

CANYON REGIONAL WATER AUTHORITY DROUGHT CONTINGENCY PLAN

Approved by BOARD OF MANAGERS APRIL 3, 2024

Adopted by BOARD OF TRUSTEES APRIL 15, 2024

Submitted to TCEQ

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1.1 Introduction and Intent

The goal of the Canyon Regional Water Authority (CRWA) Drought Contingency Plan (DCP) is to maximize available water supplies and reduce water use during times of water shortage caused by drought. To conserve the available water supply and/or to protect the integrity of water supply facilities, with regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, safety and minimize the adverse impact of water supply shortage or other water supply emergency conditions, the Authority adopts the following revised version of its DCP under the requirements of Section 11.1272, Texas Water Code, and associated administrative rules of the Texas Commission on Environmental Quality (TCEQ) (Title 30, Texas Administrative Code, Chapter 288).

1.2 Defining Drought

A general definition of drought is a deficiency of precipitation over an extended period, resulting in a water shortage for some beneficial activity or environmental purpose. A water shortage from drought occurs when available water supply from anticipated runoff and storage is reduced to a level that supporting customer demands are at risk. Not knowing exactly when a drought begins, when it will end, and its severity, make uncertainty one of the defining characteristics of drought.

1.3 Texas Water Rights

Texas Water Law of Rights stem from a combination of Hispanic elements with traditional English common law, as well as from its legal fragmentation of the hydrologic cycle.

With respect to surface-water rights, Texas is one of several dual-doctrine states that recognize both Riparian and Prior Appropriation Doctrines, which are dissimilar in almost every respect. The Riparian Doctrine accords water rights to those who own riparian land and has been in affect over the last 200 years with various revisions. Prior Appropriation doctrine was adopted by the state near the turn of the 20th century. Since 1895 land acquired from the state has no longer carried riparian water rights as a matter of course. Instead, individuals must appropriate water rights from the state through established statutory procedures. The State of Texas began certifying surface water diversions in 1913, thus the issuance of surface rights. The Prior-Appropriation Doctrine applies, *"the first in time is the first in right"*, Texas Water Code, Chapter 11, Subchapter A, General Provisions, Section 11.027.

Concerning groundwater, ownership of subsurface resources, such as oil and water, is governed by the "rule of capture." If an individual or business can "capture" the resource and bring it to the surface, it becomes his/her property. The State of Texas has appointed Counties to manage groundwater through the formation of Groundwater Districts. Rules on groundwater and the rule of capture can be found in Texas Water Code Chapter 36, Subchapter A, General Provisions.

CRWA has both surface and groundwater sources divided amongst its three water treatment facilities, Lake Dunlap Water Treatment Plant (LDWTP), Hays Caldwell Water Treatment Plant (HCWTP), and Wells Ranch Water Treatment Plant (WRWTP).

1.4 CRWA Supply

The supply of water for the Lake Dunlap WTP is derived from surface water comprised of Senior Water Rights on the Guadalupe River, a Water Lease Agreement with Guadalupe-Blanco River Authority (GBRA), and the Water Purchase Agreement between Crystal Clear Special Utility District (CCSUD) and GBRA (Table 1).

Water Right #	Water Right Name	Priority Date	(AF/YR)
18-3829-A	Mill	June 29, 1914	400.00
18-3832-A	Ray Dittmar	April 19, 1912	44.00
18-3833-B	Gary Dittmar	April 19, 1912	30.5
18-3834	Daniels	April 19, 1912	71.48
18-3834-A	Daniels	April 19, 1912	18.52
18-2074-C	Crystal Clear	March 19, 1956	500.00
18-2074-D	GBRA	March 19, 1956	10,575.00
	Lake Dunlap WTP	Total Supply	11,639.50

Table 1

The supply of water for the Wells Ranch WTP is derived from groundwater from the Carrizo and Wilcox aquifers located in Guadalupe and Gonzales Counties. CRWA holds three groundwater permits, two in Guadalupe County with the Guadalupe County Groundwater Conservation District (GCGCD) and the third in Gonzales County with the Gonzales County Underground Water Conservation District (GCUWCD) (Table 2).

Table 2

County	District	Permit Number	Aquifer	(AF/YR)
Guadalupe	GCGCD	PWS-2017-WX-01	Wilcox	3,026.000
Guadalupe	GCGCD	PWS-2017-CZ-01	Carrizo	2,603.415
Gonzales	GCUWCD	11-16-01	Carrizo	7,400.000
		Wells Ranch WTP	Total Supply	13,029.415

The supply of water for the Hays Caldwell WTP is derived from surface water comprised of Junior and Senior Water Rights on the San Marcos River, and a Lease Agreement with GBRA (Table 3).

