

**SECTION H. DROUGHT CONTINGENCY AND EMERGENCY WATER DEMAND  
MANAGEMENT PLAN**

KINGSLAND WATER SUPPLY CORPORATION

DROUGHT CONTINGENCY PLAN

UPDATED NOVEMBER 12, 2019

Kingsland Water Supply Corporation

1422 West Drive  
PO Box 73  
Kingsland, Texas 78639  
325-388-6611


**RESOLUTION**

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE KINGSLAND WATER SUPPLY CORPORATION ADOPTING THE ATTACHED DROUGHT CONTINGENCY PLAN.

BE IT RESOLVED BY THE BOARD OF DIRECTORS: that on this 8th day of October 8, 2019, we do hereby adopt the attached updated Drought Contingency Plan to be implemented immediately. Any violation of this plan may cause the forfeiture of Membership in the Corporation and/or termination of water service. Water service penalties and/or termination will only apply to violations of mandatory rationing imposed by the Corporation.

ADOPTED THIS 12<sup>th</sup> day of November 2019, at a Regular meeting of the Board of Directors at which a quorum was present.

BOARD OF DIRECTORS



President, Danny Stone

ATTEST:



Vice President, Vicki Moore

## **WATER CONSERVATION PLAN**

Kingsland Water Supply conservation activities consist of those that improve its efficiency in producing and marketing potable water and those that encourage or support the conservation of supplies by its customers.

## **CONSERVATION PRACTICES**

### **EDUCATION AND INFORMATION**

The Corporation will promote water conservation by informing the public of ways to conserve water. The following methods will be used to inform water users.

- Distribution of educational materials to all customers.
- Articles will be published periodically in the local paper as steady reminders to always conserve water. These will be published more frequently when prudent.
- New Customers will receive general conservation information when applying for service.
- Utilize Billing Cards for periodic water conservation advisement.

Information presented for public education as well as pre-printed brochures available from: Texas Water  
Development Board  
P. O. Box 13231, Capital Station Austin, TX  
78711-3231

**Plumbing Codes**

The Corporation has adopted the 2009 Edition *Uniform Plumbing Codes*. Builders in the area utilize these codes when constructing or remodeling homes. The Corporation will encourage local builders and developers to use water conservation-plumbing fixtures in new construction and replacing of existing fixtures.

**Retrofit Program**

Customers in existing buildings which do not have water saving devices will be encouraged to replace their old plumbing fixtures and shower heads with new water saving designs. The advertising program will help inform them of the advantages of installing water saving devices. Customers will be encouraged to take adequate precautions to avoid freezing of exposed water lines to avoid possible water-loss.

**Water Rate Structures**

The current rate structure encourages water conservation:

Monthly Minimum (Includes first 999 gallons) - \$27.50

1,001 - 15,000 gallons : \$3.50/1,000 gallons

15,001 - 25,000 gallons : \$5.00/1,000 gallons

25,001 - 50,000 gallons : \$7.00/1,000 gallons

50,001 and up: \$9.00/1,000 gallons.

### **Water Conservation Landscaping**

The System does not have the authority to establish subdivision regulations which would require developers to plant only low water-using plants and grasses. The advertising program will include suggestions on landscaping and irrigation procedures that will save water usage and money.

### **Metering**

The System currently meters 100% of the water used, and monitors facilities' storage tanks through the SCADA system, which indicates low water levels. A sudden drop in water levels, 24 hours a day seven days a week, triggers an investigation by a plant operator for the possibility of major water main breaks. Visual inspection by field operators and plant operators keep a constant watch out for abnormal conditions indicating leaks. An adequate maintenance staff and repair parts inventory are kept to allow rapid repair of leaks.

There are individual meters for managing water use in the plant and detecting leaks in the distribution system, compared to actual meter reading routes. The raw water inlet, treated water, flushing and sales is metered individually. We compare the treated water minus flushing with the sales to detect leaks in the system. The backwash water and lab equipment water is reprocessed.

