



DROUGHT CONTINGENCY PLAN SUMMARY

CANYON RESERVOIR

GENERAL INFORMATION

- Canyon Reservoir – 8,200 surface acres -- Impounds 378,852 acre feet
- Conservation Pool – Between 800' mean sea level (msl) and elevation of 909' msl.
- Corps responsible for management within flood pool, between 909' and 943' msl.
- GBRA's TCEQ issued water rights authorizes GBRA to divert a five-year average of 90,000 acre feet/year of stored water from Canyon Reservoir to supply contractual water users.
- Drought of Record -- 1947-1956

STAGE 1 – Mild Water Shortage Conditions

Initiation: 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).

Goal: achieve a voluntary **5 percent reduction** in comparison to the average monthly usage of contracted water from storage for that time period of the calendar year.

STAGE 2 – Moderate Water Shortage Conditions

Initiation: Water in storage in Canyon Reservoir is equal to or less than **890 feet msl** (242,872 acre-feet or approximately 64% full).

Goal: achieve a voluntary **10 percent reduction** in comparison to the average monthly usage of contracted water from storage for that time period of the calendar year.

STAGE 3 – Severe Water Shortage Conditions

Initiation: Water in storage in Canyon Reservoir is equal to or less than **885 feet msl** (213,386 acre-feet or approximately 56% full).

Goal: achieve a voluntary **15 percent reduction** in comparison to the average monthly usage of contracted water from storage for that time period of the calendar year.

STAGE 4: Emergency Water Shortage Conditions

Whenever the following emergency water shortage conditions exist (i) mechanical or system failures occur which cause unprecedented loss of capability to provide water service, (ii) natural or man-made contamination of water supply source(s) occur; or (iii) a drought of greater severity than the Drought of Record occurs, the GM shall:

1. Assess severity of problem and identify actions needed and time required to solve the problem.
2. Inform utility director or other responsible official of each wholesale water customer by telephone or in person and suggest appropriate actions to alleviate problems.
3. If appropriate, notify city, county, and/or state emergency response officials for assistance.
4. Undertake necessary actions, including repairs and/or clean-up as needed.
5. Prepare a post-event assessment report on the incident and critique of emergency response procedures and actions.

In addition to the above features, this curtailment policy for firm water demands requires each GBRA firm water customer to prepare and adopt a legally enforceable local drought contingency plan which specifies the actions to be taken to comply with GBRA's Drought Contingency Plan regarding the curtailment of firm supplies. Such plans have to be developed pursuant to GBRA guidelines and submitted for GBRA review and approval within a reasonable time. GBRA staff provides direct technical assistance with the preparation of required local plans.

Declaration of Drought Worse Than Drought of Record

The GBRA Board of Directors will declare a drought worse than the drought of record when the following three conditions are simultaneously met: a) drought at least 24 consecutive months (24 months since Canyon Reservoir was last full – elevation 909' msl); b) the cumulative inflow deficit since the beginning of the drought exceeds the envelope curve for cumulative inflow deficits by at least 5% for six consecutive months; and c) the storage of Canyon Reservoir is less than elevation 885' msl (213,386 acre-feet or approximately 56% full). The GBRA Board of Directors will cancel such a declaration if any of the following conditions are met; d) the cumulative inflow deficit since the beginning of the drought is less than the envelope curve for cumulative inflow deficits by at least 5% for six consecutive months; or e) the storage in Canyon Reservoir is greater than elevation 890' msl (242,872 acre-feet or approximately 64% full).

Pro Rata Water Allocation

In event that Stage 4 – Emergency Water Shortage Conditions have been met, the GM is hereby authorized to initiate allocation of water supplies on pro rata basis in accordance with Texas Water Code Section 11.039 and according to the following water allocation policies and procedures:

1. A wholesale customer's allocation of water from storage shall be based on the customer's average monthly use of contracted water from storage for that time period of the calendar year. The percentage will be set by resolution of Board of Director's of GBRA based on GM's assessment of severity of water shortage condition and the need to curtail water diversions and/or deliveries and may be adjusted periodically by resolution of Board of Director's of GBRA as conditions warrant. Once pro rata allocation is in effect, water diversions by or deliveries to each wholesale customer shall be limited to the allocation established for each month.
2. GM shall provide notice, by certified mail, to each wholesale customer informing them of their water usage allocations and shall notify the news media and the executive director of the Texas Commission on Environmental Quality upon initiation of pro rata water allocation.
3. Upon request of customer or at initiation of the GM, the allocation may be reduced or increased if, 1) the designated period does not accurately reflect wholesale customer's average monthly usage of contracted water from storage for that time period of the calendar year; 2) the customer, with approval from GBRA, agrees to transfer part of its allocation to another wholesale customer; or 3) other objective evidence demonstrates the designated allocation is inaccurate under present conditions. A customer may appeal an allocation established hereunder to the Board of Directors of GBRA.

