1 – Drought Watch Condition</u>

The Stage 1, Drought Watch condition, is intended to raise customer and public awareness of potential drought problems. For water supplied from the Brazos River System, there is a voluntary target reduction goal of five (5) percent of the use that would have occurred in the absence of drought contingency measures. For LCRA water, there is a voluntary target reduction goal of five (5) percent, as indicated in LCRA's Plan. The BRA's GM/CEO or his/her designee may perform or request implementation of any of the actions listed below, as deemed necessary:

- Inform customers of the Drought Watch Condition and request them to inform their customers, if any.
- Notify customers of actions being taken and urge activation by customers of appropriate water conservation measures to achieve the target water use reduction goal.

- Meet with customers to discuss current drought and possible measures to be taken if the drought intensifies.
- Initiate Stage 1 or equivalent of customer drought contingency plans, if available.
- Intensify efforts on leak detection and repair.
- Reduce nonessential water use.
- Initiate voluntary landscape watering schedules.
- Verify the location, depth and operational requirements of intake structures.
- Increase public education efforts on ways to reduce water use.
- Investigate alternative ways to supply needs that could be implemented if the drought intensifies.
- In cooperation with customers, initiate the preparation of a specific drought response plan tailored to conditions as they exist at the time.
- Implement appropriate provisions of the specific drought response plan.
- Contact the TCEQ, United States Geological Survey (USGS) and U.S. Army Corps of Engineers. Inform them of the situation and request appropriate actions from each, such as closer monitoring to protect releases, more frequent gage inspections to reflect actual flow conditions more accurately or a greater effort to meet exact release requests.
- Other actions, as deemed appropriate, for the given situation.

#### Stage 2 – Drought Warning Condition

For water supplied from the Brazos River System, the goal for water use reduction under a Stage 2, Drought Warning Condition, is a ten (10) percent reduction of the use that would have occurred in the absence of drought contingency measures. If circumstances warrant, the BRA's GM/CEO or his/her designee may modify this goal. For LCRA water, the target reduction goal is ten (10) to twenty (20) percent, as indicated in LCRA's Plan. The BRA's GM/CEO or his/her designee may perform or request implementation of any of the actions listed below, as deemed necessary:

- Inform customers of the Drought Warning Condition and request that they inform their customers, if any.
- Notify customers of actions being taken and urge activation by customers of appropriate water conservation measures to achieve the target water use reduction goal.
- Meet with customers to discuss the current drought and possible measures to be taken.

- Initiate Stage 2 or equivalent of customer drought contingency plans, if available.
- Encourage the public to wait until the current drought has passed before establishing new landscaping.
- Initiate mandatory landscape and outdoor water use restrictions needed to achieve the water use reduction goal.
- Initiate engineering studies to evaluate alternative actions if conditions worsen.
- Further accelerate public education efforts on ways to reduce water use.
- In cooperation with BRA customers, develop or update the specific drought response plan tailored to conditions as they exist at the time.
- Implement appropriate provisions of the specific drought response plan.
- For LCRA firm water, begin discussions with LCRA to develop a specific curtailment plan, consistent with LCRA's TCEQ-approved Pro-rata Curtailment Plan and LCRA's Raw Water Rules related to pro-rata curtailment.
- For LCRA firm water, any landscape water schedule used to implement restrictions should restrict daytime outdoor water use and not allow the irrigation of landscaping to occur more than twice a week.
- For EWCRWS, initiate preparations for the implementation of pro-rata curtailment of water diversion and/or deliveries.
- Implement other measures identified by the BRA and its customers.

#### Stage 3 – Drought Emergency Condition

For water supplied from the Brazos River System, the goal for water use reduction under a Stage 3, Drought Emergency Condition, is a total reduction of twenty (20) percent in the use that would have occurred in the absence of any drought contingency measures. If circumstances warrant, the BRA's GM/CEO or his/her designee may modify this goal. For LCRA water, the LCRA will implement a mandatory pro-rata curtailment of a minimum of twenty (20) percent, as indicated in LCRA's Plan. If the combined storage of Lakes Buchanan and Travis continue to drop below 600,000 acre-feet, the mandatory pro-rata curtailment percentage may be increased as determined by the LCRA Board of Directors. The BRA's GM/CEO or his/her designee may perform or request implementation of any of the actions listed below, as deemed necessary:

- Continue actions commenced under Stages 1 and 2.
- Inform customers of the Drought Emergency Condition and request that they inform their customers, if any.
- Notify customers of actions being taken and urge activation by customers of appropriate water conservation measures to achieve the target water use reduction goal.