Each customer's tap is monitored monthly for abnormal use. When abnormally high use is detected:

1. KWSC customer service personnel investigates, the site for possible leak,
2. The customer is notified by phone to look for a possible leak.

To ensure meter reliability, KWSC routinely replaces meters that have exceeded ten (10) years or 1.5 million gallons and calibration of all meters in the plant are conducted annually.

### **Control of Unaccounted-for Usage of Water**

Monthly audits of the water system are conducted to determine illegal connections, abandonment of domicile and leaks along water distribution lines. These audits are done by Kingsland Water Supply personnel during normal monthly meter reading.

As part of this conservation plan, the system has been acoustically surveyed for leakage. The oldest one-fourth of the system was surveyed November 2009, and the remainder of the system was surveyed in 2011 and 2012. The surveys were deemed successful, no minor or major leaks were detected during the survey process.

Older sections of the system have many "dead-end" lines which must be flushed monthly. This flushing has required 250,000 to 500,000 gal/month. A program is underway to eliminate the dead-end lines. Several dead ends have been looped during 2010 and 2011 with flushing volumes reduced. A section of 8-inch supply line along RR 2545 was extended 3300 ft. during 2010 to eliminate ten dead ends in the lateral supply lines, which will reduce flushing requirements. Several sections of lines in the Royal Oaks subdivision of approximately 6,000 feet were looped to eliminate "dead-end" lines and increase water volume in 2017. In 2018 approximately 9,000 feet of lines in the Ranch Road 2545 area were installed to eliminate bottlenecks of smaller pipe diameters and to eliminate the need for dead end flushing in the area.



**Wholesale Customers**

KWSC will require all wholesale customers signing new and renewed wholesale water supply contracts to comply with KWSC's Water Conservation Plan, and when water shortages resulting from drought occur, water to be distributed shall be divided in accordance with Texas Water Code, §11.039.

**COORDINATION WITH THE REGIONAL WATER PLANNING GROUPS  
(RWPG)**

The water service area of KWSC is within Region K Water Planning Area. KWSC will provide a copy of the Water Conservation Plan to the RWPG's.

**DROUGHT CONTINGENCY PLAN  
DECLARATION OF POLICY, PURPOSE AND INTENT**

In order to conserve the available water supply in accordance with the water volume stored in Lake Buchanan and Lake Travis, and in cooperation with LCRA giving particular regard for domestic water use to minimize the adverse impacts of water supply shortages and other water supply emergency conditions, KWSC adopts the following Drought Contingency Plan.

**PUBLIC INVOLVEMENT**

Opportunity for the public to provide input into the preparation of the Plan was provided by the Board by scheduling and providing public notice of a public meeting to accept input on the Plan. Notice of the meeting was provided by all customers. In the adoption of this plan, the Board considered all comments from customers. All amendments conform to LCRA directives and requirements.

### **INFORMATION AND EDUCATION PROGRAM**

KWSC will periodically provide the public with information about the Plan and conditions under which each state of the plan is to be initiated or terminated including the drought responses to be implemented in each stage. Once trigger conditions and emergency measures have been reached, the public will be informed of these conditions and measures to be taken. The public will also be notified when each stage has been terminated and drought measures are no longer in effect. The process for notifying the public may include:

- A. Posting the Notice of Drought conditions at the Corporation's office and on its Website, the Post Office, and at major businesses within the Area.
- B. Announcement in the local newspapers.
- C. Notify the Texas Commission on Environmental Quality (TCEQ)
- D. Broadcasts from the local radio stations.
- E. Direct mailing to customers explaining the need for and provisions of the Drought Contingency Plan, including steps to be taken to ensure compliance with the plan.
- F. Phone Calls, Fax and/or Email directly to all those listed on our EMERGENCY CONTACT LIST.

### **WHOLESALE WATER CUSTOMER EDUCATION**

Wholesale water customer education will be provided through the same **Education and Information Program** provided to our residential customers.