HYDROELECTRIC LAKES

GENERAL INFORMATION

- Lake Dunlap Comal/Guadalupe County
- Lake McQueeney Guadalupe County
- Lake Placid Guadalupe County
- Meadow Lake Guadalupe County
- H4 (Lake Gonzales) Gonzales County
- H5 (Lake Wood) Gonzales County

Applicable to any diverter of water, other than contracted stored water, that diverts and uses water from any of the GBRA hydroelectric lakes.

CRITICAL PERIOD STAGES

STAGE I: Applies on any day following a day when the average twenty-four (24) hour spring flow rate from the Comal Springs, when measured at the Comal River is **at or below 250 cfs, but greater than 200 cfs**. When Stage I is in effect the following restrictions apply:

1. No person may waste water, including allowing irrigation tailwater or water from vehicle washing at a residence to escape from that person's property.
2. No person may use water to wash an impervious outdoor ground covering such as a parking lot, driveway, street or sidewalk unless for health or safety reasons.
3. No person may use water for landscape watering between the hours of 10 a.m. and 8 p.m. However, landscape watering by means of a bucket, hand-held or soaker hose, or a properly installed drip irrigation system is permitted at any time. This subsection does not apply to reclaimed, reuse or recycled water.
4. Every person who owns or has possession of a swimming pool must cover the pool with an effective evaporation cover, screen or shield covering at least 25 percent of the surface of the pool when the pool is not in active use. Active use includes necessary maintenance that requires removal of the cover, screen or shields. Active use of public, commercial and apartment pools is whenever the pool is not officially closed.
5. No person may wash a vehicle at other than a commercial vehicle wash facility except on Monday and Friday, before 10 a.m. and after 8 p.m. Such washing must be done on a lawn or other pervious surface using a bucket or hand-held hose with an automatic shutoff nozzle.

STAGE II: Applies on any day following a day when the average twenty-four (24) hour spring flow rate from the Comal Springs, when measured at the Comal River is **at or below 200 cfs, but greater than 150 cfs**. When Stage II is in effect, the following restrictions apply:

1. All of the prohibitions applicable in Stage I apply in Stage II, except to the extent replaced by more restrictive conditions imposed by this stage.
2. Landscape watering is prohibited between 10 a.m. and 8 p.m., and is further restricted such that properties with an odd numbered address may landscape water only on Mondays, Wednesdays and Fridays and properties with an even numbered address may landscape water only on Tuesdays, Thursdays and Saturdays. However, landscape watering by means of a bucket, hand-held or soaker hose, or a properly installed drip irrigation system is permitted at any time. This subsection does not apply to reclaimed, recycled or reuse water.
3. No person may use water for an ornamental outdoor fountain or similar feature, unless the water is recycled and the only additional water used is to compensate for evaporative losses.
4. No person may wash a vehicle at other than a commercial vehicle wash facility except over a pervious surface area, during the above designated watering days and times with a hand-held hose with automatic shutoff nozzle or using a bucket.

The penalty for wasting water or any violation of Stage II restrictions as determined by the GBRA General Manager, or his designee, is \$100 per day per violation.

STAGE III: Applies on any day following a day when the average twenty-four (24) hour spring flow rate from the Comal Springs, when measured at the Comal River is **at or below 150 cfs, but greater than 100 cfs**. When Stage III is in effect, the following restrictions apply:

1. All of the prohibitions applicable in Stages I and II apply in Stage III, except to the extent replaced by more restrictive conditions imposed by this stage.
2. Landscape watering is prohibited between the hours of 10 a.m. and 8 p.m. and is further restricted such that properties with an odd numbered address may landscape water on Mondays and Fridays, and those with an even numbered address may landscape water on Tuesdays and Saturdays. However, landscape watering by means of a bucket, hand-held hose or soaker hose, or a properly-installed drip irrigation system is permitted at any time. This subsection does not apply to reclaimed, recycled or reuse water.
3. No person may use water for an ornamental outdoor fountain or similar feature.
4. No person may wash a vehicle at other than a commercial vehicle wash facility except over a pervious surface area, during the above designated watering days and times with a hand-held hose with automatic shut-off nozzle or using a bucket.

