Drought Contingency Plan

2013

SAN PATRICIO MUNICIPAL WATER DISTRICT

Adopted August 13, 2013

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Appendices

Drought Contingency Plan

1. Introduction

This document is the **Drought Contingency Plan (DCP)** for the San Patricio Municipal Water District (District). This DCP was created so that the District may reduce demand when supplies are low so that the customers of the District have enough water to make it through a drought. This DCP clearly explains the triggers initiated by a drought and the steps to be taken during each stage of a drought.

There is also information in this DCP which explains the steps to be taken in a water emergency, such as when supplies are cut off or contaminated.

This DCP is different from the Water Conservation Plan (WCP) because it only takes effect when there are drought conditions. The WCP is a year-round guide, regardless of the drought conditions, and contains several regular best management practices.

The DCP has been prepared in accordance with Texas Administrative Code Title 30 Chapter 288 Subchapter B Rule §288.20 for Municipal Uses by Public Water Suppliers. Since the District serves wholesale water customers, a Drought Contingency Plan for Wholesale Water Suppliers has also been included in Section 16 in accordance with Texas Administrative Code Title 30 Chapter 288 Subchapter B Rule §288.22.

2. Declaration of Policy and Reason

In order to conserve the available water supply, to protect the integrity of water supply facilities with particular regard for domestic water use, sanitation, and fire protection, to protect and preserve public health, welfare, and safety, and to minimize the adverse impacts of water-supply shortage or other water-supply emergency conditions, the District hereby adopts the following regulations and restrictions on the delivery and consumption of water. By contract with the City of Corpus Christi, the District is obligated to impose similar drought contingency and water conservation measures as those instituted by Corpus Christi and subsequently, the District's contractual partners are required to do the same. Consequently, the District has adopted a Water Conservation and a Drought Contingency Plan that is substantively identical to Corpus Christi.

Water uses regulated or prohibited under this DCP are considered to be non-essential, and continuation of such uses during times of water shortage or other emergency water-supply conditions are deemed to constitute a waste of water, which may subject the offender(s) to penalties as defined in Section 13 of this DCP. Since the District first started supplying its customers with water in the 1950's, the region has experienced several periods of drought. Over the years, supplies have been added and conservation measures have been strengthened to ensure water security for the residents and businesses of the region. However, with the

variability of weather patterns in South Texas and a continually growing population, it is critical that the City plans for future drought conditions.

Currently, the District's water supply system is comprised of three reservoirs: Lake Corpus Christi, Choke Canyon Reservoir and Lake Texana. However, the criteria to trigger drought response stages are based on the combined capacity of Lake Corpus Christi and Choke Canyon Reservoir. (See Section 8). Since Choke Canyon Reservoir filled in June 1987, the combined storage of Choke Canyon Reservoir and Lake Corpus Christi has exceeded 60% capacity only about 62% of the time. The water storage levels in Choke Canyon Reservoir and Lake Corpus Christi have generally been 2% to 4% higher since Lake Texana supplies were added in October 1998.

Even with three reservoirs, the District still faces drought conditions (<50% storage levels) 16% of the time. It is because of this frequency that the following DCP has been developed. This plan adopts measures that will dramatically cut water consumption in order to conserve water supplies.

3. Public Education

A public meeting to receive comments on the San Patricio Municipal Water District's DCP was held on July 23, 2013.

The District will periodically provide the public with information about the DCP, including information about the conditions under which each stage of the DCP is to be initiated or terminated, and the drought response measures to be implemented in each stage. This information will be provided by utility bill inserts, notices in the San Patricio County News, and notice on the District's website (www.sanpatwater.com).

Notification to the public about when drought stages go into effect or when restrictions are lifted is explained in more detail in Section 9.

4. Coordination with Regional Water Planning Groups

The service area of the District is located within the Coastal Bend Regional Water Planning Area (Region N) and the District has provided a copy of this DCP to Region N in care of the Nueces River Authority.

The City of Corpus Christi shall review and update, as appropriate, the DCP at least every five years based on new or updated information, such as the adoption or revision of the regional water plan. Subsequently, the District will review and update, as appropriate, the DCP.

A presentation on the 2013 DCP revisions will be made to the Region N Water Planning Group. Minutes from that meeting will be available at http://www.nuecesra.org/CP/RWPG/minutes/index.php.

5. Authorization

The District Manager, or 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 District Manager, or designee, shall have the authority to initiate or terminate drought or other water supply emergency responses as described in this DCP.

6. Application

The provisions of this DCP shall apply to all persons, customers, and property utilizing water provided by the District. The terms "person" and "customer" as used in the DCP include individuals, corporations, partnerships, associations, and all other legal entities.

7. Definitions

For the purposes of this Chapter in this DCP, the following definitions shall apply:

Aesthetic water use: water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

Commercial and institutional water use: water use which is integral to the operations of commercial, non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

Conservation: those practices, techniques, and technologies that reduce the consumption of water, reduce 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.

Contract (end-user) water customers: a private entity that has a contract with the District to receive raw or treated water supplies for its sole use (i.e. does not resell to other users).

Customer: any person, company, or organization using water supplied by the District and paying a retail water bill.

Domestic water use: water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

Industrial water use: the use of water in processes designed to convert materials of lower value into forms having greater usability and use.

Institutional water use: the use of water by an establishment dedicated to public service, such as a school, university, church, hospital, nursing home, prison, or government facility. All facilities dedicated to public service are considered institutional regardless of ownership.

Landscape irrigation use: water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, rights-of-way, and medians.

Non-essential water use: water uses that are not essential or not required for the protection of public, health, safety, and welfare, including:

- irrigation of landscape areas, including parks, athletic fields, and golf courses, except as otherwise provided under this DCP;
- use of water to wash any motor vehicle, motorbike, boat, trailer, or other vehicle;
- use of water to wash down any impervious cover including sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
- use of water to wash down buildings or structures for purposes other than immediate fire protection or health reasons;
- flushing gutters or permitting water to run or accumulate in any gutter or street;
- use of water to fill, refill, or add to any indoor or outdoor swimming pools or jacuzzi-type pools;
- use of water in an aesthetic feature including fountain or pond except where necessary to support aquatic life;
- failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak; and
- use of water from hydrants for construction purposes or any other purposes other than fire fighting or flushing needed to maintain chlorination levels and protect public health.

Wholesale customers: any public or private utility that has a contract with the District to receive raw or treated water supplies and authority (through contracts) to resell this water to other users.

8. Criteria for Initiation and Termination of Drought Response Stages

The District Manager, or designee, shall monitor the City of Corpus Christi's actions, water supply and/or demand conditions on a weekly basis and shall determine when conditions warrant initiation or termination of each stage of the DCP, that is, when the specified "triggers" are reached. However, the District Manager, in the exercise of the District Manager's discretion, may initiate or terminate any stage when the District Manager deems necessary at any time. This section explains the triggers of each stage. Best management practices and water use restrictions for each drought stage are described in Section 10.

The triggering criterion to be monitored for determining drought response stages is (1) the combined reservoir storage levels of Choke Canyon Reservoir and Lake Corpus Christi, based

on the TCEQ 2001 Agreed Order (amended April 17, 2001) relating to inflows into Nueces Bay and Estuary or (2), in the alternative for Stage 1, Lake Texana's level. See Appendix A.

8.1. Stage 1 – Mild Water Shortage Condition

Requirements for initiation – Customers shall be requested to voluntarily conserve water and adhere to prescribed restrictions on certain water used when the combined storage level of Choke Canyon Reservoir and Lake Corpus Christi declines below 50 percent or Lake Texana storage level declines below 40%.

Requirement for termination – Stage 1 of the DCP may be rescinded when the combined storage level of Choke Canyon Reservoir and Lake Corpus Christi increases above 60 percent or Lake Texana storage level increases above 50%. Either of these conditions must exist for a period of 15 consecutive days before termination of Stage 1.