Table 3

Water Right #	Water Right Name	Priority Date	(AF/YR)
18-3887	Cummings	June 22, 1905	516.16
18-3889-A	Foster	June 23, 1914	24.00
18-3888-A	Baugh	December 31, 1955	320.00
18-2074-C	GBRA	March 19, 1956	2,038.00
18-3887-D	Mart./Cummings	June 22, 1905	255.84
	City of San Marcos		1314.00
	Hays Caldwell WTP	Total Supply (AF/YR)	4,468.00

2.1 Public Involvement

Opportunity for the public to view CRWA's DCP can be found on Canyon Regional's website, <u>www.crwa.com</u>. Canyon Regional Water Authority is a wholesale water provider to retail public utilities. Each public entity is required by the TCEQ to implement and maintain their own DCP. CRWA has presented a (2024 draft) copy of the DCP to its customers for review and comments.

CRWA has Lease Agreements with GBRA at the Lake Dunlap WTP and the Hays Caldwell WTP. These agreements are subject to GBRAs Drought Contingency Plan for wholesale water supply customers, therefore, portions of GBRA's DCP are applicable and referenced in CRWA's DCP.

2.2 Customer Education

CRWA will provide its customers with information about the DCP, including trigger levels within each stage of the Plan that is to be initiated or terminated and response measures to be implemented in each stage of drought. This information will be provided by means of:

- A copy of the Plan will be distributed to all CRWA water supply customers for their comment, review, and guidance. If any changes are made to the current plan, a copy of those changes will be emailed, mailed, or communicated using Microsoft applications such as OneNote or OneDrive;
- 2. If any drought stage is initiated, CRWA will notify all customers through email or phone indicating the stage and the actions to be taken; and
- 3. CRWA will continue to make available copies of educational materials, as they become available to the customers.

2.3 Amendments to the DCP

Any future amendments or updates to the DCP will be done in the open meeting of CRWA Board of Trustees. If any changes are made to the DCP, a copy of those changes will be posted on CRWA's website, provided to all CRWA customers, and provided to TCEQ.

3.1 Authorization

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

CRWA Board of Trustees action is not required for actions under the DCP other than the actions set forth below:

- 1) Approval of DCP Revisions (Section 1.1); and
- 2) Amendments to the DCP (Section 2.3).

3.2 Application

The provisions of this Plan shall apply to all customers utilizing water provided by CRWA from the storage in Canyon Reservoir (see Section 1.3, CRWA Supply, Table 1 & 3). The terms "person" and "customer" as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

4.1 Definitions

- **Conservation** Practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water or increase the recycling and reuse of water so that a supply is conserved and made available for future or alternative uses.
- **Conservation Pool** Water level in Canyon Reservoir between 800 feet mean sea level and normal operating elevation of 909 feet mean sea level in which GBRA has management responsibility and release.
- CustomerWater Supply Corporations, Special Utility Districts, Municipalities, and other
public entities utilizing water provided by CRWA from GBRA storage in the Canyon
Reservoir.
- **Drought of Record** The worst recorded drought since compilation of meteorologic and hydrologic data began. In terms of severity and duration, the drought of the 1950s is considered the drought of record in the Guadalupe River Basin.
- **Firm Yield** "Firm Yield" is a supply term referring to the specific amount necessary to fully supply an area with water during a repeat of the most severe drought within the historical record. GBRA holds a Certificate of Adjudication from TCEQ that provides GBRA the rights to utilize approximately 386,000 acre-feet of conservation storage, representing the available storage in the reservoir between the low elevation of 800-ft mean sea level (msl) up to a maximum elevation of 909-ft msl. GBRA's drought stages and responses outlined in this DCP relate to GBRA's contracts with Lake Dunlap WTP and Hays Caldwell WTP for stored water out of the Canyon Reservoir.
- Stored WaterWater that is contained within the conservation pool of the Canyon Reservoir and
that GBRA has responsibility and release of under a water right granted by the
Texas Commission on Environmental Quality.

TCEQ SouthState program that oversees the surface water system of rivers and tributariesTexas Water Masterin a 50-county area in South Central Texas. It allow diversions as water is available
as it passes individual diversion points.

5.1 GBRA Canyon Dam & Reservoir Operations

The Canyon Dam and Reservoir were completed in 1964 as a cooperative project that is jointly managed by GBRA and the U.S. Army Corps of Engineers. GBRA is responsible for reservoir water management and release within the "conservation pool", between 800-ft msl and the normal operating elevation of 909-ft msl.

The Canyon Reservoir delivers water to customers on a firm yield basis (see Section 4.1 "Firm Yield"). GBRA has determined, based upon hydrologic and other studies performed by or for GBRA, the amount of stored water from Canyon Reservoir that can be committed and reserved by GBRA on a "firm" basis, meaning the amount that should be considered to be available through a drought as server as the drought that occurred in the 1950's (also referred to as the "Drought of Record"). GBRA will review such studies and perform additional studies from time-to-time, and it will not commit to supply to its customers at any time a total amount of stored water on a firm basis more than the total amount determined by GBRA at that time that should be firm. However, reasonable conservation requirements under this Plan and other plans may be imposed at any time, including during periods of normal or wet climatic conditions, and curtailments of stored water may be triggered under this Plan during any sever drought, even if that drought is determined to be less sever than the Drought of Record. Curtailments of stored water may also be triggered under this Plan because of some other condition that significantly reduces the available firm water supply.