- Require BRA customers to cease diversion and use of water under Interruptible Water Availability Agreements.
- Cease the sale of water by the BRA under Interruptible Water Availability Agreements.
- Limit or restrict the temporary assignment of water by BRA customers to third parties in accordance with the terms of the underlying contracts.
- In cooperation with BRA customers, develop or update the specific drought response plan tailored to conditions as they exist at the time.
- Implement appropriate provisions of the specific drought response plan.
- Meet with customers to discuss the current drought and measures to be taken.
- Initiate the drought emergency or equivalent stage in customer drought contingency plans as necessary to meet the target water use reduction goal.
- Initiate mandatory water use restrictions such as prohibiting hosing of paved areas, buildings or windows, prohibiting operation of ornamental fountains, prohibiting washing or rinsing of vehicle by hose and prohibiting water use in such a manner as to allow runoff or other waste.
- Limit landscape watering at each service address.
- Prohibit draining and filling of existing swimming pools and filing of new swimming pools (pools may add water to replace losses during normal use).
- Prohibit establishment of new landscaping.
- Prohibit all outdoor watering, including hand held hoses.
- Implement viable alternative water supply strategies (this may require prior approval from TCEQ).
- Coordinate with customers regarding the pro-rata curtailment process in the event that drought conditions persist or intensify and a Pro-rata Curtailment Condition is initiated.
- For EWCRWS, initiate mandatory measures to reduce non-essential water use and initiate pro-rata curtailment measures, pursuant to *Texas Water Code* §11.039.

#### Stage 4 – Pro-rata Curtailment Condition

Under Stage 4, Pro-rata Curtailment Condition, the BRA's customers will be required to implement a mandatory pro-rata curtailment, pursuant to *Texas Water Code* §11.039. All uses of water under Interruptible Water Availability Agreements in the affected part of the system will be suspended prior to and during any mandatory pro-rata curtailment of water use under long-term contracts.

If conditions change while pro-rata curtailment is in effect, meetings with affected customers may be necessary in order to adjust the curtailment percentage.

In the event that the BRA implements pro-rata curtailment under Stage 4 of this Plan, the GM/CEO will establish conditions under which the curtailment will be rescinded.

### 7. Required Provision on Distribution of Water in Case of Shortage in BRA Contracts

The BRA water contracts shall include a provision that allows water curtailment in accordance with the provisions of *Texas Water Code* §11.039 during shortages of water.

#### 8. Procedures for Granting Variances

The BRA's GM/CEO or his/her designee may 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:

- 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; or
- Alternative methods can be implemented which will achieve the same level of reduction in water use.

Variances shall be granted or denied at the discretion of the BRA's GM/CEO or his/her designee. All petitions for variances should be in writing and should include the following information:

- Name and address of the petitioner(s).
- Purpose of water use.
- Specific provisions from which relief is requested.
- Detailed statement of the adverse effect of the provision from which relief is requested.
- Description of the relief requested.
- Period of time for which the variance is sought.
- Alternative measures that will be taken to reduce water use.
- Other pertinent information.

For LCRA water, LCRA may consider a temporary variance to the pro-rata water allocation requirement in accordance with LCRA's Plan.

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

#### 9. Procedures for Implementation and Enforcement

Appendix F is a copy of the BRA's Board resolution approving this Plan. Compliance with this Plan, as amended from time to time, is a condition in the BRA's water supply agreements. Failure to comply with the Plan is a violation of the water supply agreement provision and will be treated as such.

For the EWCRWS, during any period when pro-rata allocation of available water supplies is in effect, wholesale customer shall pay the Excess Water Fee for all water taken that exceeds the customers pro-rata allocation. The Excess Water Fee is determined by the BRA's contract.

#### 10. Review and Update

The BRA shall review this Plan at least every five (5) years and shall update as appropriate based on new or updated information.