8.2. Stage 2 – Moderate Water Shortage Condition

Requirements for initiation – Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses described in Section 10 when the combined storage level declines to below 40 percent.

Requirement for termination – Stage 2 of the DCP may be rescinded when the combined storage level increases above 50 percent for a period of 15 consecutive days. Upon termination of Stage 2, Stage 1 becomes operative.

8.3. Stage 3 – Severe Water Shortage Condition

Requirements for initiation – Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this DCP when the combined storage levels declines to below 30 percent.

Requirement for termination – Stage 3 of the DCP may be rescinded when the combined storage level increases above 40 percent for a period of 15 consecutive days. Upon termination of Stage 3, Stage 2 becomes operative.

8.4. Stage 4 – Critical Water Shortage Condition

Requirements for initiation – Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 4 of the DCP when the combined storage levels declines to below 20 percent.

Requirement for termination – Stage 4 of the DCP may be rescinded when the combined storage level increases above 30 percent for a period of 15 consecutive days. Upon termination of Stage 4, Stage 3 becomes operative.

8.5. Stage 5 – Emergency Water Shortage Condition

Requirements for initiation – Customers shall be required to comply with requirements and restrictions for Stage 5 of this DCP when the District Manager, or designee, determines that a water supply emergency exists based on:

- A major water line breaks, or pump or system failures occur, which causes unprecedented loss of capability to provide water service; or
- Water production or transmission system limitations; or
- Natural or man-made contamination of the water supply source occurs.

Requirement for termination – The emergency water shortage condition may be rescinded when the District Manager, or designee, deems appropriate.

9. Drought Stages Response Notification

The District Manager, or designee, shall monitor Corpus Christi's actions, water supply and/or demand conditions on a weekly basis and, in accordance with the triggering criteria set forth in Section 8 of this Plan, shall determine that a mild, moderate, severe, critical, or emergency water shortage condition exists and shall implement the following notification procedures.

Notification of the Public:

The District Manager, or designee, shall notify the public for every change in drought stage status by any or all of the following:

- District's website (www.sanpatwater.com)
- Publication in the San Patricio County News
- Notice on the monthly billing
- Public Service Announcements
- Signs posted in public places

Additional Notification:

The District Manager, or designee shall, at a minimum, notify directly, or cause to be notified directly, the following individuals and entities for every change in drought stage status:

- Board President and Board Directors
- City Manager or designee from Odem, Taft, Portland, Gregory, Ingleside, Aransas Pass, and Rockport
- Manager or designee from Nueces County WCID No.4, Rincon WSC and Seaboard WSC
- County Judge and Commissioner(s)

- Major water users (such as industries)
- Texas Commission on Environmental Quality (TCEQ) – note TCEQ executive director MUST be informed within five (5) business days of mandatory water use restrictions being imposed

10. Drought Best Management Practices Per Stage

A summary of water use reduction targets for each drought stage response is presented in the following table. Further discussion on best management practices and implementation practices associated with each stage of response is included below. During Stages 2, 3, and 4, requests for exceptions may be presented to the District Manager or designee.

Drought Stage Response	CCR/LCC Combined Reservoir Storage Level	Target Demand Reduction Levels
Stage 1- Mild	<50% or if Lake Texana is <40%	5%
Stage 2- Moderate	<40%	10%
Stage 3- Severe	<30%	15%
Stage 4- Critical	<20%	30%
Stage 5- Emergency	Not Applicable	50%

10.1. Stage 1 Response – MILD Water Shortage Conditions

Target: Achieve a *voluntary* 5% reduction in daily treated water demand relative to treated water demand with the water use restrictions below.

Best Management Practices for Supply Management:

The District will enact voluntary measures to reduce or discontinue the flushing of water mains if practicable and utilize reclaimed water for non-potable uses to the greatest extent possible. The District will prioritize sources of supply not impacted by drought conditions, when available, including interruptible supplies from Lake Texana during times when Lake Texana water level is at or above 43 feet mean sea level in accordance with Lavaca-Navidad River Authority (LNRA) contract.

Water Use Restrictions for Reducing Demand

(a) Water customers are requested to voluntarily limit the irrigation of landscaped areas to **once per week**. The District Manager, or designee, will determine the water schedule.

(b) All operations of the District shall adhere to water use restrictions prescribed for Stage 2 of the DCP.

(c) Water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential purposes.

10.2. Stage 2 Response – MODERATE Water Shortage Conditions

Target: During Stage 2, achieve a 10% reduction in daily treated water demand relative to treated water demand with the water use restrictions below.

Best Management Practices for Supply Management:

In addition to the best management practices for supply management listed under Stage 1, the District will also do the following during Stage 2:

- Use more repair crews if necessary to allow for a quicker response time for water-line leak repair; and
- District crews begin monitoring customers' compliance with Stage 2 restrictions during the course of their daily rounds.

Water Use Restrictions for Demand Reduction

Under threat of penalty for violation, the following water use restrictions shall apply to all persons during Stage 2:

a) Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems shall be limited to **once per week**. The watering schedule will be determined by the District Manager or designee. Customers will be made aware of their designated watering day in accordance with Section 9. However, irrigation of landscaped areas is permitted on any day if it is by means of a hand-held hose (with positive shutoff nozzle), a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system with a positive shutoff device. Exceptions for this restriction may be permitted, upon review and approval by the District Manager or designee, for the following uses: new plantings (for up to 60 days), vegetable gardens, athletic playing fields, and botanical gardens. In addition, this restriction does not apply to customers irrigating with well water or an aerobic septic system. Customers irrigating with well water or an aerobic septic system should provide a legible sign prominently posted on the premises within two (2) feet of the street number located on the premises.

b) Use of water to wash any motor vehicle, motorbike, boat, trailer, or other vehicle is prohibited except on designated watering days. However, washing of boats and/or flushing of boat motors is permitted upon immediate exit of water body. Such washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rinses. Vehicle washing may be done at any time on the immediate premises of a commercial car wash. Further, such washing may be exempted from these regulations upon review by the District Manager or designee if the health, safety, and welfare of the public are

contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.

c) Use of water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or Jacuzzi-type pools is prohibited except on designated watering days.
d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life.
e) Use of water from hydrants shall be limited to fire fighting, related activities, or other activities necessary to maintain public health, safety, and welfare, except that use of water from designated fire hydrants for construction purposes may be allowed under special permit from the applicable city.
f) Use of water for the irrigation of golf course greens, tees, and fairways is prohibited except on designated watering days. However, if the golf course utilizes a groundwater source or a reclaimed water source, the facility shall not be subject to these regulations unless it is restricted by another governmental entity.
g) The use of water to maintain integrity of building foundations is limited to designated watering days and is only permitted by use of hand-held hose or drip irrigation.
h) The following uses of water are defined as non-essential and are prohibited:
    1. Wash-down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
    2. Use of water to wash down buildings or structures for purposes other than immediate fire protection without permit granted by the District Manager or designee;
    3. Use of water for dust control without permit granted by the District Manager or designee;

10.3. Stage 3 Response – SEVERE Water Shortage Conditions

Target: During Stage 3, achieve a 15% reduction in total daily treated water demand relative to treated water demand with the water use restrictions below.

Best Management Practices for Supply Management:

In addition to the best management practices for supply management listed under Stage 2, the City will also do the following during Stage 3:

- Eliminate the flushing of water mains unless required for water quality issues and/or public safety; and
- Review customers' water usage for compliance based on the previous month's water use and notify violators verbally or in writing as the situation dictates.

