



# Drought Contingency Plan

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January 3, 2012

**Developed to Meet Requirements Outlined in 30 TAC Section 288.20**

Public Water Supply Number:

TX1050012

Certificate of Convenience and Necessity Number:

11953

121 Main Street

Buda, Texas 78610

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## **SECTION I. DECLARATION OF POLICY, PURPOSE AND INTENT**

The City of Buda (the “City”) establishes the 2011-2016 Drought Contingency Plan (the “Plan”) to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of water supply shortage or other emergency water supply conditions. The Plan will allow the City to manage its water system and water resources in a conscientious, fair and appropriate manner during certain situations when water use reductions are necessary. It is not designed to punish, stigmatize, or criticize anyone about their usage of water, but rather to ensure the City maintains an adequate supply of water during various stages of drought conditions or other water supply emergencies.

The City believes that significant reductions in water usage can be achieved through drought triggered water use restrictions and voluntary efforts by end-users, along with complimentary efforts by the water utility to maximize the efficiency of the system and eliminate loss. Implementation of voluntary water conservation measures beyond minimum year-round requirements and conscientious water use practices are encouraged at all times; however, additional water use restrictions are required in cases of extreme drought, periods of abnormally high usage, system contamination, or extended reduction in ability to supply water due to equipment failure. During drought, these efforts, if sufficiently effective, may delay the depletion of spring flows at Barton Springs, aquifer water levels and surface water supplies until sufficient recharge and runoff is available to replenish the Aquifer and reservoirs.

The Plan specifies how the City will respond to and manage the water system during system capacity and distribution limitations. In addition, the Plan specifies how the City will respond to and manage the water system during a repetition of the critical drought of record, and interim steps leading up to such a drought. The City will coordinate with policies of the Barton Springs-Edwards Aquifer Conservation District (BSEACD) and Guadalupe Blanco River Authority (GBRA) and any other water provider secured subsequent to the adoption of this Plan as it pertains to their adopted Drought Contingency Plans, Water Management Plans and other similar policies, if and when drought conditions occur. Both water supply and system capacity management actions are codified in the City of Buda’s Municipal Code Article 24.06. This Plan is designed to meet Section 11.1272 of the Texas Water Code and Chapter 288 of the Texas Administrative Code. These regulations require all Texas public water supply systems providing water service to 3,300 or more connections to prepare a Drought Contingency Plan. In addition, this Plan satisfies and complies with BSEACD Rules 3-7.5 and 3-7.7 related to Drought Management.

## **SECTION II. AUTHORITY AND APPLICABILITY**

The City Manager, or his/her designee is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. The City Manager 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.

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by the City of Buda, excluding reclaimed water and grey water. The terms person and customer as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

## **SECTION III. BACKGROUND**

### **CITY OF BUDA WATER SUPPLY, PROJECTED DEMAND, AND WATER SUPPLY CONTRACTS**

The City holds historic public water supply rights to pump 275,000,000 gallons annually from the Edwards Aquifer. However, the amount permitted to pump per month, absent any drought curtailments, varies from 17,325,000 in December and January up to 33,275,000 in August. BSEACD manages pumping from the Edwards Aquifer, and through its policies can curtail the City's pumping rights by as much as forty percent.

To stabilize and increase the water supply, the City entered into a contract with GBRA in 2002 to secure up to 1,000,000 gallons per day, sourced from Canyon Reservoir (Canyon Lake) in Comal County. In 2011, the City secured an additional 500,000 gallons per day through GBRA from the same source, bringing the total to 1,500,000 gallons per day. Assuming the maximum daily amount was pumped from GBRA's supply line, the City has access to 549,000,000 gallons annually through GBRA's Canyon Reservoir facility. GBRA's policies do not identify specific curtailments in each drought stage, but curtailments are negotiated and implemented at certain stages. While GBRA's curtailments are not specifically identified, this Plan seeks to be pro-active in drought management to sufficiently address any curtailments implemented.

Figure 1 provides a summary of water supply availability by month under BSEACD's various drought curtailments.