#### **APPENDIX A**

Texas Administrative Code, Section 288.22
Texas Commission on Environmental Quality Rules on Drought Contingency
Plans for Wholesale Water Suppliers

#### APPENDIX A

# Texas Administrative Code, Section 288.22 Texas Commission on Environmental Quality Rules on Drought Contingency Plans for Wholesale Water Suppliers

TITLE 30 ENVIRONMENTAL QUALITY

<u>PART 1</u> TEXAS COMMISSION ON ENVIRONMENTAL

**QUALITY** 

**CHAPTER 288** WATER CONSERVATION PLANS, DROUGHT

CONTINGENCY PLANS, GUIDELINES AND

REQUIREMENTS

**SUBCHAPTER B** DROUGHT CONTINGENCY PLANS

SECTION §288.22 Drought Contingency Plans for Wholesale Water

**Suppliers** 

- (A) A drought contingency plan for a wholesale water supplier must include the following minimum elements:
  - (1) Preparation of the Plan shall include provisions to actively inform the public and to affirmatively provide opportunity for user input in the preparation of the Plan and for informing wholesale customers about the Plan. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the public and providing written notice to the public concerning the proposed plan and meeting.
  - (2) The drought contingency plan must document coordination with the regional water planning groups for the service area of the wholesale public water supplier to ensure consistency with the appropriate approved regional water plans.
  - (3) The drought contingency plan must include a description of the information to be monitored by the water supplier and specific criteria for the initiation and termination of drought response stages, accompanied by an explanation of the rationale or basis for such triggering criteria.
  - (4) The drought contingency plan must include a minimum of three drought or emergency response stages providing for the implementation of measures in response to water supply conditions during a repeat of the drought-of-record.
  - (5) The drought contingency plan must include the procedures to be followed for the initiation or termination of drought response stages, including procedures for notification of wholesale customers regarding the initiation or termination of drought response stages.
  - (6) The drought contingency plan must include specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought. The entity preparing the Plan shall establish the targets. The goals established by the entity under this paragraph are not enforceable.

- (7) The drought contingency plan must include the specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following:
  - (a) pro-rata curtailment of water deliveries to or diversions by wholesale water customers as provided in Texas Water Code, §11.039; and
  - (b) utilization of alternative water sources with the prior approval of the executive director as appropriate (e.g., interconnection with another water system, temporary use of a non-municipal water supply, use of reclaimed water for non-potable purposes, etc).
- (8) The drought contingency plan must include a provision in every wholesale water contract entered into or renewed after adoption of the Plan, including contract extensions, that in case of a shortage of water resulting from drought, the water to be distributed shall be divided in accordance with Texas Water Code, §11.039.
- (9) The drought contingency plan must include procedures for granting variances to the plan.
- (10) The drought contingency plan must include procedures for the enforcement of any mandatory water use restrictions including specification of penalties (e.g., liquidated damages, water rate surcharges, discontinuation of service) for violations of such restrictions.
- (B) The wholesale public water supplier shall notify the executive director within five (5) business days of the implementation of any mandatory provisions of the drought contingency plan.
- (C) The wholesale public water supplier shall review and update, as appropriate, the drought contingency plan, at least every five (5) years, based on new or updated information, such as adoption or revision of the regional water plan.

**Source Note:** The provisions of this §288.22 adopted to be effective February 21, 1999, 24 TexReg 949; amended to be effective April 27, 2000, 25 TexReg 3544; amended to be effective October 7, 2004, 29 TexReg 9384

## APPENDIX B Example Letter to Wholesale Water Customers

### APPENDIX B Example Letter to Wholesale Water Customers





Date

[Customer] [Address]

#### Dear «Salutation»:

The Brazos River Authority (BRA) is performing an update of its Drought Contingency Plan (Plan). In accordance with Texas Commission on Environmental Quality regulations, we are notifying our customers that the draft Plan will be available for review and comment on the BRA's Web site at www.brazos.org starting on March 22, 2019.