Water Use Restrictions for Demand Reduction:

All requirements of Stage 2 shall remain in effect during Stage 3 except as modified below:

a) Irrigation of landscaped areas shall be limited to **once every other week**. The watering schedule will be determined by the District Manager or designee. Customers will be made aware of their designated watering day. However, irrigation of landscaped areas is permitted on any day if it is by means of a hand-held hose (with positive shutoff nozzle), a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system with a positive shutoff device. Exceptions for this restriction may be permitted, upon review and approval by the District Manager or designee, for the following uses: new plantings (for up to 60 days), vegetable gardens, athletic playing fields, and botanical gardens. In addition, this restriction does not apply to customers irrigating with well water or an aerobic septic system. Customers irrigating with well water or an aerobic septic system should provide a legible sign prominently posted on the premises within two (2) feet of the street number located on the premises.
b) The watering of golf course fairways with potable water is prohibited. The watering of greens and tees are limited to once every other week unless the golf course utilizes a groundwater source or a reclaimed water source or done by means of hand-held hoses, hand-held buckets, or drip irrigation.

Optional Measures:

During Stage 3, the following measures are optional water use restrictions that may be implemented by the District Manager, or designee, following similar actions implemented by the City of Corpus Christi and with prior Board notification, as conditions warrant:

a) The use of water for construction purposes from designated fire hydrants under special permit is to be discontinued.
b) For residential and multi-unit customers, a drought surcharge of up to and including 100% of the total monthly water bill over the monthly allocation may be added to the customers' bill to deter discretionary water use, as explained in Section 11.

10.4. Stage 4 Response – CRITICAL Water Shortage Conditions

Target: During Stage 4, achieve a 30% or greater reduction in daily treated water demand relative to treated water demand with the water use restrictions below. An additional surcharge will be added to each utility bill during Stage 4 water shortage conditions to discourage discretionary water use, as described in Section 11 for retail customers and Section 16.10 for wholesale customers.

Best Management Practices for Supply Management:

In addition to the best management practices for supply management listed under Stage 3, the City will also do the following during Stage 4:

- Upon written notice, disconnect the water meters of willful violators if absolutely necessary to prevent the deliberate wasting of water.

Water Use Restrictions for Demand Reduction:

All requirements of Stage 2 and 3 shall remain in effect during Stage 4 except as modified below:

a) Irrigation of landscaped areas shall be **prohibited at all times**.
b) Use of water to wash any motor vehicle, motorbike, boat, trailer, or other vehicle not occurring on the premises of a commercial car wash stations and not in the immediate interest of public health, safety, and welfare is prohibited.
c) The filling, refilling, or adding of water to swimming pools, wading pools, and jacuzzi-type pools, and water parks (unless non-city, alternative source) is prohibited.
d) The use of water to maintain the integrity of a building foundation is still permitted on the designated Stage 3 watering day and shall be done by hand or drip irrigation method.

Optional Measures:

During Stage 4, the following measures are optional water use restrictions that may be implemented by the District Manager, or designee, following similar actions implemented by the City of Corpus Christi and with prior Board notification, as conditions warrant:

a) No application for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as this drought response stage shall be in effect.
b) For residential and multi-unit customers, a drought surcharge of up to and including 100% of the total monthly water bill over the monthly allocation may be added to the customers' bill to deter discretionary water use, as explained in Section 11.

10.5. Stage 5 Response – EMERGENCY Water Shortage Conditions

Target: During Stage 5, achieve a 50% or greater reduction in daily treated water demand relative to treated water demand with the below water use restrictions. Surcharges and reduced allocations are enforceable during Stage 5 water shortage conditions.

During emergency conditions that result in a major system interruption, alternative water sources and/or alternative delivery mechanisms may be required. For emergency water shortage conditions associated with the interruption of water supply from theNueces Basin stored supplies, the District will cease pumping from the Nueces River and will contact the City of Corpus Christi to identify additional, temporary water that may be available from Lake Texana on a short-term basis to meet essential water needs. For

emergency water shortage conditions associated with the interruption of water from Lake Texana supplies, the District will cease pumping from the Mary Rhodes Pipeline and will contact the City of Corpus Christi.

Best Management Practices for Supply Management:

In addition to the best management practices for supply management listed under Stage 4, the City will also do the following:

- Call the 10 largest water customers in the area affected by the emergency condition, and if necessary, use runners in key areas to begin spreading the message of a major outage.

Water Use Restrictions for Demand Reduction:

During Stage 5, all requirements of Stage 2, 3, and 4 shall remain in effect except as modified below:

a) Irrigation of landscaped areas is absolutely prohibited.
b) Use of water to wash any motor vehicle, motorbike, boat, trailer, or other vehicle is absolutely prohibited.
c) Associated uses of water not related to business process which are discretionary, such as equipment washing, shall be deferred until the Stage 5 emergency has been terminated.

Optional Measure:

During Stage 5, the following measure is an optional water use restriction that may be implemented by the District Manager, or designee, following similar actions implemented by the City of Corpus Christi (when appropriate) and with prior Board notification, as conditions warrant:

a) For residential and multi-unit customers, a drought surcharge of up to and including 100% of the total monthly water bill over the monthly allocation may be added to the customers' bill to deter discretionary water use, as explained in Section 11.

11. Surcharges for Drought Stages 3 – 5 and Service Measures

(a) General

1. The surcharges established herein are solely intended to regulate and deter the use of water during a period of serious drought in order to achieve necessary water conservation. The District expressly finds that the drought poses a serious and immediate threat to the public and economic health and general welfare of this community, and that the surcharges and other measures adopted herein are essential to protect said public health and welfare.

2. This section, and the surcharges and measures adopted herein are an exercise of the District's regulatory power, and the surcharges and connection fees are conservation rates intended to meet fixed costs as a result of lost revenue.
3. Following similar actions of the City of Corpus Christi and with prior SPMWD Board notification, the District Manager is authorized to determine trigger points or allocations and surcharges during Stages 3, 4, and 5 Emergency Water Shortage conditions.
4. In this section, institutional customer means city utility customer which operates as a not-for-profit entity.
5. A customer may appeal an allocation or drought surcharge triggering point established under this Section to the District Manager or designee on grounds of unnecessary hardship, through the process outlined in Section 12.
6. Drought surcharge funds will first be applied towards annual debt service as reflected in the District's operating budget to offset revenue loss due to drought conditions.

(b) Residential water customers, who are not billed through a master water meter.

1. A monthly base amount of 3,000 gallons shall be established as a trigger point for each customer. Water consumption up to and including this amount will not include a drought surcharge.
2. Above the 3,000 gallon consumption trigger point, following similar actions of the City of Corpus Christi and with prior SPMWD Board notification, a drought surcharge shall be added up to and including 100% of the customer's total monthly water bill over the allocation.

(c) *Residential customers who are billed from a master water meter.*

1. Once Stage 2 condition has been declared, property managers of multi-tenant units shall notify the District Managerof the number of residential units in their facility for determination of allocations. Until so notified, the District shall calculate the allocation based on two residential units per master water meter. A monthly base amount of 3,000 gallons shall be established as a trigger point for each residential unit.
2. When consumption for the month is less than or equal to 3,000 gallons times the number of residential units, there will be no surcharge.
3. Following similar actions of the City of Corpus Christi and with prior SPMWD Board notification, when consumption is above the 3,000 gallons times the number of units, a drought surcharge shall be added up to and including 100% of the customer's total monthly water bill over the allocation.

(d) Commercial or institutional customer

1. A monthly water usage allocation shall be established by the District Manager or designee for each commercial or institutional customer.
2. Method of establishing allocation:
    a. When the combined reservoir capacity is less than 20% of total capacity (Stage 4), the commercial or institutional customer's allocation shall be 90 percent of the customer's usage for the corresponding month's billing period during previous 12 months prior to the implementation of Stage 2.

    b. If the customer's billing history is shorter than 12 months, the monthly average for the period for which there is a record shall be used for any monthly period for which no history exists.

    c. Provided, however, a customer, 90 percent of whose monthly usage is less than 6,000 gallons, shall be allocated 6,000 gallons.

    d. The District Manager shall give best effort to see that notice of each commercial or institutional customer's allocation is mailed to such customer.

    e. If, however, the customer does not receive such notice, it shall be the customer's responsibility to contact the District's Billing Office to determine the allocation, and the allocation shall be fully effective notwithstanding lack of receipt of written notice.

    f. Upon request of the customer or at the initiative of the District Manager, the allocation may be reduced or increased,

        (1) if one nonresidential customer agrees to transfer part of its allocation to another nonresidential customer, or

        (2) if other objective evidence demonstrates that the designated allocation is inaccurate under present conditions.