FIGURE 1: WATER SUPPLY AVAILABILITY BY MONTH UNDER BSEACD'S DROUGHT CURTAILMENTS

Baseline Scenario					
Month	BSEACD		GBRA*		Total
	Gallons	% of Total	Gallons**	% of Total	
January	17,325,000	27.1%	46,500,000	72.9%	63,825,000
February	17,875,000	29.1%	43,500,000	70.9%	61,375,000
March	18,150,000	28.1%	46,500,000	71.9%	64,650,000
April	20,350,000	31.1%	45,000,000	68.9%	65,350,000
May	22,000,000	32.1%	46,500,000	67.9%	68,500,000
June	26,125,000	36.7%	45,000,000	63.3%	71,125,000
July	33,275,000	41.7%	46,500,000	58.3%	79,775,000
August	33,000,000	41.5%	46,500,000	58.5%	79,500,000
September	27,500,000	37.9%	45,000,000	62.1%	72,500,000
October	22,825,000	32.9%	46,500,000	67.1%	69,325,000
November	19,250,000	30.0%	45,000,000	70.0%	64,250,000
December	17,325,000	27.1%	46,500,000	72.9%	63,825,000
Annual	275,000,000	33.4%	549,000,000	66.6%	824,000,000

  

BSEACD Conservation (10% Voluntary) Scenario						
Month	BSEACD		GBRA*		Total	Effective Curtailment
	Gallons	% of Total	Gallons**	% of Total		
January	15,592,000	25.1%	46,500,000	74.9%	62,092,000	2.72%
February	16,087,500	27.0%	43,500,000	73.0%	59,587,500	2.91%
March	16,335,000	26.0%	46,500,000	74.0%	62,835,000	2.81%
April	18,315,000	28.9%	45,000,000	71.1%	63,315,000	3.11%
May	19,800,000	29.9%	46,500,000	70.1%	66,300,000	3.21%
June	23,512,500	34.3%	45,000,000	65.7%	68,512,500	3.67%
July	29,947,500	39.2%	46,500,000	60.8%	76,447,500	4.17%
August	29,700,000	39.0%	46,500,000	61.0%	76,200,000	4.15%
September	24,750,000	35.5%	45,000,000	64.5%	69,750,000	3.79%
October	20,542,500	30.6%	46,500,000	69.4%	67,042,500	3.29%
November	17,325,000	27.8%	45,000,000	72.2%	62,325,000	3.00%
December	15,592,500	25.1%	46,500,000	74.9%	62,092,500	2.71%
Annual	247,499,500	31.1%	549,000,000	68.9%	796,499,500	3.34%

  

BSEACD Alarm (20% Curtailed) Scenario						
Month	BSEACD		GBRA*		Total	Effective Curtailment
	Gallons	% of Total	Gallons**	% of Total		
January	13,860,000	23.0%	46,500,000	77.0%	60,360,000	5.43%
February	14,300,000	24.7%	43,500,000	75.3%	57,800,000	5.82%
March	14,520,000	23.8%	46,500,000	76.2%	61,020,000	5.61%
April	16,280,000	26.6%	45,000,000	73.4%	61,280,000	6.23%
May	17,600,000	27.5%	46,500,000	72.5%	64,100,000	6.42%
June	20,900,000	31.7%	45,000,000	68.3%	65,900,000	7.35%
July	26,620,000	36.4%	46,500,000	63.6%	73,120,000	8.34%
August	26,400,000	36.2%	46,500,000	63.8%	72,900,000	8.30%
September	22,000,000	32.8%	45,000,000	67.2%	67,000,000	7.59%
October	18,260,000	28.2%	46,500,000	71.8%	64,760,000	6.58%
November	15,400,000	25.5%	45,000,000	74.5%	60,400,000	5.99%
December	13,860,000	23.0%	46,500,000	77.0%	60,360,000	5.43%
Annual	220,000,000	28.6%	549,000,000	71.4%	769,000,000	6.67%

  

BSEACD Critical (30% Curtailed) Scenario						
Month	BSEACD		GBRA*		Total	Effective Curtailment
	Gallons	% of Total	Gallons**	% of Total		
January	12,127,500	20.7%	46,500,000	79.3%	58,627,500	8.14%
February	12,512,500	22.3%	43,500,000	77.7%	56,012,500	8.74%
March	12,705,000	21.5%	46,500,000	78.5%	59,205,000	8.42%
April	14,245,000	24.0%	45,000,000	76.0%	59,245,000	9.34%
May	15,400,000	24.9%	46,500,000	75.1%	61,900,000	9.64%
June	18,287,500	28.9%	45,000,000	71.1%	63,287,500	11.02%
July	23,292,500	33.4%	46,500,000	66.6%	69,792,500	12.51%
August	23,100,000	33.2%	46,500,000	66.8%	69,600,000	12.45%
September	19,250,000	30.0%	45,000,000	70.0%	64,250,000	11.38%
October	15,977,500	25.6%	46,500,000	74.4%	62,477,500	9.88%
November	13,475,000	23.0%	45,000,000	77.0%	58,475,000	8.99%
December	12,127,500	20.7%	46,500,000	79.3%	58,627,500	8.14%
Annual	192,500,000	26.0%	549,000,000	74.0%	741,500,000	10.01%