The Canyon Reservoir supplies stored water to cities, industries, and agricultural users under a permit issued by the TCEQ. To many users Canyon storage is their sole source of water. These customers rely on daily releases of stored water to meet their demands. For others, Canyon Reservoir provides a dependable source of water during drought conditions and low river flows. These customers "call" for the release of stored water on an as needed basis to meet periodic or drastic low-flow conditions.

With TCEQ's approval, GBRA can contract for stored water that will provide for an average annual use of stored water from Canyon Lake, with a special condition that a greater maximum quantity of stored water can be used during any one critical year. This way the use of stored water is minimized, and an adequate water supply is available during shortterm droughts. This is an example of the benefits of reservoir averaging.

6.1 Scope

The scope of CRWA's Drought Contingency Plan is to comply with the curtailment of GBRA firm yield water supplies to ensure that there is sufficient firm, uninterruptible water to meet projected demands for such water to protect the environmental flows through a repetition of the Drought of Record. GBRA Firm, stored water is subject to curtailment only if it is determined that the drought in effect is worse than the Drought of Record. Additionally, in times of shortage of supply caused by drought or emergency, the TCEQ's South Texas water master will determine when water rights holders must reduce or stop diversions of run-of-river water. CRWA will comply with the Water Master on its water rights at the Lake Dunlap WTP and the Hays Caldwell WTP (see Section 4.1 "Firm Yield").

GBRA in accordance with Section 11.039 of the Texas Water Code, will curtail and distribute the available supply or run-of-river water among its water supply customers on a pro rata basis, so that preference is given to no one, and all interruptible water supply customers suffer alike.

7.1 GBRA Drought Response Stages for Canyon Reservoir

The GBRA Drought Response Stages for the Canyon Reservoir described below are applied to Canyon Regional's Water Supply Agreements at the Lake Dunlap WTP and the Hays Caldwell WTP.

GBRA's General Manager, or his/her designee, shall monitor the water supply and/or demand conditions on a weekly basis and shall determine when conditions warrant initiation or termination of each stage of the Plan. Customer notification of the initiation or termination of drought response stages will be made by mail, email, fax, social media platforms, or telephone. The news media will also be informed.

The Drought Response Stages for the Canyon Reservoir described below are based on a statistical analysis, performed by GBRA, of the vulnerability of the water source under the drought of record conditions.

Stage 1 – Mild Water Shortage Conditions

<u>Requirements for initiation</u> – GBRA will recognize that Stage 1 conditions exist when water in storage in Canyon Reservoir is equal to or less than elevation 895 feet msl (274,800 acre-feet or approximately 72.5% full).

<u>Drought Stage Response</u> – In order to manage limited water supplies and/or reduce water demand during a Stage 1 condition, GBRA will contact wholesale water customers to discuss water supply and/or demand conditions and request that all customers initiate voluntary measures to reduce non-essential water use and achieve a voluntary 5 percent reduction in comparison to their average monthly usage of contracted for that time period of the calendar year.

<u>Requirements for termination</u> – Stage I of the Plan may be rescinded when Canyon Reservoir returns to elevation 895 feet msl or greater for a period of 30 consecutive days. GBRA will notify its wholesale customers and the media of the termination of Stage I in the same manner as the notification of initiation of Stage I of the Plan.

Stage 2 – Moderate Water Shortage Conditions

<u>Requirements for initiation</u> – GBRA will recognize that Stage 2 conditions exist when water in storage in Canyon Reservoir is equal to or less than elevation 890 feet msl (242,872 acre-feet or approximately 64% full).

<u>Drought Stage Response</u> – In order to manage limited water supplies and/or reduce water demand during a Stage 2 condition, GBRA will contact wholesale water customers to discuss water supply and/or demand conditions and request that all customers initiate voluntary measures to reduce non-essential water use and achieve a voluntary 10 percent reduction in comparison to their average monthly usage of contracted water for that time period of the calendar year.

<u>Requirements for termination</u> – Stage 2 of the Plan may be rescinded when Canyon Reservoir returns to elevation 890 feet msl or greater for a period of 30 consecutive days. Upon termination of Stage 2, Stage 1 becomes operative. GBRA will notify its wholesale customers and the media of the termination of Stage 2 in the same manner as the notification of initiation of Stage 2 of the Plan.