(e) Industrial customers, who use water for processing.

1. A monthly water usage allocation shall be established by the District Manager or designee for each an industrial customer, which uses water for processing (e.g., an industrial customer).
2. Method of establishing allocation.
    a. When the combined reservoir capacity is less than 20% of total capacity (Stage 4), the industrial customer allocation shall be 90 percent of the customer's usage for the corresponding month's billing

period during the previous 12 months prior to the implementation of Stage 2.

b. If the customer's billing history is shorter than 12 months, the monthly allocation shall be 1/12 of 90% of the customer's maximum annual contracted amount until 12 months of billing history are established. However, if the industrial customer does not have a water contract and does not have at least 12 months of billing history, then the new industrial customer will provide data regarding expected water use and City will determine allocation based on 90% of expected use to determine initial allocation until 12 months of billing history are established.

c. The District Manager shall give his best effort to see that notice of each industrial customer's allocation is mailed to such customer.

d. If, however, the customer does not receive such notice, it shall be the customer's responsibility to contact the District Billing Office to determine the allocation, and the allocation shall be fully effective notwithstanding lack of receipt of written notice.

e. Upon request of the customer or at the initiative of the District Manager, the allocation may be reduced or increased, if:

    1. The designated period does not accurately reflect the customer's normal water usage because customer had shut down a major processing unit for overhaul during the period.

    2. The customer has added or is in the process of adding significant additional processing capacity.

    3. The customer has shut down or significantly reduced the production of a major processing unit.

    4. The customer has previously implemented significant permanent water conservation measures.

    5. The customer agrees to transfer part of its allocation to another industrial customer.

    6. Other objective evidence demonstrates that the designated allocation is inaccurate under present conditions.

(f) Commercial, institutional, and industrial customers shall pay the following surcharges:

1. Customers whose allocation is 6,000 gallons through 20,000 gallons per month:

    a. $5.00 per 1,000 gallons for the first 1,000 gallons over allocation.

    b. $8.00 per 1,000 gallons for the second 1,000 gallons over allocation.

    c. $16.00 per 1,000 gallons for the third 1,000 gallons over allocation.

    d. $40.00 for each additional 1,000 gallons over allocation.

2. Customers whose allocation is 21,000 gallons per month or more:

    a. One times the block rate for each 1,000 gallons in excess of the allocation up through 5 percent above allocation.

    b. Three times the block rate for each 1,000 gallons from 5 percent through 10 percent above allocation.

    c. Five times the block rate for each 1,000 gallons from 10 percent through 15 percent above allocation.

    d. Ten times the block rate for each 1,000 gallons more than 15 percent above allocation.

    e. The surcharges shall be cumulative.

    f. As used herein, "block rate" means the charge to the customer per 1,000 gallons at the regular water rate schedule at the level of the customer's allocation.

(g) *Nonresidential customer is billed from a master meter*.

1. When a nonresidential customer is billed from a master meter which jointly measures water to multiple residential dwelling units (for example: apartments, mobile homes), the customer may pass along any surcharges assessed under this DCP to the tenants or occupants, provided that:

    a. The customer notifies each tenant in writing:

        1. That the surcharge will be passed along.

        2. How the surcharge will be apportioned.

3. That the landlord must be notified immediately of any plumbing leaks.

4. Methods to conserve water (which shall be obtained from the District).

b. The customer diligently maintains the plumbing system to prevent leaks.

c. The customer installs water saving devices and measures (ideas for which are available from the District) to the extent reasonable and practical under the circumstances.

(h) Water service to the retail water customer may be terminated under the following conditions:

1. Monthly residential water usage exceeds allocation by 4,000 gallons or more two or more times for any individual month after the implementation of Stage 4. Also, the two months need not be consecutive months.

2. Monthly water usage on a master meter which jointly measures water usage to multiple residential dwelling units exceeds allocation by 4,000 gallons times the number of dwelling units or more two or more times (which need not be consecutive months).

3. Monthly nonresidential water usage for a customer whose allocation is 6,000 gallons through 20,000 gallons exceeds its allocation by 7,000 gallons or more two or more times (which need not be consecutive months).

4. Monthly nonresidential water usage for a customer whose allocation is 21,000 gallons or more exceeds its allocation by 15 percent or more two or more times (which need not be consecutive months).

5. For residential customers and nonresidential customers whose allocation does not exceed 20,000 gallons, after the first disconnection water service shall be restored upon request for a fee of $50.

6. For such customers, after the second disconnection, water service shall be restored within 24 hours of the request for a fee of $500.

7. If water service is disconnected a third time for such customer, water service shall not be restored until the District re-enters a level of water conservation less than Stage 3.

8. For master meter customers, the service restoration fees shall be the same as above times the number of dwelling units.

9. For nonresidential customers whose allocation is 21,000 gallons per month or more:

    a. After the first disconnection water service shall be restored upon request for a fee in the amount of "X" in the following formula:

        X = $ 50 x Customer's Allocation in gallons / 20,000 gallons

    b. After the second disconnection for said customers, water service shall be restored within 24 hours of the request for a fee of 10 times "X".

    c. If water service is disconnected a third time for such customer, water service shall not be restored until the District re-enters a level of water conservation less than Stage 3.

    d. The District Manager is directed to institute written guidelines for disconnection of water service under this provision, which will satisfy minimum due process requirements, if any.

(i) It shall be a defense to imposition of a surcharge hereunder, or to termination of service, that water used over allocation resulted from loss of water through no fault of the customer (for example, a major water line break) for the following conditions:

1. The customer shall have the burden to prove such defense by objective evidence (for example, a written certification of the circumstances by a plumber).

2. A sworn statement may be required of the customer.

3. This defense shall not apply if the customer failed to take reasonable steps for upkeep of the plumbing system, failed to reasonably inspect the system and discover the leak, failed to take immediate steps to correct the leak after discovered, or was in any other way negligent in causing or permitting the loss of water.

(j) When this section refers to allocation or water usage periods as "month," monthly," "billing period," and the like, such references shall mean the period in the District's ordinary billing cycle which commences with the reading of a meter one month and commences with the next reading of that meter which is usually the next month.

1. The goal for the length of such period is 30 days, but a variance of two days, more or less, will necessarily exist as to particular meters.

2. If the meter reader system is prevented from timely reading a meter by any obstacle which is attributable to the customer, the original allocation shall apply to the longer period without modification.

12. Requests for Exemptions and Variances

(a) The Assistant District Manager or designee may, in writing, grant a temporary variance to any of the provisions for water users found in this DCP upon determination that failure to grant such variance would cause an emergency condition adversely affecting the public health, sanitation, or fire protection for the public or person requesting such a variance.

(b) A person requesting an exemption or variance from the provisions of this DCP shall file request on District-provided application for exemption/variance with the District within 5 days after a particular drought response stage has been invoked. All request forms shall be reviewed by the Assistant District Manager or designee, and shall include the following:

1. Name and address of the water user(s).
2. Purpose of water use.
3. Specific provision(s) of the Drought Contingency Plan from which the water user is requesting relief.
4. Detailed statement as to how the specific provision of the Drought Contingency Plan adversely affects the water user or what damage or harm will occur to the water user or others if water user complies with this DCP.
5. Description of the exemption requested
6. Period of time for which the exemption is sought.
7. Alternative water use restrictions or other measures the water user is taking or proposes to take to meet the intent of this DCP and the compliance date.
8. Other pertinent information; or as required on permit application

(c) No exemption nor variance shall be retroactive or otherwise justify any violation of this DCP occurring prior to the issuance of the exemption/variance.