### **CONSENT**

At no time will this plan ever be used without consent of, or instructions from, the Board of Directors.

### **AUTHORIZATION**

The General Manager of Kingsland Water Supply, as approved by attached resolution of the Board of Directors, is authorized to implement the applicable provisions of this Drought Contingency Plan upon determination that implementation is necessary to protect public health, safety, and welfare. The General Manager will have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Drought Contingency Plan.

### **APPLICATION**

The provisions of the Drought Contingency Plan will apply to all customers, including wholesale customers using water provided by KWSC.

**TRIGGER CRITERIA FOR INITIATION AND TERMINATION OF  
EMERGENCY AND DROUGHT RESPONSE STAGES**

KWSC monitors the conditions of its distribution system. In the event of equipment failure or urgent maintenance procedures, which could affect the ability to deliver safe water, KWSC will initiate appropriate emergency water use restrictions. The LCRA is responsible for monitoring water supply and demand conditions throughout the Highland Lakes on a monthly basis (or more frequently if conditions warrant). LCRA has a drought management plan that defines five stages according to the water volumes in Lakes Buchanan and Lake Travis. That plan has specific "trigger" conditions which determine the stage and define actions to be taken to conserve water.

The following trigger conditions indicate when emergency and drought contingency measures will be put into effect.

The General Manager will monitor water supply conditions in accordance with the trigger criteria set forth in the DCP, and will determine if a mild, moderate, or severe water shortage condition exists or that an emergency condition exists or if LCRA declares an emergency condition KWSC will follow their required water restrictions and will implement the following actions:



**STAGE 1 - EMERGENCY AND/OR DROUGHT**

*Goal- Reduce Treated Water by 10%*

**Stage 1 is triggered when KWSC delivers water at the rate of 85% capacity for three consecutive days or LCRA declares a Stage 1 drought condition. If the total combined storage in Lakes Buchanan and Travis drops below 1.4 million acre-feet.**

Voluntary watering restrictions will be put into place as follows. The General Manager will:

- Ask customers to voluntarily restrict the use of water for outdoor sprinkling, watering of lawns, shrubs, driveways and the washing of automobiles.
- Inform the public through the news media that the Stage 1 trigger condition has been reached because of emergency water conditions in the KWSC system or low lake levels, and that they should look for ways to voluntarily reduce water use.
- Notify major water users of the situation and request voluntary water use restrictions.

The following lawn watering schedule will be suggested:

1. Businesses, Churches, apartments, duplexes, or multifamily dwellings irrigation schedule is on Monday and Friday between the hours of 12:00 midnight and 10:00 a.m. and between 7:00 p.m. and 12:00 midnight. Hand watering with a hose is allowed anytime.
2. Residential with a physical address ending in an even number watering schedule is only on Tuesday and Saturday between the hours of 12:00 midnight and 10:00 a.m. and between 7:00 p.m. and 12:00 midnight. Hand watering with a hose is allowed anytime.
3. Residential with a physical address ending in an odd number watering schedule is only on Wednesday and Sunday between the hours of 12:00 midnight and 10:00 a.m. and between 7:00 p.m. and 12:00 midnight. Hand watering with a hose is allowed anytime.
4. No irrigation between the hours of 10:00 a.m. and 7 p.m.
5. Irrigation should be monitored to avoid run-off on the pavement, sidewalk or adjacent property.