The following is a summary of the proposed changes to the Plan:

- 1) Established new trigger levels
- 2) Incorporated requirements specific to BRA's East Williamson County Regional Water System
- 3) Referenced seasonal rainfall forecasts developed by the Texas Water Development Board as a drought monitoring tool
- 4) Clarification of Pro-Rata curtailment language

If you prefer to review a hard copy of the draft Plan, you may request one through our Public Information Office by calling (254) 761-3111. Comments on the draft Plan will be accepted through close of business on Monday, April 22, 2019. Please mail written comments to:

Brazos River Authority Attn: Chris Higgins P.O. Box 7555 Waco, TX 76714-7555

Following the receipt of comments, the Plan will be considered for adoption at the next BRA Board of Directors meeting on April 29, 2019.

Sincerely,

AARON ABEL Water Services Manager AA:kld

# APPENDIX C Example Letter to Regional Water Planning Groups [Planning Groups B, C, F, G, H, K and O]

Brazos River Authority Drought Contingency Plan April 2019

#### APPENDIX C

## Example Letter to Regional Water Planning Groups [Planning Groups B, C, F, G, H, K and O]





Brazos River Authority

**QUALITY • CONSERVATION • SERVICE** 

Date
[Chairman]
Chair, Region \_ Water Planning Group
[Address]

#### Dear «Salutation»:

The Brazos River Authority (BRA) is performing an update of its Drought Contingency Plan (Plan). In accordance with Texas Commission on Environmental Quality regulations, we are notifying our customers that the draft Plan will be available for review and comment on the BRA's Web site at www.brazos.org starting on March 22, 2019.

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Brazos River Authority Attn: Chris Higgins P.O. Box 7555 Waco, TX 76714-7555

Following the receipt of comments, the Plan will be considered for adoption at the next BRA Board of Directors meeting on April 29, 2019. A final copy of the Plan will be forwarded to the regional water planning groups after it is adopted by the BRA Board.

Sincerely,

AARON ABEL Water Services Manager AA:kld

Brazos River Authority Drought Contingency Plan April 2019

Appendix D - 4

## APPENDIX D Customer Water Supply Intake Structures

## APPENDIX D Customer Water Supply Intake Structures

Physical Lakeside Intakes				
RESERVOIR	BRA CUSTOMER	MINIMUM OPERATION LEVEL (ft)		
AQUILLA	AQUILLA WSD	507		
	BELL COUNTY WCID #1	540		
BELTON	CITY OF GATESVILLE	538		
	BLUEBONNET WSC	568		
	GEORGETOWN, CITY OF	732		
GEORGETOWN	ROUND ROCK, CITY OF	747		
	BRUSHY CREEK MUD	747		
	TXU - COMANCHE PEAK	678		
	TXU - DECORDOVA	673		
GRANBURY	LENMO INC. (LEONARDS)	682		
GRANDURI	WOLF HOLLOW I, L.P.	673		
	CITY OF GRANBURY	682		
	SWATS	674		
GRANGER	EAST WILLIAMSON COUNTY REGIONAL WATER SYSTEM	496		
	NRG	330		
LIMESTONE	SOUTH LIMESTONE COUNTY WATER SUPPLY	354		
	LUMINANT (OAK GROVE MANAGEMENT)	331		
PROCTOR	UPPER LEON RIVER MWD	1135		
	SPORTSMAN"S WORLD MUD	983		
POSSUM KINGDOM	POSSUM KINGDOM WSC	982		
	WEST CENTRAL BRAZOS PIPELINE	967		
SOMERVILLE	CITY OF BRENHAM	208		
	CENTRAL TEXAS WSC	582		
STILLHOUSE HOLLOW	WILLIAMSON COUNTRY REGIONAL RAW WATER LINE	559.5		
	KEMPNER WSC	580		

<sup>&</sup>lt;sup>1</sup> This list includes some of the larger BRA water customers. It is not all inclusive. The Minimum Operation Levels represent the critical reservoir elevation at which the operation of the intake structure would start to be compromised. These values were provided directly by the customers. The BRA makes no statement as to their accuracy, and they are not intended for any other use outside of this DCP.