(d) The Assistant District Manager or designee shall consider requests of water users for special consideration to be given as to their respective particular circumstances and is hereby authorized to, in special cases, grant such variance from the terms of this DCP if such compliance would cause an emergency condition adversely affecting the public health, sanitation, or fire protection for the public or person requesting such a variance as will not be contrary to the public interest, where, owing to special conditions, a literal enforcement of the provisions of this DCP will result in unnecessary hardship, and so that the spirit of this DCP shall be observed and substantial justice done.

(e) Should a permit for special exception be granted, it shall be in effect from the time of granting through the termination of the then current stage, unless revoked by the Assistant District Manager or designee for noncompliance; provided, that the permit is prominently posted on the premises within two (2) feet of the street number located on the premises.

(f) A person denied request for permit or exception from these rules may appeal the decision to the District Manager by submitting written request for appeal to the District Manager within five business days from issuance of denial. The decision of the District Manager shall be final.

(g) Violations of any permit conditions may be enforced under Section 13.

13. Enforcement

(a) No person or entity may knowingly or intentionally allow the use of water from the District for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an amount in excess of that permitted by any drought response stage in effect at the time.

(b) The provisions of this Plan constitute rules adopted under the authority set forth in Section 11.1272 of the Texas Water Code and 30 Texas Administrative Code 288.2. Any person who violates any provision of this Plan will be subject to the payment of a fine in an amount per violation that does not exceed the jurisdiction of justice court, as provided by Section 27.031, Government Code, as permitted under Section 49.004 of the Texas Water Code. Each day of violation will constitute a separate offense. In addition, the offending party will be liable to the District for any costs incurred by the District in connection with any violation. Compliance with this Plan may also be sought through injunctive relief in the district court. In accordance with the foregoing authority, any person that violates any provision of this Plan shall be subject to a fine of not more than five hundred dollars ($500.00) per violation per day.

(c) If any person or a second person in the same household or premises commits a second violation of this article, the District Manager shall be authorized to discontinue water service to the premises where such violation occurs.

(d) Any person, including a person classified as a customer of the District, who is in apparent control of the property where a violation occurs or originates is presumed to be the violator, and proof that a violation occurred on a person's property constitutes a rebuttable presumption that the person committed the violation. Parents are responsible for violations of their minor children and proof that a violation, committed by a child, occurred on property within the parents' control constitutes a rebuttable presumption that the parent committed the violation.

14. Variances

A temporary variance for existing water uses otherwise prohibited under this DCP may be obtained through the process outlined in Section 12.

15. Severability

It is hereby declared to be the intention of the District that the sections, paragraphs, sentences, clauses, and phrases of this DCP are severable and, if any phrase, clause, sentence, paragraph, or section of this DCP shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such declaration shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this DCP, since the same would not have been enacted by the District without the incorporation into this DCP of any such unconstitutional phrase, clause, sentence, paragraph, or section.

16. Wholesale Drought Contingency Plan

16.1 Declaration of Policy, Purpose, and Intent

In order to conserve the available water supply and/or to 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 water supply emergency conditions, the San Patricio Municipal Water District(District) adopts the following Wholesale Drought Contingency Plan (the Plan).

16.2 Public and Wholesale Customer Involvement

Opportunity for the wholesale water customers to provide input into the preparation of the San Patricio Municipal Water District's Plan was provided by the District by means of supplying the Contracting Parties with a copy of the Plan and receiving comments by email. The public was invited to view and make comments on the Plan by placement of the Plan on a public website and a public meeting held on July 23, 2013 at San Patricio Municipal water District office. The District Plan was adopted under the open meetings requirement of the TCEQ during the August 13, 2013 Board meeting.

16.3 Wholesale Water Customer Education

The District will periodically provide wholesale customers with information about the Plan, including information about conditions under which each stage of the Plan is to be initiated or terminated and drought response measures to be implemented in each stage. This information will be distributed by providing a copy of the Plan to each wholesale water customer.

16.4 Coordination with Regional Water Planning Groups

The water service area of San Patricio Municipal Water District and its wholesale water customers is located within the Coastal Bend Planning Region (Region N) and the District has provided a copy of the Plan to Region N.

The City of Corpus Christi shall review and update, as appropriate, the drought contingency plan at least every five years based on new or updated information, such as the adoption or revision of the regional water plan. . Subsequently, the District will review and update, as appropriate, the DCP in the same manner.

16.5 Authorization

The District Manager, or 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. Wholesale customers are subject to the plan under their contracts with the District. The District Manager, or designee, shall have the authority to initiate or terminate drought or other water supply emergency response measures as described in this Plan. The District Manager shall notify the TCEQ within five (5) business days of any mandatory water use restrictions being enacted.

16.6 Application

The provisions of this Plan shall apply to all customers utilizing water provided by the District on a wholesale basis. The terms “person” and “customer” as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities. The provisions of this Plan shall apply to all customers utilizing water provided by the District on a wholesale basis. Every wholesale water contract entered into, renewed or modified after official adoption of this Plan (by either ordinance, resolution, or tariff) shall include language relating to the San Patricio Municipal Water District Water Conservation Plan and Drought Contingency Plan, and shall require the imposition of similar restrictions, surcharges or rationing measures on their customers. To the extent of its legal authority, the San Patricio Municipal Water District shall require its wholesale customers to implement outdoor watering restrictions similar to those of the District for each drought response stage. The District requires that any contract for the resale of water furnished to wholesale water contractors shall contain a similar condition.

16.7 Triggering Criteria for Initiation and Termination of Drought Response Stages

The District Manager, or designee, shall monitor 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 email, mail, or telephone. The news media will also be informed by the City of Corpus Christi.

The triggering criterion to be monitored for determining drought response stages is the combined reservoir storage levels of Choke Canyon Reservoir and Lake Corpus Christi. The

combined storage levels selected are based on the TCEQ 2001 Agreed Order on Freshwater Inflows to the Nueces Bay and Estuary (amended April 17, 2001). See Appendix A. The triggering criterions in this section are minimum standards for initiation and maximum standards for termination, and the District Manager, or designee, can initiate or terminate each stage when conditions warrant.

(a)Stage 1 – MILD Water Shortage Condition

Requirements for initiation – The District will recognize that a mild water shortage condition exists when the combined storage level declines below 50 percent or Lake Texana storage level declines below 40%.

Requirement for termination – Stage 1 of the Plan may be rescinded when the combined storage level of Choke Canyon Reservoir and Lake Corpus Christi increases above 60 percent or Lake Texana storage level increases above 50%. Either of these conditions must exist for a period of 15 consecutive days before termination of Stage 1.

(b)Stage 2 – MODERATE Water Shortage Condition

Requirements for initiation – The District will recognize that a moderate water shortage condition exists when the combined storage level declines below 40 percent.

Requirement for termination – Stage 2 of the Plan may be rescinded when the combined storage level increases above 50 percent for a period of 15 consecutive days. Upon termination of Stage 2, Stage 1 becomes operative. The District 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 1 of the Plan.

(c)Stage 3 – SEVERE Water Shortage Condition

Requirements for initiation – The District will recognize that a severe water shortage condition exists when the combined storage levels declines to below 30 percent.

Requirement for termination – Stage 3 of the Plan may be rescinded when the combined storage level increases above 40 percent for a period of 15 consecutive days. Upon termination of Stage 3, Stage 2 becomes operative. The District will notify its wholesale customers and the media of the termination of Stage 3.

(d)Stage 4 – CRITICAL Water Shortage Condition

Requirements for initiation – The District will recognize that a severe water shortage condition exists when the combined storage levels declines to below 20 percent.

Requirement for termination – Stage 4 of the Plan may be rescinded when the combined storage level increases above 30 percent for a period of 15 consecutive days. Upon termination of Stage 4, Stage 3 becomes operative. The District will notify its wholesale customers and the media of the termination of Stage 4.