Stage 3 – Severe Water Shortage Conditions

<u>Requirements for initiation</u> – GBRA will recognize that Stage 3 conditions exist when water in storage in Canyon Reservoir is equal to or less than elevation 885 feet msl (213,386 acre-feet or approximately 56% full).

<u>Drought Stage Response</u> – In order to manage limited water supplies and/or reduce water demand during a Stage 3 condition, GBRA will contact wholesale water customers to discuss water supply and/or demand conditions and request that all customers initiate voluntary measures to reduce non-essential water use and achieve a voluntary 15 percent reduction in comparison to the average monthly usage of contracted water for that time period of the calendar year.

<u>Requirements for termination</u> – Stage 3 of the Plan may be rescinded when Canyon Reservoir returns to elevation 885 feet msl or greater for a period of 30 consecutive days. Upon termination of Stage 3, Stage 2 becomes operative. GBRA will notify its wholesale customers and the media of the termination of Stage 3 in the same manner as the notification of initiation of Stage 3 of the Plan.

Stage 4 – Critical Water Shortage Conditions

<u>Requirements for initiation</u> – GBRA will recognize that Stage 4 conditions exist when water in storage in Canyon Reservoir is equal to or less than elevation 880 feet msl (186,313 acre-feet or approximately 49% full).

<u>Drought Stage Response</u> – In order to manage limited water supplies and/or reduce water demand during a Stage 4 condition, GBRA will initiate allocation of water supplies on a pro-rata basis in accordance with Texas Water Code Section 11.039 and Section 10 of GBRA's DCP. The curtailment percentage in effect for Stage 4 will be 15%.

<u>Requirements for termination</u> – Stage 4 of the Plan may be rescinded when Canyon Reservoir returns to elevation 880 feet msl or greater for a period of 30 consecutive days. Upon termination of Stage 4, Stage 3 becomes operative. GBRA will notify its wholesale customers and the media of the termination of Stage 4 in the same manner as the notification of initiation of Stage 4 of the Plan.

Stage 5 – Extreme Water Shortage Conditions

<u>Requirements for initiation</u> – GBRA will recognize that Stage 5 conditions exist when water in storage in Canyon Reservoir is equal to or less than elevation 865 feet msl (118,817 acre-feet or approximately 31% full).

<u>Drought Stage Response</u> – In order to manage limited water supplies and/or reduce water demand during a Stage 5 condition, GBRA will initiate allocation of water supplies on a pro-rata basis in accordance with Texas Water Code Section 11.039 and Section 10 of GBRA's DCP. The curtailment percentage in effect for stage 5 will be 30%.

<u>Requirements for termination</u> – Stage 5 of the Plan may be rescinded when Canyon Reservoir returns to elevation 865 feet msl or greater for a period of 30 consecutive days. Upon termination of Stage 5, Stage 4 becomes operative. GBRA will notify its wholesale customers and the media of the termination of Stage 5 in the same manner as the notification of initiation of Stage 5 of the Plan.

Stage 6 – Emergency Water Shortage Conditions

<u>Requirements for initiation</u> – GBRA will recognize that Stage 6 Emergency conditions exists when any of the following conditions exist:

- 1) Mechanical or system failures occur, which cause unprecedented loss of capability to provide water service;
- 2) Natural or man-made contamination of the water supply source(s) occurs; and
- 3) GBRA determines water levels are reduced to a condition that could lead to a loss of service within 180 days or less.

Stage 6 Emergency conditions may occur at any time and are not dependent on being preceded by any other drought stage.

<u>Drought Stage Response</u> – In order to manage limited water supplies and/or reduce water demand during a Stage 6 Emergency condition, GBRA will implement the following measures:

- Initiate allocation of water supplies on a pro-rata basis in accordance with Texas Water Code Section 11.039 and GBRA's Section 10 of this Plan. The General Manager will make a recommendation on pro rata curtailment levels necessary to address the situation, and the GBRA Board of Directors will establish the curtailment percentage in effect for Stage 6 Emergency Conditions;
- 2) Assess the severity of the problem and identify the actions needed and time required to solve the problem;
- Inform the utility director or other responsible official of each wholesale water customer by telephone or in person and suggest actions, as appropriate, to alleviate problems;
- 4) If appropriate, notify city, county, and/or state emergency response officials for assistance; and
- 5) Undertake necessary actions, including repairs and/or clean-up as needed.

<u>Requirements for termination</u> – Stage 6 of GBRA's Plan may be rescinded when the triggering conditions of Stage 6 have ceased to exist.

7.2 GBRA Additional Supply and Demand Management Measures

In order to manage limited water supplies during drought conditions, GBRA may implement one or more of the following supply management measures:

- Encourage wholesale water customers to utilize alternative water sources including, but not limited to, other surface water or groundwater sources available to Customer, interconnections with another water system, and/or use of reclaimed water for non-potable purposes;
- Contact the United States Geological Survey (USGS) to calibrate and review the operation of all critical stream gauges;
- 3) Coordinate review of water use in the Guadalupe-San Antonio River Basin with the Watermaster. In times of shortage of supply caused by drought or emergency, the Watermaster will determine when water rights holders must reduce or stop diversions; and

4) Implement any available water delivery procedures to improve efficiency of the delivery of water.