**Stage 1 Termination: Restrictions will be rescinded by the General Manager when all of the conditions listed as triggering events have ceased to exist. KWSC will notify the public, wholesale customers, and media of the termination of Stage 1 or elevation to Stage 2 in the same manner outlined previously under Information and Education Program.**

**STAGE 2 - EMERGENCY AND/OR DROUGHT**

*Goal- Reduce Treated Water by 10-20%*

**Stage 2 is triggered when KWSC delivers water at the rate of 85% capacity for seven consecutive days or LCRA declares a Stage 2 drought condition. Mandatory watering restrictions will be put in place by the following. If the total combined storage in Lakes Buchanan and Travis drop below 900,000 acre-feet.**

- Voluntary restrictions in Stage 1 are declared mandatory including suggested watering schedule. It is mandatory that everyone follow the watering schedule in Stage 1.
- Inform the public through the news media that the Stage 2 trigger conditions has been reached, because of emergency water conditions in KWSC system or low lake levels, and that they should look for ways to reduce water use.
- Notify the Texas Commission on Environmental Quality (TCEQ)
- The following public water uses, not essential for public health or safety, are prohibited:
  - 1) Street washing
  - 2) Water hydrant flushing
  - 3) Filling pools and spas
  - 4) Athletic field watering
  - 5) Car, Boat and Trailer Washing

**Stage 2 Termination: restrictions will be rescinded by the General Manager when all the conditions listed as triggering events have ceased to exist. Upon termination of Stage 2, Stage 1 becomes operative. KWSC will notify the public, wholesale customers, and media of the change in stage level status in the same manner outlined previously under Information and Education Program.**

### ***STAGE 3 EMERGENCY AND/OR DROUGHT***

*Goal- Reduce Treated Water by 20% or better.*

**LCRA has mandated emergency drought relief requiring all customers to go to a mandatory Once-A-Week water schedule. The mandatory Once-A-Week watering schedule is as follows:**

1. Businesses, Churches, apartments, duplexes, or multifamily dwellings irrigation schedule is only on Wednesday between the hours of 12:00 midnight and 10:00 a.m. and between 7:00 p.m. and 12:00 midnight. Hand watering with a hose is allowed anytime.
2. Residential with a physical address ending in an even number watering schedule is only on Saturday between the hours of 12:00 midnight and 10:00 a.m. and between 7:00 p.m. and 12:00midnight. Hand watering with a hose is allowed anytime.
3. Residential with a physical address ending in an odd number watering schedule is only on Sunday between the hours of 12:00 midnight and 10:00 a.m. and between 7:00 p.m. and 12:00midnight. Hand watering with a hose is allowed anytime.
4. No irrigation between the hours of 10:00 a.m. and 7 p.m.
5. Irrigation should be monitored to avoid run-off on the pavement, sidewalk, or adjacent property.

Other Restrictions include:

- Wasteful irrigation practices such as spraying on driveways, sidewalks or water running down the street will be considered a violation.
- No ornamental fountain unless water is recycled.
- Washing of cars or boats will only be allowed with handheld spray nozzles equipped with automatic shut off on the set day of the watering schedule.
- Watering with handheld hose is permitted only to sustain life of planted trees or plants.
- Further non-essential use of water is prohibited including street washing, washing sidewalks, driveways, filling pools or spas.

Stage 3 is triggered when the emergency situation in KWSC system is in danger of causing immediate health or safety hazard, or LCRA declares Stage 3 drought conditions. Mandatory water restrictions will be put into place by the following: If the LCRA Board of Directors declares a drought worse than the drought of Record consistent with the LCRA Water Management Plan, LCRA will curtail and distribute the available supply of firm water among its firm water supply customers and firm environmental flow commitments.

The General Manager's giving notice of curtailment to the customers within the area; the posting of a notice of curtailment and notifying the news media of curtailment as stated in the Informationand Education Program section of this plan.

- All outdoor water usage is prohibited.
- Continue all relevant action from Stage 2.
- Water uses that are not essential to the health and safety of the community will be prohibited.
- Notify the Texas Commission on Environmental Quality (TCEQ).

Inform the public according to the KWSC information and education program that Stage 3 trigger conditions have been reached because of emergency water conditions in the Kingsland



Water Supply system or low lake levels, and that they should look for ways to reduce water use. Water rates to be increased (see Violations).

**Stage 3 Termination:** Restrictions will be rescinded by the General Manager when all of the conditions listed as triggering events have ceased to exist. Upon termination of Stage 3, Stage 2 becomes operative. KWSC will notify the public, wholesale customers, and media of the change in stage level status in the same manner outlined previously under Information and Education Program.