(e)Stage 5 – EMERGENCY Water Shortage Condition

Requirements for initiation – The District will recognize that an emergency water shortage condition exists when any of the following occur:

i. A major water line breaks, or pump or system failures occur, which cause severe loss of capability to provide water service; or
ii. Water production or transmission system limitations; or
iii. Natural or man-made contamination of the water supply source occurs.

Requirement for termination – The emergency water shortage condition may be rescinded when the District Manager, or designee, deems appropriate. The District will notify its wholesale customers and the media of the termination of emergency shortage condition in the same manner as the notification of initiation of Stage 1 of the Plan.

16.8 Drought Response Stages

The District Manager, or designee, shall monitor water supply and/or demand conditions and, in accordance with the triggering criteria set forth in Section 16.7, shall determine that mild, moderate, or severe water shortage conditions exist or that an emergency condition exists and shall implement best management practices accordingly.

For water contracts between the District and wholesale customers with specific reductions based on stage, wholesale water customers are to implement measures to achieve water use reduction targets specified in the contract. For other contracts, required adoption of a Drought Contingency Plan should strive to achieve the water use reduction targets for each drought stage response presented in the following table. Further discussion on best management practices and implementation practices associated with each stage of response is described below.

Drought Stage Response	Reservoir Storage Level	Target Demand Reduction Levels
Stage 1- Mild	<50% or if Lake Texana is <40%	5%
Stage 2- Moderate	<40%	10%
Stage 3- Severe	<30%	15%
Stage 4- Critical	<20%	30%
Stage 5- Emergency	Not Applicable	50%

Stage 1 – MILD Water Shortage Conditions

Target: Achieve a *voluntary* 5 percent reduction in daily water demand for each wholesale customer utilizing District's water supply system.

Best Management Practices for Supply Management:

- The City of Corpus Christi will *voluntarily* coordinate with the necessary agencies to ensure that unnecessary releases of water from the Reservoir System are minimized, including leakage from gates or outlet works.

- The District will encourage each wholesale water customer to utilize alternative water sources *voluntarily* such as interconnections with another water system, temporary use of a water supply other than from the District's system, or use of reclaimed water for non-potable purposes, etc.

Water Use Restrictions for Reducing Demand:

- The District Manager, or designee, will contact wholesale water customers to discuss water supply and/or demand conditions and will request that wholesale water customers initiate voluntary measures to reduce water use (e.g. implement Stage 1 of the customer's drought contingency plan).
- The District Manager, or designee, will provide a regular report to the news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Stage 2 – MODERATE Water Shortage Conditions

Target: Achieve a 10 percent reduction in daily water demand for each wholesale customer utilizing District's water supply system.

Best Management Practices for Supply Management:

- The City of Corpus Christi will coordinate with the necessary agencies to ensure that unnecessary releases of water from the Reservoir System are minimized.
- The District will encourage each wholesale water customer to utilize alternative water sources such as interconnections with another water system, temporary use of a water supply other than from the District's system, use of reclaimed water for non-potable purposes, etc.
-

Water Use Measures for Reducing Demand:

- The District Manager, or designee, will initiate contact with wholesale water customers to discuss water supply and/or demand conditions and the possibility of pro rata curtailment of water diversions and/or deliveries.
- The District Manager, or designee, will request wholesale water customers to initiate mandatory measures to reduce non-essential water use (e.g. implement Stage 2 of the customer's drought contingency plan).
- The City of Corpus Christi or San Patricio MWD will provide a regular report to the news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Other Actions to be Taken:

- The City of Corpus Christi will notify, in writing, operators of recreational facilities to consider issuance of signs near boat ramps and in public parks notifying the public that the Reservoir System is operating at less than 40 percent of its

conservation pool volume, and that a Stage 2 Drought Response level has been declared. The City will recommend that operators post information to the public regarding Stage 2 of the Drought Contingency Plan and possible boating safety hazards due to decreasing Reservoir levels.

Stage 3 – SEVERE Water Shortage Conditions
Target: Achieve a 15 percent reduction in daily water demand for each wholesale customer utilizing District's water supply system.

Best Management Practices for Supply Management:

- The City of Corpus Christi will coordinate with the necessary agencies to ensure that unnecessary releases of water from the Reservoir System are minimized.
- The District will encourage each wholesale water customer to utilize alternative water sources such as interconnections with another water system, temporary use of a water supply other than from the District's system, use of reclaimed water for non-potable purposes, etc.

Water Use Measures for Reducing Demand:

- The District Manager, or designee, will contact wholesale water customers to discuss water supply and/or demand conditions and will request that wholesale water customers initiate additional mandatory measures to reduce non-essential water use (e.g. implement Stage 3 of the customer's drought contingency plan).
- The District Manager, or designee, will initiate preparations for the implementation of pro rata curtailment of water diversions and/or deliveries in accordance with Texas Water Code §11.039 by preparing a monthly water usage allocation baseline for each wholesale customer according to procedures specified in 16.9 of the Plan.
- The City of Corpus Christi or San Patricio MWD will provide a regular report to the news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Other Actions to be Taken:

- The City of Corpus Christi will notify, in writing, operators of recreational facilities to consider issuance of signs near boat ramps and in public parks notifying the public that the Reservoir System is operating at less than 30 percent of its conservation pool volume, and that a Stage 3 Drought Response level has been declared. The City will recommend that operators post information to the public regarding Stage 3 of the Drought Contingency Plan and possible boating safety hazards due to decreasing Reservoir levels.

Stage 4 – CRITICAL Water Shortage Conditions

Target: Achieve a 30 percent reduction in daily water demand for each wholesale customer utilizing District's water supply system.

Best Management Practices for Supply Management:

- The City of Corpus Christi will coordinate with the necessary agencies to ensure that unnecessary releases of water from the Reservoir System are minimized, including leakage from project gates.
- The District will encourage each wholesale water customer to utilize alternative water sources such as interconnections with another water system, temporary use of a water supply other than from the District's system, use of reclaimed water for non-potable purposes, etc.

Water Use Restrictions for Reducing Demand:

- The District Manager, or designee, will contact wholesale water customers to discuss water supply and/or demand conditions and will request that wholesale water customers initiate additional mandatory measures to reduce non-essential water use (e.g. implement Stage 4 of the customer's drought contingency plan).
- The District Manager, or designee, will initiate pro rata curtailment of water diversions and/or deliveries for each wholesale customer according to the procedures specified in Section 16.9 of the Plan in accordance with Texas Water Code §11.039.
- The City of Corpus Christi or San Patricio MWD will provide a regular report to the news media with information regarding current water supply and/or demand conditions, projected water supply and demand conditions if drought conditions persist, and consumer information on water conservation measures and practices.

Other Actions to be Taken:

- The City of Corpus Christi will notify, in writing, operators of recreational facilities to consider issuance of signs near boat ramps and in public parks notifying the public that the Reservoir System is operating at less than 20 percent of its conservation pool volume, and that a Stage 4 Drought Response level has been declared. The City will recommend that operators post information to the public regarding Stage 4 of the Drought Contingency Plan and possible boating safety hazards due to decreasing Reservoir levels.

Stage 5 – EMERGENCY Water Shortage Conditions

Whenever emergency water shortage conditions exist as defined in Section 16.7 of the Plan, the District Manager, or designee, shall:

- Assess the severity of the problem and identify the actions needed and the time required to solve the problem.
- Inform the utility coordinator or other responsible official of each wholesale water customer and major industrial users 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.

16.9 Pro Rata Water Allocation

In the event that the triggering criteria specified in Section 16.7 of the Plan for Stage 4 have been met, the District Manager, or designee, is hereby authorized to implement allocation of water supplies on a pro rata basis to raw water and treated wholesale customers in accordance with Texas Water Code §11.039. The initiation of pro rata allocation preparations shall begin during Stage 3. 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.