# APPENDIX E Elevation-Capacity Tables Selected Reservoirs

#### APPENDIX E Elevation-Capacity Tables Selected Reservoirs

Table E-1 Lake Aquilla Elevation-Capacity Values Year 2030 Estimated Sedimentation Conditions					
Elevation	Capacity	Elevation	Capacity		
(Feet msl)	(Acre-Feet)	(Feet msl)	(Acre-Feet)		
495	0	517	4,336		
496	0	518	5,139		
497	0	519	6,022		
498	0	520	6,996		
499	0	521	8,051		
500	0	522	9,179		
501	0	523	10,379		
502	0	524	11,651		
503	0	525	13,003		
504	0	526	14,446		
505	0	527	16,000		
506	22	528	17,667		
507	96	529	19,447		
508	229	530	21,337		
509	421	531	23,333		
510	674	532	25,450		
511	988	533	27,697		
512	1,364	534	30,088		
513	1,805	535	32,630		
514	2,327	536	35,328		
515	2,929	537	38,181		
516	3,599	537.5	39,656		

Baseline Conditions from Texas Water Development Board, 2014 Volumetric Survey

Table E-2 Lake Belton Elevation-Capacity Values Year 2030 Estimated Sedimentation Conditions					
Elevation	Capacity	Elevation	Capacity	Elevation	Capacity
(Feet msl)	(Acre-Feet)	(Feet msl)	(Acre-Feet)	(Feet msl)	(Acre-Feet)
484	0	521	12,302	558	124,055
485	1	522	13,526	559	129,416
486	3	523	14,833	560	134,902
487	9	524	16,224	561	140,519
488	16	525	17,695	562	146,264
489	29	526	19,246	563	152,161
490	47	527	20,879	564	158,211
491	70	528	22,594	565	164,429
492	100	529	24,383	566	170,821
493	141	530	26,241	567	177,358
494	189	531	28,175	568	184,034
495	247	532	30,197	569	190,870
496	315	533	32,308	570	197,900
497	394	534	34,507	571	205,146
498	491	535	36,799	572	212,639
499	607	536	39,192	573	220,393
500	746	537	41,698	574	228,375
501	913	538	44,327	575	236,562
502	1,104	539	47,078	576	244,948
503	1,322	540	49,938	577	253,510
504	1,569	541	52,903	578	262,260
505	1,852	542	55,988	579	271,249
506	2,184	543	59,207	580	280,488
507	2,550	544	62,558	581	289,987
508	2,949	545	66,030	582	299,702
509	3,381	546	69,617	583	309,619
510	3,846	547	73,342	584	319,750
511	4,346	548	77,221	585	330,102
512	4,888	549	81,254	586	340,662
513	5,472	550	85,449	587	351,418
514	6,102	551	89,804	588	362,371
515	6,785	552	94,307	589	373,535
516	7,521	553	98,951	590	384,902
517	8,317	554	103,742	591	396,472
518	9,182	555	108,662	592	408,266
519	10,129	556	113,688	593	420,318
520	11,168	557	118,816	594	432,631

Baseline Conditions from Texas Water Development Board, 2015 Volumetric Survey

Table E-3 Lake Georgetown Elevation-Capacity Values Year 2030 Estimated Sedimentation Conditions				
Elevation	Capacity	Elevation Cond	Capacity	
(Feet msl)	(Acre-Feet)	(Feet msl)	(Acre-Feet)	
	, ,	` ′	`	
714	10 14	753	6,256	
715		754	6,690	
716	19 27	755	7,136	
717	37	756	7,598 8,079	
718	48	757	8,579	
719 720	63	758 759	9,098	
720	80		9,637	
721	99	760 761	10,198	
723	122	762	10,779	
724	147	763	11,380	
725	176	764	12,000	
726	210	765	12,643	
727	252	766	13,310	
728	307	767	14,001	
729	372	768	14,718	
730	453	769	15,462	
731	549	770	16,235	
732	658	771	17,038	
733	780	772	17,868	
734	912	773	18,721	
735	1,056	774	19,594	
736	1,211	775	20,490	
737	1,380	776	21,405	
738	1,562	777	22,342	
739	1,763	778	23,302	
740	1,983	779	24,286	
741	2,219	780	25,293	
742	2,471	781	26,323	
743	2,738	782	27,380	
744	3,020	783	28,463	
745	3,315	784	29,573	
746	3,624	785	30,708	
747	3,949	786	31,869	
748	4,292	787	33,057	
749	4,653	788	34,271	
750	5,031	789	35,511	
751	5,425	790	36,776	
752	5,834	791 Watan Davidanin	38,068	