  

BSEACD Exceptional (40% Curtailed) Scenario						
Month	BSEACD		GBRA*		Total	Effective Curtailment
	Gallons	% of Total	Gallons**	% of Total		
January	10,395,000	18.3%	46,500,000	81.7%	56,895,000	10.86%
February	10,725,000	19.8%	43,500,000	80.2%	54,225,000	11.65%
March	10,890,000	19.0%	46,500,000	81.0%	57,390,000	11.23%
April	12,210,000	21.3%	45,000,000	78.7%	57,210,000	12.46%
May	13,200,000	22.1%	46,500,000	77.9%	59,700,000	12.85%
June	15,675,000	25.8%	45,000,000	74.2%	60,675,000	14.69%
July	19,965,000	30.0%	46,500,000	70.0%	66,465,000	16.68%
August	19,800,000	29.9%	46,500,000	70.1%	66,300,000	16.60%
September	16,500,000	26.8%	45,000,000	73.2%	61,500,000	15.17%
October	13,695,000	22.8%	46,500,000	77.2%	60,195,000	13.17%
November	11,550,000	20.4%	45,000,000	79.6%	56,550,000	11.98%
December	10,395,000	18.3%	46,500,000	81.7%	56,895,000	10.86%
Annual	165,000,000	23.1%	549,000,000	76.9%	714,000,000	13.35%

  

BSEACD Emergency Response Scenario						
Month	BSEACD		GBRA*		Total	Effective Curtailment
	Gallons	% of Total	Gallons**	% of Total		
January	10,395,000	18.3%	46,500,000	81.7%	56,895,000	10.86%
February	10,725,000	19.8%	43,500,000	80.2%	54,225,000	11.65%
March	10,890,000	19.0%	46,500,000	81.0%	57,390,000	11.23%
April	12,210,000	21.3%	45,000,000	78.7%	57,210,000	12.46%
May	13,200,000	22.1%	46,500,000	77.9%	59,700,000	12.85%
June	15,675,000	25.8%	45,000,000	74.2%	60,675,000	14.69%
July	19,965,000	30.0%	46,500,000	70.0%	66,465,000	16.68%
August	19,800,000	29.9%	46,500,000	70.1%	66,300,000	16.60%
September	16,500,000	26.8%	45,000,000	73.2%	61,500,000	15.17%
October	13,695,000	22.8%	46,500,000	77.2%	60,195,000	13.17%
November	11,550,000	20.4%	45,000,000	79.6%	56,550,000	11.98%
December	10,395,000	18.3%	46,500,000	81.7%	56,895,000	10.86%
Annual	165,000,000	23.1%	549,000,000	76.9%	714,000,000	13.35%

\* The GBRA Drought Contingency Plan does not pre-determine curtailments during various drought stages, though they are 'negotiated' in Stage II of their plan and implemented in Stage III.

\*\* GBRA provides water up to 1.5 million gallons per day, rather than as a monthly amount. Except in an emergency, Buda is unable to exceed 1.5 million gallons on any given day.

The City is also participating in the Hays Caldwell Public Utility Association (HCPUA) in an effort to secure additional water sources from the Carizzo-Wilcox Aquifer. The HCPUA is a joint effort by several public water utilities and large water users to act regionally & cooperatively to secure the region's future water supply. In addition, the City is constantly evaluating other water sources available to assure a sustainable & reliable water supply.

## SECTION IV. PUBLIC INVOLVEMENT

The City conducted a public workshop on November 1, 2011 at its regularly scheduled City Council meeting, which presented issues regarding current water supply & sources, concerns & challenges pertaining to the City's current water conservation ordinances and Drought Contingency Plan, and some recommendations. The City then held a public hearing on December 6, 2011 at 7:00 p.m. in the City Hall Council Chambers, with notification of the hearing published in the Hays Free Press (newspaper of record) on November 30, 2011.

## SECTION V. PUBLIC EDUCATION AND NOTIFICATION

The City will 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 response measures to be implemented in each stage. This information will be provided by means of press releases, web page notices, signs posted in public places, public meetings and fliers available at City facilities. The City will also provide notice via utility bill inserts at the first opportunity following declaration of a drought stage. The City may take additional actions to notify beyond those listed. To the extent possible, the City will provide copies of public education and notification materials to its water suppliers. The City will provide additional public education regarding water use and water conservation throughout the year.