The penalty for wasting water or any violation of Stage III restrictions, as determined by the GBRA General Manager, or his designee, is \$100 - \$200 per day per violation.

STAGE IV: Applies on any day following a day when the average twenty-four (24) hour spring flow rate from the Comal Springs, when measured at the Comal River is **at or below 100 cfs, but greater than 50 cfs**. When Stage IV is in effect, the following restrictions apply:

1. All of the prohibitions applicable in Stages I, II and III apply in Stage IV, except to the extent replaced by more restrictive conditions imposed by this stage.
2. Landscape watering is prohibited between the hours our 10 a.m. and 8 p.m. and is further restricted such that properties with an odd numbered address may landscape water on Mondays while those with an even numbered address may landscape water on Tuesdays. However, landscape watering by means of a bucket, hand-held hose or soaker hose or a properly installed drip irrigation system is permitted during the hours allotted for watering. This subsection does not apply to reclaimed, recycled or reuse water.
3. Filling of new and existing pools is prohibited unless at least 30 percent of the water is obtained from a source other than the GBRA hydroelectric lakes. Water may be used to replenish swimming pools to maintenance levels. Drainage of swimming pools is permitted only onto a pervious surface, or onto a pool deck where the water is transmitted directly to a pervious surface, only if necessary to:
 - a. Remove excess water from the pool due to rain in order to lower the water to the maintenance level;
 - b. Repair, maintain, or replace a pool component which has become hazardous; or
 - c. Repair a pool leak.
4. Washing of vehicles is prohibited at other than a commercial vehicle wash facility.

The penalty for wasting water or any violation of Stage IV restrictions, as determined by the GBRA General Manager, or his designee, is \$100 - \$500 per day per violation.

STAGE V: Applies on any day following a day when the average spring flow rate from the Comal Springs, when measured at the Comal River is **at or below 50 cfs**. When Stage V takes effect an emergency condition exists and the GBRA General Manager shall convene an emergency session of the GBRA Board of Directors to consider emergency rules to further restrict uses or other appropriate action.

Use Necessary for Public Health or Safety

Notwithstanding any provision of this section, water may be used when and to the extent it is necessary to prevent danger to public health, safety or welfare or to the extent required by state or federal law.

Termination of Restrictions

The GBRA General Manager, or his designee, may terminate the restrictions of a Stage when the condition listed as the triggering event for such Stage has ceased to exist for a period of thirty (30) consecutive days. Upon termination of the restrictions of the applicable Stage, the restrictions of the prior Stage become operative.

LULING WATER RIGHTS

GENERAL INFORMATION

- The GBRA Luling Water Rights authorize run-of-the-river diversion from the San Marcos River just upstream of Zedler Mill Dam in Luling.
- GBRA pumps raw water from the San Marcos River to the GBRA Luling Water Treatment plant, which delivers treated water on a wholesale basis to both the City of Luling and the City of Lockhart.

STAGE 1 – Mild Water Shortage Conditions

Initiation: Water production at the GBRA Luling Water Treatment Plant for the City of Luling (not including the City of Lockhart demands) equals 2.5 MGD or greater for seven (7) consecutive days or when the average daily flow in the San Marcos River drops below **130 cfs** at the USGS Gauging Station in Luling.

Goal: Achieve a voluntary **5 percent reduction** in daily water demand for each retail utility utilizing the GBRA Luling Water Treatment Plant.

STAGE 2 – Moderate Water Shortage Conditions

Initiation: The average daily flow in the San Marcos River drops below **80 cfs** at the USGS Gauging Station in Luling.

Goal: Achieve a voluntary **10 percent reduction** in daily water demand for each retail utility utilizing the GBRA Luling Water Treatment Plant.

STAGE 3 – Severe Water Shortage Conditions

Initiation: The average daily flow in the San Marcos River drops below **40 cfs** at the USGS Gauging Station in Luling.

Goal: Achieve a voluntary **15 percent reduction** in daily water demand for each retail utility utilizing the GBRA Luling Water Treatment Plant.