### **PRO RATA WATER ALLOCATION**

If the triggering criteria specified in Stage 3 - Emergency and/or Drought have been met, the General Manager of KWSC is hereby authorized to initiate allocation of water supplies on a pro rata basis in accordance with Texas Water Code Section 11.039.

### **VIOLATIONS OF MANDATORY EMERGENCY RATIONING RULES**

The Board of Directors may grant exemptions or variance from the uniform rationing program, for health or safety reasons. The General Manager can amend, add, or delete any of these Rules and Regulations when notified by the Board of Directors of said amendments, additions or deletions.

Any violation of the Rules and Regulations adopted by KWSC can carry a penalty of forfeiture of membership and termination of water service, with approval of Directors.

Penalties for non-compliance of the KWSC Drought Contingency Watering schedule per the Drought Contingency Plan will include:

- **First Violation:** A Warning Letter issued to customer identifying violation, (copy to be placed in customer's account file).
- **Second Violation:** A Penalty shall be assessed in the amount of 4 times the monthly minimum.
- **Third Violation:** A Penalty shall be assessed in the amount of 6 times the monthly minimum.
- **Fourth Violation:** Service will be shut off. The member will be required to sign a binding agreement to conform to the Emergency Rationing rules and pay a return to service fee of \$1,000 before their water will be placed in service. **PROVISIONS OF THE KINGSLAND WATER SUPPLY CORPORATION DROUGHT CONTINGENCY PLAN**

LCRAS' Water Management Plan-Drought Triggers are attached. KWSC as a Firm Customer will implement Water Restrictions as necessary in accordance with the LCRA Water Management Plan. Kingsland Water Supply intends to promote year-round water conservation measures to assist in meeting our goals.



STAGE	TRIGGERING CRITERIA	ACTION/RESTRICTIONS
1. Mild	<p>(A) Average daily water use reaches 85% of firm plant capacity for three consecutive days. Consideration given to weather, time of year and customer complaints.</p> <p>(B) If the combined storage of Lakes Buchanan and Travis drop below 1.4 million acre-feet.</p>	<p>(1) Initiate public information efforts.</p> <p>(2) Request that the public look for ways to conserve water.</p> <p>(3) Ask customers to voluntarily restrict outdoor use of water.</p>
2. Moderate	<p>(A) Average daily water use reaches firm 85% plant capacity for seven consecutive days; or</p> <p>(B) Water storage levels decreasing and fall below 60% (200,000 gallons) for 24 hours; or</p> <p>(C) Water pressure drops to 35psi.</p> <p>(D) If the combined storage of Lakes Buchanan and Travis drops below 900,000 acre-feet.</p>	<p>(1) Continue Stage 1 requirements.</p> <p>(2) Lawn irrigation limited to watering schedule.</p> <p>(3) Mandatory customers reduce non-essential water use.</p> <p>(4) Monitor system pressure.</p>
3. Once-A-Week Watering Requirements	(A) LCRA Requirement	(1) Mandatory Once-A-Week watering.
4. Severe	<p>(A) Water demand exceeds firm system capacity (3.0 MGD) for three consecutive days; or</p> <p>(B) Supply reservoir levels reduced to a point where demand exceeds available supply; or</p> <p>(C) Imminent or actual failure of system components affecting health and safety.</p> <p>(D) If the LCRA Board of Directors declares a drought worse than the Drought of Record consistent with the LCRA Water Management Plan, LCRA will curtail and distribute the available supply of firm water among its firm water supply customers and firm environmental flow commitments.</p>	<p>(1) Continue Stage 1 and 2 requirements.</p> <p>(2) Ban lawn irrigation water use.</p> <p>(3) Prohibit car washing, window washing, and pavement washing except when a bucket is used.</p> <p>(4) Ban nonessential public water uses.</p>