Press releases, web page notices, fliers and utility bill inserts shall at a minimum include the following information and/or a reference to a website that provides:

1. The date restrictions will begin
2. The circumstances that triggered the restrictions
3. The stages of response and explanation of the restrictions to be implemented, and
4. An explanation of the consequences for violations

Signs posted in public spaces should clearly identify the drought stage and provide key information regarding restrictions (or a reference to a website that provides the information described above for press releases, web page notices, fliers and utility bill inserts.

The water suppliers will notify the City of the implementation or termination of each stage of their Drought Contingency Plan program. The City will provide notice to customers as described above prior to implementation or termination of each stage of the water restriction program. The City must notify TCEQ by telephone at 512-239-4691 or my electronic mail at [watermon@tceq.state.tx.us](mailto:watermon@tceq.state.tx.us), and must notify in writing the water suppliers and the Public Drinking Water Section at MC – 155, P.O. Box 13087, Austin, Texas 78711-3087 within five working days of implementation. This notification must include a copy of the utility's restriction notice. The utility must file a status report of its restriction program with the TCEQ at the initiation and termination of mandatory water use restrictions.

## SECTION VI. COORDINATION WITH REGIONAL WATER PLANNING GROUPS AND THE CITY'S SUPPLIERS

The City's water suppliers, BSEACD and GBRA, are located within Regional Water Planning Groups K & L. A draft of this plan was provided to both Regional Water Planning Groups for comment, and adopted copies of this Plan have been provided.

## SECTION VII. DROUGHT STAGE TRIGGERS AND GOALS

### YEAR-ROUND WATER CONSERVATION

The City of Buda has implemented year-round water conservation requirements rather than establishing summer water conservation periods in an effort to reduce waste of water, improve implementation of drought restrictions when necessary and maintain water management as a public good & priority with the public. Due to the frequency of droughts in Central Texas, maintaining a year-round conservation program represents a pro-active approach to reduce demand and potentially avert or delay implementation of drought stages. Information regarding the year-round water conservation standards is contained in Appendix A.

#### STAGE 1

##### GOAL

To reduce overall water use by 10 percent, and reduce pumping from BSEACD by 20 percent

##### TRIGGERS

Stage 1 shall be implemented when any one of the following conditions occur:

1. BSEACD declares an Alarm Stage in accordance with its Drought Contingency Plan
2. Daily demand reaches 75 percent of available supply (including any water supply source curtailments) for five consecutive days
3. A water quality, supply, distribution system or other emergency exists as determined by the City Manager

##### TERMINATION OF STAGE

The stage will be terminated when the conditions which prompted initiation of the restrictions no longer exist.

#### STAGE 2

##### GOAL

To reduce overall water use by 15 percent, and reduce pumping from BSEACD by 30 percent

##### TRIGGERS

Stage 2 shall be implemented when any one of the following conditions occur:

1. BSEACD declares a Critical Stage in accordance with its Drought Contingency Plan
2. BSEACD declaring an Alarm Stage and GBRA declaring Stage II in accordance with their respective Drought Contingency Plans
3. Daily demand reaches 80 percent of available supply (including any water supply source curtailments) for five consecutive days
4. A water quality, supply, distribution system or other emergency exists as determined by the City Manager

##### TERMINATION OF STAGE

The stage will be terminated when the conditions which prompted initiation of the restrictions no longer exist.

### STAGE 3

#### GOAL

To reduce overall water use by 20 percent, and reduce pumping from BSEACD by 40 percent

#### TRIGGERS

Stage 3 shall be implemented when any one of the following conditions occur:

1. BSEACD declares a Exceptional Stage in accordance with its Drought Contingency Plan
2. BSEACD declaring an Alarm Stage or greater stage and GBRA declaring Stage III in accordance with their respective Drought Contingency Plans
3. Daily demand reaches 85 percent of available supply (including any water supply source curtailments) for five consecutive days
4. A water quality, supply, distribution system or other emergency exists as determined by the City Manager

#### TERMINATION OF STAGE

The stage will be terminated when the conditions which prompted initiation of the restrictions no longer exist.

### STAGE 4

#### GOAL

To reduce water use by more than 20 percent, and reduce pumping from BSEACD by more than 40 percent

#### TRIGGERS

Stage 4 shall be implemented when any one of the following conditions occur:

1. BSEACD declares a Emergency Response Stage in accordance with its Drought Contingency Plan
2. BSEACD declaring an Critical Stage or greater stage and GBRA declaring Stage IV in accordance with their respective Drought Contingency Plans
3. Daily demand reaches 90 percent of available supply (including any water supply source curtailments) for five consecutive days
4. A water quality, supply, distribution system or other emergency exists as determined by the City Manager

#### TERMINATION OF STAGE

The stage will be terminated when the conditions which prompted initiation of the restrictions no longer exist.