(1) A raw water or wholesale treated water customer's monthly allocation shall be a percentage of the customer's water usage baseline. The percentage will be set by resolution of the Board of Directors based on the City of Corpus Christi's allocation to the District and the District Manager's assessment of the severity of the water shortage condition and the need to curtail water diversions and deliveries, and may be adjusted periodically by resolution of the Board of Directors as conditions warrant. Once pro rata allocation is in effect, water diversions by or deliveries to each raw water or wholesale treated water customer shall be limited to the allocation established for each month.

(2) A monthly water usage allocation shall be established by the District Manager, or designee, for each raw water or wholesale treated water customer. The raw water or wholesale treated water customer's water usage baseline will be computed on the average water usage by month for the previous five-year period. If the raw water or wholesale treated water customer's billing history is less than five (5) years, the monthly average for the period for which there is a record shall be used for any monthly period for which no billing history exists.

(3) The District Manager shall provide notice, by certified mail, to each raw water or wholesale treated water customer informing them of their monthly 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.

(4) Upon request of the raw water or wholesale treated water customer or at the initiative of the District Manager, the allocation may be reduced or increased if:

a. The designated period does not accurately reflect the raw water or wholesale treated water customer's normal water usage;

b. The customer agrees to transfer part of its allocation to another raw water or wholesale treated water customer; or

c. Other objective evidence demonstrates that the designated allocation is inaccurate under present conditions. A customer may appeal an allocation established under this section to the Board of Directors of the San Patricio MWD.

16.10 Pro Rata Surcharges and Enforcement

During any period when pro rata allocation of available water supplies is in effect, wholesale customers shall pay the following surcharges on excess water diversions:

- 2.0 times the normal water rate per unit in excess of the monthly allocation up through 5 percent above the monthly allocation.
- 2.5 times the normal water rate in excess of the monthly allocation from 5 percent through 10 percent above the monthly allocation.
- 3.0 times the normal water rate in excess of the monthly allocation from 10 percent through 15 percent above the monthly allocation.
- 3.5 times the normal water rate more than 15 percent above the monthly allocation.

16.11 Variances

The District Manager, or designee, may, in writing, grant a temporary variance to the pro rata water allocation policies provided by this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the public health, welfare, or safety and if one or more of the following conditions are met:

(1) Compliance with this Plan cannot be technically accomplished during the duration of this water supply shortage or other condition for which the Plan is in effect.

(2) Alternative methods can be implemented which will achieve the same level of reduction in water use.

Persons requesting an exemption from the provisions of this Plan shall file a petition for variance with the District Manager within 5 days after pro rata allocation has been invoked. All

petitions for variances shall be reviewed by the District Manager, or designee, and shall include the following:

(1) Name and address of the petitioner(s).
(2) Detailed statement with supporting data and information as to how the pro rata allocation of water under the policies and procedures established in the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Plan.
(3) Description of the relief requested.
(4) Period of time for which the variance is sought.
(5) Alternative measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
(6) Other pertinent information.

Variances granted by the District shall be subject to the following conditions, unless waived or modified by the District.

(1) Variances granted shall include a timetable for compliance with allocation requirements.
(2) Variances granted shall expire when the Plan is no longer in effect, unless the petitioner has failed to meet specified requirements.

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

16.12 Severability

It is hereby declared to be the intention of the District that the sections, paragraphs, sentences, clauses, and phrases of this Plan are severable and, if any phrase, clause, sentence, paragraph, or section of this Plan shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such declaration shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Plan, since the same would not have been enacted by the District without the incorporation into this Plan of any such unconstitutional phrase, clause, sentence, paragraph, or section.

16.13 Reservoir System Operating Plan

Because all of the wholesale customers rely on the reservoir systems for their supplies, they are subject to the Reservoir Operating Plan. A copy of this is included in Attachment B.

Appendix A

TCEQ 2001 Agreed Order on Freshwater Inflows to the Nueces Bay and Estuary

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

AN AGREED ORDER Amending the operational procedures and continuing an Advisory Council pertaining to Special Condition 5.B., Certificate of Adjudication No. 21-3214; Docket No. 2001-0230-WR

On April 4, 2001, came to be considered before the Texas Natural Resource Conservation Commission ("Commission") the Motion by the City of Corpus Christi and Nueces River Authority for the adoption of an amendment to the Agreed Order issued April 28, 1995, establishing operating procedures pertaining to Special Condition 5.B., Certificate of Adjudication No. 21-3214, held by the City of Corpus Christi, the Nueces River Authority, and the City of Three Rivers" (the two cities and river authority shall be referred to herein as "Certificate Holders"). The Certificate Holders and the Executive Director of the Texas Natural Resource Conservation Commission have agreed to the provisions of this Agreed Order.

The City of Corpus Christi (managing entity) requests that Section 2 of this Agreed Order be amended to add further detail to the provisions regarding the use of water for bays and estuaries and to make changes in the required passage of inflows for the bays and estuaries automatic at 40 percent and 30 percent of total reservoir system capacity upon institution of mandatory outdoor watering restrictions. Additionally, Certificate Holders request the most recent bathymetric surveys be used for determining reservoir system storage capacity. The Certificate Holders request details be added regarding provisions for two projects to enhance/augment the amount of freshwater going into the receiving estuary and timelines for those projects.

After considering the proposals and the presentations of the parties, the Commission finds that it has authority to establish operational procedures under Special Condition 5.B. of Certificate of Adjudication No. 21-3214, and that operational procedures previously established should be amended. The Commission finds that, because of the need to continue to monitor the ecological environment and health of related living marine resources of the estuaries to assess the effectiveness of freshwater inflows provided by requirements contained in this Agreed Order relating to releases and spills from Choke Canyon Reservoir and Lake Corpus Christi (collectively referred to as the Reservoir System), as well as return flows, and to evaluate potential impacts which may occur to the reservoirs as well as to the availability of water to meet the needs of the Certificate Holders and their customers which may result from those operational procedures, the existing advisory council should be maintained to consider such additional information and related issues and to formulate recommendations for the Commission's review.

The Commission additionally finds that based on the preliminary application of the Texas Water Development Board's Mathematical Programming Optimization Model, (GRG-2), 138,000 acre-feet of fresh water is necessary to achieve maximum harvest in the Nueces Estuary; and, therefore, when water is impounded in the Lake Corpus Christi-Choke Canyon Reservoir System to the extent greater than 70 percent of the system's storage capacity, the delivery of 138,000

acre-feet of water to Nueces Bay and/or the Nueces Delta, by a combination of releases and spills, together with diversions and return flows noted below, should be accomplished; and that during periods when the reservoir system contains less than 70 percent storage capacity, reductions in releases and spills, along with diversions and return flows, are appropriate in that a satisfactory level of marine harvest will be sustained and the ecological health of the receiving estuaries will be maintained.

The Commission finds that return flows, other than to Nueces Bay and/or the Nueces Delta, that are delivered to Corpus Christi Bay and other receiving estuaries are currently in the assumed amount of 54,000 acre-feet per annum (per calendar year), and that they shall be credited at this amount until such time as it is shown that actual return flows to Corpus Christi Bay and other receiving estuaries exceed 54,000 acre-feet per annum.

The Commission finds that by contractual relationships, the City of Corpus Christi is the managing entity for operating the Reservoir System.

The Commission finds that the Motion by the City of Corpus Christi and Nueces River Authority to Amend this Agreed Order is reasonable and should be granted. Benefits of the proposed diversion project and operating changes will include increased water supply, increased reservoir storage levels, increased positive flow events for Rincon Bayou and the upper Nueces Delta, increased sources of nitrogen for the upper delta, and lower salinity levels in the upper delta.

When the Commission uses the word "release" in this Order, release means spills, inflow passage, intentional releases, and return flows; provided, however, under this Order no release from storage is required to meet conditions of this Order.