7.3 GBRA Pro-Rata Curtailment

The following steps outline the process for preparing for and implementing pro-rata curtailment of wholesale customers:

- 1) <u>General Procedures</u>
 - a) When projections indicate that any drought response stage triggering pro-rata curtailment is anticipated to occur within 90 days or less, GBRA will provide each affected Customer a written notice requesting the Customer develop a Curtailment Plan that meets the requirements of GBRA's DCP Section 10.2;
 - b) Customer develops a Curtailment Plan, including monthly patterns of use and the measures to achieve the necessary reduction, and provides it to GBRA for review and approval within 30 days of GBRA's notice requesting the Curtailment Plan;
 - c) When the triggering criteria for any drought response stage including pro-rata curtailment is met, GBRA will provide each affected Customer a notice directing Customers to implement their Curtailment Plan; and
 - d) GBRA Staff will follow the Monitoring and Reporting procedures outlined in Section 10.2 of GBRA's DCP to evaluate how each affected Customer's actual water use compares to the Customer's Curtailment Plan and determine if any of the enforcement provisions outlined GBRA's DCP Section 11.0 are warranted.
- 2) <u>Curtailment Plan</u> The Curtailment Plan is a plan developed by the Customer that outlines the measures a Customer will employ to achieve a reduction in actual water use that is less than or equal to their Annual Allotment. The Annual Allotment will be provided to the Customer by GBRA and will be based upon the Customer's Contracted Annual Commitment of water from GBRA less the curtailment percentage in effect. The Curtailment Plan must include the following items, at a minimum:
 - a) Identify the Customer's Drought Coordinator and coordinator's contact information (phone, email, and mailing address), as well as the contact information for any other person to whom GBRA shall provide materials and information during the period in which a pro-rata curtailment is in effect;
 - b) Include a Monthly Distribution of the Annual Allotment identifying the monthly water use targets the customer expects to achieve for the Allotment Year beginning on the first full month the relevant drought stage is anticipated to be triggered; and
 - c) Identify the specific measures which will be implemented by the Customer to achieve the curtailment percentage in effect.

GBRA will not accept a Curtailment Plan that does not include a reasonable Monthly Distribution of the Customer's Annual Allotment, with such reasonableness to be solely determined by GBRA. In determining reasonableness, GBRA will consider the Customer's monthly water use from previous years, a typical distribution based on the Customer's purpose of use, other sources of supply available to the Customer, and any other relevant information.

A Curtailment Plan for a Customer utilizing wholesale water supplies from GBRA for municipal purposes shall include, at a minimum, provisions for landscape water with an irrigation system or sprinkler to be limited to once per week or less frequent.

In the event that Customer has not submitted a plan or GBRA has not accepted a Curtailment Plan for Customer prior to initiation of a curtailment, Customer's Monthly Distribution shall be 1/12 of the Annual Allotment per month.

 <u>Review and Acceptance of Curtailment Plan</u> – Within 15 days of receipt of Customer's Curtailment Plan, GBRA will review the plan and notify Customer of acceptance or of any deficiencies in the plan.

If Customer's Curtailment Plan is not accepted, Customer shall have 15 days from receipt of GBRA's notice of deficiency to remedy the elements of the Customer's Curtailment Plan that are not acceptable.

- 4) <u>Curtailment Year</u> If pro-rata curtailment commences after the beginning of a calendar year, the curtailment shall apply over a 12 month "Curtailment Year" beginning on the first full month the curtailment is in effect. If the pro-rata curtailment is rescinded prior to the end of the Curtailment Year, customer shall be responsible for meeting the Annual Allotment as pro-rated for the applicable portion of the Curtailment Year. In the event the curtailment will be determined based upon the months in which each curtailment percentage was in effect.
- 5) <u>Monitoring and Reporting During Pro-Rata Curtailment</u> GBRA Staff will monitor Customers' use of water on a monthly basis and will send information to the Drought Coordinator each month including:
 - a) The Customer's actual use;
 - b) The Monthly Distribution amounts (based on the curtailment percentage in effect at that time) that will be used for purposes of tracking applicable water use exceedances and/or credits; and
 - c) The accrued total of exceedances or credits for purposes of tracking how customer's actual water use compares to its Curtailment Plan. The accrued total of exceedances or credits shall be tracked as follows:
 - 1) Exceedances and credits will be tracked by comparing a Customer's actual monthly water use against the Monthly Distribution over the course of the Curtailment Year;
 - 2) In the event the Customer's actual water use within a month is less than the Monthly Distribution, a credit will be recorded for that month in units of acre-feet. The credit can be carried forward into subsequent months within the same Curtailment Year, but cannot be used in a subsequent Curtailment Year;
 - 3) Within a Curtailment Year, if there is a month in which the amount diverted exceeds the Monthly Distribution, an available credit from a prior month can be applied to reduce the exceedance for the month;
 - In the event the amount used in a month is greater than the Monthly Distribution in a Customer's Curtailment Plan and no credits are available from a prior month, an exceedance will be accrued;
 - 5) Accrued exceedances can be offset by credits in subsequent months within the Curtailment Year; and

6) Credits and exceedances will be pro-rated for a month in which pro-rata curtailment is ceased.