Baseline conditions from Texas Water Development Board, 2016 Volumetric Survey

Table E-4 Lake Granbury Elevation-Capacity Values Year 2030 Estimated Sedimentation Conditions				
Elevation	Capacity	Elevation	Capacity	
(Feet msl)	(Acre-Feet)	(Feet msl)	(Acre-Feet)	
627	0	661	14,679	
628	0	662	16,050	
629	0	663	17,516	
630	2	664	19,077	
631	9	665	20,731	
632	24	666	22,472	
633	53	667	24,302	
634	108	668	26,226	
635	178	669	28,245	
636	272	670	30,357	
637	398	671	32,572	
638	547	672	34,898	
639	717	673	37,347	
640	909	674	39,936	
641	1,137	675	42,684	
642	1,399	676	45,594	
643	1,689	677	48,674	
644	2,013	678	51,950	
645	2,366	679	55,428	
646	2,744	680	59,137	
647	3,152	681	63,115	
648	3,603	682	67,349	
649	4,106	683	71,859	
650	4,659	684	76,654	
651	5,261	685	81,730	
652	5,917	686	87,178	
653	6,626	687	93,042	
654	7,395	688	99,357	
655	8,233	689	106,078	
656	9,138	690	113,123	
657	10,106	691	120,492	
658	11,133	692	128,227	
659	12,227	693	136,326	
660	13,405			

Baseline conditions from Texas Water Development Board, 2015 Volumetric Survey

Table E-5 Lake Granger Elevation-Capacity Values Year 2030 Estimated Sedimentation Conditions					
Elevation	Capacity	Elevation	Capacity		
(Feet msl)	(Acre-Feet)	(Feet msl)	(Acre-Feet)		
464	0	485	6,236		
465	0	486	7,359		
466	0	487	8,592		
467	0	488	9,937		
468	0	489	11,391		
469	2	490	12,966		
470	7	491	14,661		
471	29	492	16,477		
472	85	493	18,431		
473	181	494	20,528		
474	316	495	22,778		
475	490	496	25,208		
476	697	497	27,836		
477	944	498	30,665		
478	1,256	499	33,695		
479	1,644	500	36,940		
480	2,121	501	40,389		
481	2,721	502	44,022		
482	3,452	503	47,825		
483	4,288	504	51,822		
484	5,217				

Baseline conditions from Texas Water Development Board, 2013 Volumetric Survey

Table E-6 Lake Limestone Elevation-Capacity Values Year 2030 Estimated Sedimentation Conditions					
Elevation	Capacity	Elevation	Capacity		
(Feet msl)	(Acre-Feet)	(Feet msl)	(Acre-Feet)		
320	0	342	33,077		
321	0	343	37,179		
322	0	344	41,579		
323	1	345	46,420		
324	8	346	51,675		
325	65	347	57,327		
326	264	348	63,396		
327	670	349	69,866		
328	1,238	350	76,714		
329	1,949	351	83,920		
330	2,885	352	91,534		
331	4,062	353	99,673		
332	5,479	354	108,245		
333	7,078	355	117,238		
334	8,924	356	126,640		
335	11,071	357	136,422		
336	13,458	358	146,621		
337	16,134	359	157,259		
338	19,096	360	168,273		
339	22,281	361	179,655		
340	25,665	362	191,546		
341	29,242	363	203,780		