## SECTION VIII. UTILITY ACTIONS AND SUPPLY MANAGEMENT BY DROUGHT STAGE

### YEAR-ROUND

The City shall do the following on a year-round basis:

1. Regularly monitor the service area for occurrences of waste
2. Visually inspect lines and repair leaks on a regular basis
3. Include historic water use and customer water use comparisons in customer billings
4. Include a reminder on each water bill encouraging water conservation and providing a link to the City's website containing information about water conservation

## STAGE 1

The City shall do the following during Stage 1 Drought Restrictions:

1. Regularly monitor the service area for occurrences of waste
2. Conduct a monthly Lead Detection Survey and immediately repair all identified leaks in the system
3. Do not flush water mains except for dead end mains
4. City facilities shall comply with the Stage 1 Drought Restrictions consistent with Commercial watering schedules
5. Notify the public upon initiation of the drought stage, including placement of signs
6. Include historic water use and customer water use comparisons in customer billings
7. Include a reminder on each water bill encouraging water conservation and providing a link to the City's website containing information about water conservation

## STAGE 2

The City shall do the following during Stage 2 Drought Restrictions:

1. Regularly monitor the service area for occurrences of waste
2. Conduct a weekly Lead Detection Survey and immediately repair all identified leaks in the system
3. Do not flush water mains except for dead end mains
4. City facilities shall comply with the Stage 2 Drought Restrictions consistent with Commercial watering schedules
5. Notify the public upon initiation of the drought stage, including placement of signs
6. Include historic water use and customer water use comparisons in customer billings
7. Include a reminder on each water bill encouraging water conservation and providing a link to the City's website containing information about water conservation

## STAGE 3

The City shall do the following during Stage 3 Drought Restrictions:

1. Regularly monitor the service area for occurrences of waste
2. Conduct a weekly Lead Detection Survey and immediately repair all identified leaks in the system
3. Do not flush water mains except for dead end mains
4. City facilities shall comply with the Stage 3 Drought Restrictions consistent with Commercial watering schedules
5. Notify the public upon initiation of the drought stage, including placement of signs
6. Include historic water use and customer water use comparisons in customer billings
7. Include a reminder on each water bill encouraging water conservation and providing a link to the City's website containing information about water conservation

## STAGE 4

The City shall do the following during Stage 3 Drought Restrictions:

1. Regularly monitor the service area for occurrences of waste
2. Conduct a weekly Lead Detection Survey and immediately repair all identified leaks in the system
3. Do not flush water mains except for dead end mains
4. City facilities shall comply with the Stage 4 Drought Restrictions consistent with Commercial watering schedules
5. Notify the public upon initiation of the drought stage, including placement of signs

6. Place an item before City Council to consider, adopt and enforce any or all additional measures as needed to protect water supplies and the aquifer
7. Include historic water use and customer water use comparisons in customer billings
8. Include a reminder on each water bill encouraging water conservation and providing a link to the City's website containing information about water conservation

## SECTION IX. USER AND CUSTOMER DEMAND ACTIONS BY DROUGHT STAGE

User and customer actions required by each drought stage are particularly described in the ordinance contained in Appendix A.

## SECTION X. VARIANCES, ENFORCEMENT PROCEDURES AND PLAN ADOPTION

### VARIANCES

The City Manager may grant variances from this Plan in accordance with Appendix A.

If a variance request results in a conflict with adopted rules of a water supplier, such as BSEACD, the City may request a variance to such rules from the water supplier. If the City is denied such a variance, then it may appeal such action in writing to the TCEQ.

### ENFORCEMENT PROCEDURES AND PLAN ADOPTION

In accordance with the requirements of TCEQ and the rules of the City's water suppliers, this Plan and its related ordinances sufficiently establish, implement and enforce the provisions of this Plan. It sufficiently develops and implements procedures for enforcing the Plan and its related ordinances, incorporates all enforcement measures and surcharges available to CCN holders under TCEQ rules, and informs customers of the authority and intent to enforce the measures of the Plan and its related ordinances. Penalties are more particularly described in Appendix A.

## SECTION XI. PLAN REVIEW AND UPDATES

This Plan was developed to meet the requirement in 30 TAC Section 288.20 to submit a Drought Contingency Plan and provide the community and water customers with essential drought contingency response information, regulations and services. The Plan will be reviewed at a minimum every five years and updated based on developments in Buda's water service area.

## APPENDIX A. WATER CONSERVATION ORDINANCE