While exceedances are determined and tracked on a monthly basis, any applicable surcharges defined in GBRA's DCP Section 11.0 would only be assessed based on exceedances remaining at the end of the Curtailment Year, or at such time that pro-rata curtailment is rescinded.

7.4 GBRA Enforcement

GBRA will monitor Customer's compliance with its Curtailment Plan and may take enforcement action as necessary in the event the Customer is noncompliant. GBRA's enforcement actions may include:

- 1) <u>Water Rate Surcharges</u> For water used in amounts exceeding Customer's Annual Allotment or portion thereof, the following rates apply:
 - a) For actual water use in an amount up to 5 percent greater than the Annual Allotment or portion thereof, the rate assessed shall be equal to 2 times the then-current raw water rate(s) for the applicable GBRA system;
 - b) For actual water use in an amount from 5.01 to 10 percent greater than the Annual Allotment or portion thereof, the rate assessed shall be equal to 4 times the then-current raw water rate(s) for the applicable GBRA system;
 - c) For actual water use in an amount more than 10 percent greater than the Annual Allotment or portion thereof, the rate assessed shall be equal to 6 times the then-current raw water rate(s) for the applicable GBRA system; however, if a Customer has exceeded its Annual Allotment by greater than 10 percent in a prior Curtailment Year, the rate shall be ten times the then-current raw water rate(s) for the applicable GBRA system;
- 2) <u>Reductions in Water Delivers</u> GBRA may make operational changes in water delivery systems to physically restrict the rate or quantity of water delivered to Customer in an amount that is consistent with the Monthly Distribution. These operational changes may include, but are not limited to, reductions in releases from reservoirs, reductions in production at water treatment plants, manipulation of control valves to restrict water deliveries, reduction in pumping rates, installation of pressure reducing valves or other regulating devices, and any other feasible measures; and
- Discontinuation of Delivery Notwithstanding any surcharges applicable to water use in amounts greater than the Annual Allotment, and or reductions in water deliveries, GBRA reserves the right to cut off delivery of water in amounts that would exceed Customer's Annual Allotment.

Monitoring and enforcement of water-use restrictions at the end-user level will be the customers' responsibility. GBRA wholesale water contracts entered into or renewed after adoption of the plan, including contract extensions, that in case of shortage of water resulting from drought, the water to be distributed shall be divided in accordance with Texas Water Code, §11.039.

7.5 GBRA Variances

GBRA General Manager/CEO may grant a temporary variance to the pro-rata water allocation policies of this DCP if it is determined that one or more of the following conditions are met:

1) Failure to grant a variance would cause an emergency condition adversely affecting the public health, welfare, or safety;

- 2) It is not technically feasible for the Customer to continue any operations at the reduced rate required by their Annual Allotment; and
- 3) Alternative methods can be implemented which will achieve the same level of reduction in water use.

Persons requesting an exemption from the provisions of GBRA's Plan shall file a petition for variance with the General Manager within 10 days after pro-rata allocation has been invoked. All petitions for variances shall be reviewed by the Board of Directors of GBRA, and shall include the following:

- 1) Name and address of the Customer seeking the variance;
- Detailed statement with supporting data and information as to how the pro-rata allocation of water under the policies and procedures established in the GBRA's Plan adversely affects the Customer or what damage or harm will occur to the Customer by complying with the provisions of GBRA's Plan;
- 3) Demonstration of the why the threat to public health, safety and welfare addressed by the variance cannot be eliminated through any action of the Customer.
- 4) Description of the relief requested;
- 5) Period of time for which the variance is sought;
- 6) Alternative measures the petitioner is taking or proposes to take to meet the intent of GBRA's Plan and the compliance date; and
- 7) Other pertinent information.

Variances granted by GBRA shall be subject to the following conditions:

- 1) Variances granted shall include a timetable for compliance unless the customer has demonstrated the threat to public health, safety, and welfare addressed by the Variance can be eliminated through any action of the customer;
- 2) Variances granted shall expire when pro-rata curtailments are no longer in effect, unless the Customer has failed to meet specified requirements; and
- 3) No variance shall be retroactive or otherwise justify any violation of GBRA's Plan occurring prior to receipt of the request for Variance.