STAGE 4 – Emergency Water Shortage Conditions

Initiation: When any of the following factors occur:

- A major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service.
- Natural or man-made contamination of the water supply source occurs.
- Water ceases to flow past the Zedler Dam located in Luling, Caldwell County, Texas.

Response: Whenever emergency water shortage conditions exist as defined in Section 11.1 of the Plan, the General Manager, or his/her designee(s), shall:

- Assess the severity of the problem and identify the actions needed and the time required to solve the problem.
- Inform the utility director or other responsible official of each wholesale water customer by telephone, email, or in person and suggest actions, as appropriate to alleviate problems (e.g., notification of the public to reduce water use until service is restored).

- If appropriate, notify city, county, and/or state emergency response officials for assistance.
- Undertake necessary actions, including repairs and/or clean-up as needed.
- Prepare a post-event assessment report on the incident and critique of emergency response procedures and actions.

Pro Rata Water Allocation

In the event that the triggering criteria specified in Section 11.1 of the Plan for Stage 3 - Severe Water Shortage Conditions have been met, the General Manager, or his/her designee(s), is hereby authorized to initiate allocation of water supplies on a pro rata basis in accordance with Texas Water Code Section 11.039. A provision will be included 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.

LOWER BASIN WATER RIGHTS

GENERAL INFORMATION

- The GBRA Lower Basin Water Rights authorize run-of-the-river diversion from the Guadalupe River at river mile 10.
- GBRA’s lower basin water rights are a major source of supply for agricultural, industrial, municipal and environmental uses in Calhoun and Victoria counties.
- GBRA operates the Port Lavaca Water Treatment Plant that provides treated water for municipal use to the City of Port Lavaca, Port O’Connor Improvement District, and the Calhoun County Rural Water Sytem.
- Water for GBRA's municipal customers is secured by the Lower Basin run-of-river water rights and backed up with contracts for stored water from Canyon Reservoir.

STAGE 1 – Mild Water Shortage Conditions

Initiation: Flow over the top of the Salt Water Barrier (at river mile 10) is 6 inches or less for five consecutive days.

Goal: Achieve a voluntary **5% reduction** in total domestic water usage during each month of this stage in comparison to the average monthly usage for that time period of the calendar year.

STAGE 2 – Moderate Water Shortage Conditions

Initiation: Sustained flow over the Salt Water Barrier is not occurring.

Goal: Achieve a voluntary **10% reduction** in total domestic water usage during each month of this stage in comparison to the average monthly usage for that time period of the calendar year.

STAGE 3 – Severe Water Shortage Conditions

Initiation: The release of stored water from Canyon Dam to meet customer demand in Calhoun County is being executed by GBRA, to supplement its run-of-river permitted supply available at the Barrier. Also, the General Manager may designate a Stage 3 trigger when voluntary actions by customers in Stage 2 are ineffective in reducing water usage.

Goal: Achieve a voluntary **15% reduction** in total domestic water usage during each month of this stage in comparison to the average monthly usage for that time period of the calendar year.

STAGE 4 – Critical Water Shortage Conditions

Initiation: When Stage 3 conditions are in action and, in addition, all municipal demand of GBRA customers in Calhoun County is being met by the permitted release of stored water in Canyon Dam.

Goal: Achieve a voluntary **20% reduction** in total domestic water usage during each month of this stage in comparison to the average monthly usage for that time period of the calendar year.

STAGE 5 – Emergency Water Shortage Conditions

Initiation: The General Manager or his/her designee determines that a water supply emergency exists based on:

- A major water line breaks, or pump or system failures occur, which cause unprecedented loss of capability to provide water service; or
- Natural or man-made contamination of the water supply source occurs.
- This condition may occur at any time and is not dependent on being preceded by Stages 1-4.

Goal: Achieve a **50% reduction** in daily water use.

Pro-Rata Water Allocation

In the event that the triggering criteria specified in Section 11.1 of the Plan for Stage 3 - Severe Water Shortage Conditions have been met, the General Manager, or his/her designee(s), is hereby authorized to initiate allocation of water supplies on a pro rata basis in accordance with Texas Water Code Section 11.039. A provision will be included 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. Customers with contracts for stored water from Canyon Reservoir may be subject to curtailment under the provisions of Section 9.3 of the Plan.