Baseline conditions from Texas Water Development Board, 2012 Volumetric Survey

	Table E-7 Lake Possum Kingdom Elevation-Capacity Values Year 2030 Estimated Sedimentation Conditions				
Elevation	Capacity	Elevation	Capacity	Elevation	Capacity
(Feet msl)	(Acre-Feet)	(Feet msl)	(Acre-Feet)	(Feet msl)	(Acre-Feet)
893	0	929	26,220	965	169,743
894	0	930	28,176	966	176,230
895	0	931	30,253	967	182,875
896	1	932	32,427	968	189,677
897	3	933	34,691	969	196,652
898	11	934	37,051	970	203,811
899	43	935	39,513	971	211,165
900	105	936	42,071	972	218,717
901	198	937	44,720	973	226,474
902	335	938	47,464	974	234,428
903	516	939	50,325	975	242,609
904	750	940	53,305	976	251,030
905	1,041	941	56,407	977	259,689
906	1,395	942	59,637	978	268,593
907	1,801	943	62,993	979	277,756
908	2,284	944	66,472	980	287,187
909	2,833	945	70,079	981	296,928
910	3,441	946	73,811	982	307,006
911	4,105	947	77,664	983	317,398
912	4,829	948	81,644	984	328,113
913	5,620	949	85,751	985	339,142
914	6,471	950	89,986	986	350,492
915	7,379	951	94,343	987	362,155
916	8,351	952	98,829	988	374,135
917	9,379	953	103,454	989	386,435
918	10,462	954	108,213	990	399,047
919	11,594	955	113,107	991	412,036
920	12,785	956	118,133	992	425,524
921	14,031	957	123,293	993	439,682
922	15,329	958	128,593	994	454,628
923	16,682	959	134,030	995	470,242
924	18,088	960	139,606	996	486,471
925	19,558	961	145,326	997	503,227
926	21,094	962	151,197	998	520,455
927	22,696	963	157,227	999	538,139
928	24,388	964	163,410	1,000	556,340

Baseline conditions from Texas Water Development Board, 2016 Volumetric Survey

Table E-8 Lake Proctor Elevation-Capacity Values Year 2030 Estimated Sedimentation Conditions						
Elevation	Capacity	Elevation	Capacity			
(Feet msl)	(Acre-Feet)	(Feet msl)	(Acre-Feet)			
1,131	0	1,147	11,270			
1,132	0	1,148	12,990			
1,133	0	1,149	14,810			
1,134	2	1,150	16,740			
1,135	35	1,151	18,840			
1,136	234	1,152	21,060			
1,137	663	1,153	23,390			
1,138	1,251	1,154	25,830			
1,139	1,932	1,155	28,380			
1,140	2,699	1,156	31,080			
1,141	3,589	1,157	34,160			
1,142	4,592	1,158	37,790			
1,143	5,683	1,159	41,690			
1,144	6,853	1,160	45,850			
1,145	8,185	1,161	50,230			
1,146	9,654	1,162	54,760			

Baseline conditions from Texas Water Development Board, 2012 Volumetric Survey

Table E-9 Lake Somerville Elevation-Capacity Values Year 2030 Estimated Sedimentation Conditions				
Elevation	Capacity			
(Feet msl)	(Acre-Feet)			
208	0			
209	0			
210	1			
211	33			
212	318			
213	994			
214	1,990			
215	3,350			
216	5,119			
217	7,341			
218	10,034			
219	13,159			
220	16,686			
221	20,537			
222	24,731			
223	29,300			
224	34,248			
225	39,669			
226	45,633			
227	52,064			
228	58,909			
229	66,216			
230	73,888			
231	81,878			
232	90,306			
233	99,212			
234	108,593			
235	118,424			
236	128,670			
237	139,275			
238	150,293			

Baseline conditions from Texas Water Development Board, 2012 Volumetric Survey

Table E-10 Lake Stillhouse Hollow Elevation-Capacity Values Year 2030 Estimated Sedimentation Conditions						
Elevation	Capacity	Elevation	Capacity	Elevation	Capacity	
505	0	545	10,453	585	72,200	
506	0	546	11,158	586	74,869	
507	1	547	11,894	587	77,605	
508	3	548	12,659	588	80,405	
509	6	549	13,454	589	83,270	
510	11	550	14,284	590	86,209	
511	17	551	15,147	591	89,224	
512	27	552	16,047	592	92,308	
513	41	553	16,986	593	95,462	
514	61	554	17,963	594	98,687	
515	86	555	18,978	595	101,988	
516	113	556	20,031	596	105,372	
517	144	557	21,129	597	108,832	
518	190	558	22,274	598	112,370	
519	260	559	23,463	599	115,987	
520	354	560	24,694	600	119,691	
521	470	561	25,964	601	123,488	
522	607	562	27,279	602	127,384	
523	769	563	28,637	603	131,384	
524	965	564	30,040	604	135,497	
525	1,199	565	31,494	605	139,721	
526	1,459	566	33,006	606	144,062	
527	1,745	567	34,575	607	148,514	
528	2,052	568	36,202	608	153,081	
529	2,377	569	37,879	609	157,764	
530	2,722	570	39,608	610	162,567	
531	3,089	571	41,389	611	167,488	
532	3,479	572	43,219	612	172,520	
533	3,893	573	45,101	613	177,669	
534	4,331	574	47,036	614	182,938	
535	4,790	575	49,026	615	188,328	
536	5,268	576	51,072	616	193,840	
537	5,764	577	53,174	617	199,484	
538	6,277	578	55,329	618	205,271	
539	6,808	579	57,545	619	211,214	
540	7,357	580	59,826	620	217,304	
541	7,926	581	62,174	621	223,524	
542	8,516	582	64,585	622	229,881	
543	9,131	583	67,061			
544	9,777	584	69,600			