Variances from the Annual Allotment will be provided, without the need for prior written request, for water used solely for purposes of power generation.

8.1 CRWA Response

CRWA leases 10,575 acre-feet per annum at the Lake Dunlap WTP from GBRA (Certificate of Adjudication No. 18-2074) (Section 5.0). The Lake Dunlap WTP withdraws raw water from Lake Dunlap, treats, and delivers the water to its customers. The Hays Caldwell WTP, located in San Marcos, purchases raw water at the facility and is delivered by GBRA through a pipeline from Lake Dunlap to the Hays Caldwell Plant. This water also falls under GBRA's Certificate of Adjudication No. 18-2074 (section 5.0). CRWA purchases, from GBRA, 2,038 acre-feet of Lake Dunlap Water per annum at the Hays Cadwell WTP.

GBRA's right No. 18-2074 comes from storage at Canyon Reservoir (section 5.0), therefore it is subject to the conditions listed in section 7.0 of this Plan. Lake Dunlap's lease of 10,575 acre-feet and Hays Caldwell purchase of 2,038 are subject to the conditions listed in 7.0 of this Plan.

8.2 CRWA Drought Stage Response

GBRA Drought Stage Response can be found in section 7.1 of this Plan. CRWA's response to each stage, and strategy is listed below:

Stage 1 (Mild Water Shortage Conditions)

A 5% reduction in the average monthly flow is voluntary. CRWA will request its customers to initiate measures to reduce non-essential water use.

In order to manage limited water supplies and/or reduce water demand during a mild water shortage condition, the General Manager, or his/her designee(s), will implement one or more of the following:

- 1) Calibrate and review the operation of all water supply meters in the system;
- 2) Cease line flushing maintenance except to maintain water quality or line repair operations;
- 3) Implement water delivery procedures to improve efficiency of the delivery of water from storage;
- 4) Due to raw water coming from right number 18-2074, CRWA will combine Lake Dunlap and Hays Caldwell GBRA purchased water in its calculation to lessen the impact on both plants. Lake Dunlap WTP shares a service area and pipeline with the Wells Ranch WTP. CRWA can utilize the Wells Ranch Water Treatment Plant to reduce the demand on the Lake Dunlap WTP and the Hays Caldwell WTP; and
- 5) Implementation of CRWA's Conservation Plan. The Conservation Plan includes methodologies to reduce excessive and wasteful water usage to minimize the impact particularly in times of drought.

Management Measures:

- The General Manager, or his/her designee(s), will contact CRWA customers to discuss water supply and/or demand conditions and will request that customers initiate voluntary measures to reduce water use; and
- 2) The General Manager, or his/her designee(s), will provide a weekly report to the customer with information regarding current water supply and/or demand conditions, project water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 2 (Moderate Water Shortage Conditions)

A 10% reduction in the average monthly flow is voluntary. CRWA will request its customers to initiate measures to reduce non-essential water use.

In order to manage limited water supplies and/or reduce water demand during a moderate water shortage condition, the General Manager, or his/her designee(s), will implement one or more of the following:

- 1) Calibrate and review the operation of all water supply meters in the system;
- 2) Cease line flushing maintenance except to maintain water quality or line repair operations;
- 3) Implement water delivery procedures to improve efficiency of the delivery of water from storage;
- 4) Due to raw water coming from right number 18-2074, CRWA will combine Lake Dunlap and Hays Caldwell GBRA purchased water in its calculation to lessen the impact on both plants. Lake Dunlap WTP shares a service area and pipeline with the Wells Ranch WTP. CRWA can utilize the Wells Ranch Water Treatment Plant to reduce the demand on the Lake Dunlap WTP and the Hays Caldwell WTP; and
- 5) Implementation of CRWA's Conservation Plan. The Conservation Plan includes methodologies to reduce excessive and wasteful water usage to minimize the impact particularly in times of drought.

Management Measures:

- The General Manager, or his/her designee(s), will contact CRWA customers to discuss water supply and/or demand conditions and will request that customers initiate voluntary measures to reduce water use; and
- 2) The General Manager, or his/her designee(s), will provide a weekly report to the customer with information regarding current water supply and/or demand conditions, project water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 3 (Severe Water Shortage Conditions)

A 15% reduction in the average monthly flow is voluntary. CRWA will request its customers to initiate measures to reduce water use.

In order to manage limited water supplies and/or reduce water demand during a Severe water shortage condition, the General Manager, or his/her designee(s), will implement one or more of the following:

- 1) Calibrate and review the operation of all water supply meters in the system;
- 2) Cease line flushing maintenance except to maintain water quality or line repair operations;
- 3) Implement water delivery procedures to improve efficiency of the delivery of water from storage;
- 4) Due to raw water coming from right number 18-2074, CRWA will combine Lake Dunlap and Hays Caldwell GBRA purchased water in its calculation to lessen the impact on both plants. Lake Dunlap WTP shares a service area and pipeline with the Wells Ranch WTP. CRWA can utilize the Wells Ranch Water Treatment Plant to reduce the demand on the Lake Dunlap WTP and the Hays Caldwell WTP; and
- 5) Implementation of CRWA's Conservation Plan. The Conservation Plan includes methodologies to reduce excessive and wasteful water usage to minimize the impact particularly in times of drought.

Management Measures:

- The General Manager, or his/her designee(s), will contact CRWA customers to discuss water supply and/or demand conditions and will request that customers initiate measures to reduce water use; and
- 2) The General Manager, or his/her designee(s), will provide a weekly report to the customer with information regarding current water supply and/or demand conditions, project water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 4 (Critical Water Shortage Conditions)

A 15% reduction in average monthly flow will be required on a pro-rata basis (see Section 7.1, Stage 4 – Critical Water Shortage, & Section 7.3).

In order to manage limited water supplies and/or reduce water demand during a Critical water shortage condition, the General Manager, or his/her designee(s), will implement one or more of the following:

- 1) Calibrate and review the operation of all water supply meters in the system;
- 2) Cease line flushing maintenance except to maintain water quality or line repair operations;
- 3) Implement water delivery procedures to improve efficiency of the delivery of water from storage;
- 4) Due to raw water coming from right number 18-2074, CRWA will combine Lake Dunlap and Hays Caldwell GBRA purchased water in its calculation to lessen the impact on both plants. Lake Dunlap WTP shares a service area and pipeline with the Wells Ranch WTP. CRWA can utilize the Wells Ranch Water Treatment Plant to reduce the demand on the Lake Dunlap WTP and the Hays Caldwell WTP;
- 5) Implementation of CRWA's Conservation Plan. The Conservation Plan includes methodologies to reduce excessive and wasteful water usage to minimize the impact particularly in times of drought; and
- 6) Consider seeking a temporary variance to GBRA's pro-rata allocation (see Section 7.5)

Management Measures:

- The General Manager, or his/her designee(s), will contact CRWA customers to discuss water supply and/or demand conditions and will request that wholesale water customers initiate voluntary measures to reduce water use; and
- 2) The General Manager, or his/her designee(s), will provide a weekly report to the customer with information regarding current water supply and/or demand conditions, project water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

In the event that stage 4 is triggered, GBRA will implement its Pro Rata Water Allocation as defined in section 7.3 of this Plan. Once pro rata allocation is in effect, water diversion by or delivers to each wholesale customer shall be limited to the allocation established for each month.

Strategy A - CRWA will limit its production to the GBRA's wholesale pro rata allocation.

Strategy B – CRWA member entities and customers must implement drought mitigation measures to achieve this goal.

Stage 5 (Extreme Water Shortage Conditions)

A 15% reduction in average monthly flow will be required on a pro-rata basis (see Section 7.1, Stage 5 – Extreme Water Shortage, & Section 7.3).

In order to manage limited water supplies and/or reduce water demand during a Critical water shortage condition, the General Manager, or his/her designee(s), will implement one or more of the following:

- 1) Calibrate and review the operation of all water supply meters in the system;
- 2) Cease line flushing maintenance except to maintain water quality or line repair operations;
- 3) Implement water delivery procedures to improve efficiency of the delivery of water from storage;
- 4) Due to raw water coming from right 18-2074, CRWA will combine Lake Dunlap and Hays Caldwell GBRA purchased water in its calculation to lessen the impact on both plants. Lake Dunlap WTP shares a service area and pipeline with the Wells Ranch WTP. CRWA can utilize the Wells Ranch Water Treatment Plant to reduce the demand on the Lake Dunlap WTP and the Hays Caldwell WTP;
- 5) Implementation of CRWA's Conservation Plan. The Conservation Plan includes methodologies to reduce excessive and wasteful water usage to minimize the impact particularly in times of drought; and
- 6) Consider seeking a temporary variance to GBRA's pro-rata allocation (see Section 7.5)

Management Measures:

- 1) The General Manager, or his/her designee(s), will contact CRWA customers to discuss water supply and/or demand conditions and will request that customers initiate voluntary measures to reduce water use; and
- 2) The General Manager, or his/her designee(s), will provide a weekly report to the customer with information regarding current water supply and/or demand conditions, project water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

In the event that stage 5 is triggered, GBRA will implement its Pro Rata Water Allocation as defined in section 7.3 of this Plan. Once pro rata allocation is in effect, water diversion by or delivers to each wholesale customer shall be limited to the allocation established for each month.

Strategy A - CRWA will limit its production to the GBRA's wholesale pro rata allocation.

Strategy B – CRWA member entities and customers must implement drought mitigation measures to achieve this goal.

8.3 Enforcement

The provisions of this Plan shall apply to all CRWA Member Entities and Customers and shall be enforceable by the General Manager, or his/her designee.