Baseline conditions from Texas Water Development Board, 2015 Volumetric Survey

#### Table E-12. Lake Whitney Elevation-Capacity Values

Brazos River Authority storage within Lake Whitney totals 51,987 af for capacity above 520 ft. elevation. Drought contingency plan trigger values for the collective BRA storage in the Lake Possum Kingdom-Lake Granbury-Lake Whitney system take into account only this 51,987 acre-foot capacity, and not the entire capacity of Lake Whitney. Specific elevation-capacity values for Lake Whitney as a whole therefore do not apply.

# APPENDIX F Brazos River Authority Board Resolution Adopting the Drought Contingency Plan

#### **APPENDIX F**

### Brazos River Authority Board Resolution Adopting the Drought Contingency Plan



#### RESOLUTION OF THE BOARD OF DIRECTORS OF THE BRAZOS RIVER AUTHORITY APRIL 29, 2019

Agenda Item No. 7 Drought Contingency Plan Update

"BE IT RESOLVED that the Board of Directors of the Brazos River Authority that the Drought Contingency Plan, as presented at the April 29, 2019, Board of Directors' Meeting and prepared in conformance with the requirements of the Texas Commission on Environmental Quality, is hereby adopted and supersedes the Drought Contingency Plan dated October 29, 2012; and

BE IT FURTHER RESOLVED that the General Manager/CEO is directed to submit the adopted Brazos River Authority Drought Contingency Plan to the Texas Commission on Environmental Quality."

The aforementioned resolution was approved by the Board of Directors of the Brazos River Authority on April 29, 2019, to certify which witness my hand and seal.

Cynthia A. Flores

SUBSCRIBED AND SWORN TO BEFORE ME on this the 29 day 2019, to certify which witness my hand and official seal.

Jennifer J White
Notary Public
State of Texas
Commission Expires 5/21/2021
Notary ID# 314027-4

Notary Public in and for the

State of Texas

#### **APPENDIX G**

### Texas Water Code Section 11.039 Distribution of Water during Shortage

#### APPENDIX G

#### **Texas Water Code Section 11.039**

#### § 11.039. Distribution of Water During Shortage

- (a) If a shortage of water in a water supply not covered by a water conservation plan prepared in compliance with Texas Natural Resource Conservation Commission or Texas Water Development Board rules results from drought, accident or other cause, the water to be distributed shall be divided among all customers pro-rata, according to the amount each may be entitled to, so that preference is given to no one and everyone suffers alike.
- (b) If a shortage of water in a water supply covered by a water conservation plan prepared in compliance with Texas Natural Resource Conservation Commission or Texas Water Development Board rules results from drought, accident or other cause, the person, association of persons, or corporation owning or controlling the water shall divide the water to be distributed among all customers pro-rata, according to:
  - (1) the amount of water to which each customer may be entitled; or
  - (2) the amount of water to which each customer may be entitled, less the amount of water the customer would have saved if the customer had operated its water system in compliance with the water conservation plan.
- (c) Nothing in Subsection (a) or (b) precludes the person, association of persons, or corporation owning or controlling the water from supplying water to a person who has a prior vested right to the water under the laws of this state.

Amended by Acts 1977, 65th Leg., p. 2207, ch. 870, § 1, eff. Sept. 1, 1977.

Amended by Acts 2001, 77th Leg., ch. 1126, § 1, eff. June 15, 2001.