By consenting to the issuance of this Agreed Order, no party admits or denies any claim, nor waives with respect to any subsequent proceeding any interpretation or argument which may be contrary to the provisions of this Agreed Order.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION THAT:

1. a. The City of Corpus Christi, as operator of the Choke Canyon/Lake Corpus Christi reservoirs (the "Reservoir System"), shall provide not less than 151,000 acre-feet of water per annum (per calendar year) for the estuaries by a combination of releases and spills from the Reservoir System at Lake Corpus Christi Dam and return flows to Nueces and Corpus Christi Bays and other receiving estuaries (including such credits as may be appropriate for diversion of river flows and/or return flows to the Nueces Delta and/or Nueces Bay), as computed and to the extent provided for herein.

   b. When water impounded in the Reservoir System is greater than or equal to 70 percent of storage capacity, a target amount of 138,000 acre-feet is to be delivered to Nueces Bay and/or the Nueces Delta by a combination of releases and spills from

the Reservoir System as well as diversions and return flows. In accordance with the monthly schedule and except as provided otherwise in this Agreed Order, target inflows to Nueces Bay and/or the Nueces Delta shall be in the acre-foot amounts as follow:

January	2,500	July	6,500
February	2,500	August	6,500
March	3,500	September	28,500
April	3,500	October	20,000
May	25,500	November	9,000
June	25,500	December	4,500

It is expressly provided, however, that releases from Reservoir System storage shall not be required to satisfy the above targeted inflow amounts, as calculated in Subparagraph d.

c. When water impounded in the Reservoir System is less than 70 percent but greater than or equal to 40 percent of storage capacity, a targeted amount of 97,000 acre-feet is to be delivered to Nueces Bay and/or the Nueces Delta by a combination of releases and spills from the Reservoir System as well as diversions and return flows. In accordance with the monthly schedule and except as provided otherwise in this Agreed Order, target inflows to Nueces Bay and/or the Nueces Delta shall be in the acre-foot amounts as follows:

January	2,500	July	4,500
February	2,500	August	5,000
March	3,500	September	11,500
April	3,500	October	9,000
May	23,500	November	4,000
June	23,000	December	4,500

It is expressly provided, however, that releases from Reservoir System storage shall not be required to satisfy the above targeted inflow amounts as calculated in Subparagraph d.

d. The amounts of water required in subparagraphs 1.b. and 1.c. will consist of return flows, and intentional diversions, as well as spills and releases from the Reservoir System as defined in this subparagraph. For purposes of compliance with monthly targeted amounts prescribed above, the spills and releases described in this paragraph shall be measured at the U.S. Geological Survey stream monitoring station on the Nueces River at Calallen, Texas (USGS Station No. 08211500). Any inflows, including measured wastewater effluent and rainfall runoff meeting lawful discharge standards which are intentionally diverted to the upper Nueces Delta region, shall be credited toward the total inflow amount delivered to Nueces Bay and/or the Nueces

Delta. Inflow passage from the Reservoir System for the purpose of compliance with the monthly targeted amounts prescribed in subparagraphs 1.b. and 1.c. shall in no case exceed the estimated inflow to Lake Corpus Christi as if there were no impoundment of inflows at Choke Canyon Reservoir. The estimated inflow to Lake Corpus Christi as if there were no impoundment of inflows at Choke Canyon Reservoir shall be computed as the sum of the flows measured at the U.S. Geological Survey (USGS) STREAMFLOW GAGING STATIONS ON THE Nueces River near Three Rivers (USGS No. 08210000), Frio River at Tilden, Texas (USGS No. 08206600), and San Miguel Creek near Tilden, Texas (USGS No. 08206700) less computed releases and spills from Choke Canyon Reservoir.

e. The passage of inflow necessary to meet the monthly targeted allocations may be distributed over the calendar month in a manner to be determined by the City. Relief from the above requirements shall be available under subparagraphs (1) or (2) below and Section 2.(b) and 3.(c) at the option of the City of Corpus Christi. However, passage of inflow may only be reduced under one of those subparagraphs below, for any given month.

(1) Inflows to Nueces Bay and/or the Nueces Delta in excess of the required monthly targeted amount may be credited for up to fifty (50) percent of the targeted requirement for the following month, based on the amount received.

(2) When the mean salinity in Upper Nueces Bay (Lat. 27°51'02", Long. 97°28'52") for a 10-day period, ending at any time during the calendar month for which the reduction of the passage of inflow is sought, is below the SUB*, pass through of inflow from the reservoir system for that same calendar month may be reduced as follows:

(a) For any month other than May, June, September and October, if 5 parts per thousand (ppt) below the SUB for the month, a reduction of 25% of the current month's targeted Nueces Bay inflow;

(b) If 10 ppt below the SUB for the month, a reduction of 50 % of the current month's targeted Nueces Bay inflow except that credit under this provision is limited to 25 % during the months of May, June, September and October;

* "SUB" means "salinity upper bounds" as set forth more specifically in Section 3.b.

(c) If 15 ppt below the SUB for that month, a reduction of 75% of the current month's targeted Nueces Bay inflow.

f. The City of Corpus Christi shall submit monthly reports to the Commission containing daily inflow amounts provided to the Nueces Estuary in accordance with this Agreed Order through releases, spills, return flows and other freshwater inflows.

2. a. Certificate holders are to provide in any future contracts or any amendments, modifications or changes to existing contracts the condition that all wholesale customers and any subsequent wholesale customers shall develop and have in effect a water conservation and drought management plan consistent with Commission rule. The City of Corpus Christi shall solicit from its customers and report to the Commission annually the result of conservation under the City's plan, the customers' plans, and the feasibility of implementing conservation plans and programs for all users of water from the reservoir system. This report shall be submitted with the Certificate Holder's annual water use report as provided by 31 T.A.C. §295.202.

b. The Certificate Holders may reduce targeted Nueces Bay inflows during times of prolonged drought in accordance with this subparagraph 2.

(1) When the combined storage in the Choke Canyon/Lake Corpus Christi reservoir system (Reservoir System Storage) falls below 50% of the total system storage capacity, the City of Corpus Christi shall issue public notice advising and informing the water users of the region of voluntary conservation measures that are requested immediately and required drought management measures to be taken should the Reservoir System Storage fall to under 40% and/or 30% of total system storage capacity. To the extent of its legal authority, the City of Corpus Christi shall require its wholesale customers to issue public notice advising and informing the water users of the region of voluntary conservation measures that are requested immediately and required drought management measures to be taken should the Reservoir System Storage fall to under 40% and/or 30% of total system storage capacity.

(2) In any month when Reservoir System Storage is less than 40%, but equal to or greater than 30% of total system storage capacity, the City of Corpus Christi shall implement time of day outdoor watering restrictions and shall reduce targeted inflows to Nueces Bay to 1,200 acre-feet per month (1,200 acre-feet per month represents the quantity of water that is the median inflow into Lake Corpus Christi during the drought of record). Time of day outdoor watering restrictions prohibit lawn watering between the hours of 10:00 o'clock a.m. and 6:00 o'clock p.m. and are subject to additional conditions as described in the City of Corpus Christi's approved "Water Conservation and Drought Contingency Plan ("Plan")." To the extent of its legal authority, the City of Corpus Christi shall require its wholesale customers to implement time of day outdoor watering restrictions similar to those of the City.

(3) In any month when Reservoir System Storage is less than 30% of total system storage capacity, the City of Corpus Christi shall implement a lawn watering schedule in addition to time of day outdoor watering restrictions (see subparagraph 2.b.(2)) and shall suspend the passage of inflow from the Reservoir System for targeted inflows to Nueces Bay. However, return flows directed into Nueces Bay and/or the Nueces Delta shall continue. The lawn watering schedule shall allow customers to water lawns no oftener than every five days, subject to the time of day restrictions described in subparagraph 2.b.(2) and any additional conditions as described in the City's Plan.

(4) Certificate Holders' may implement whole or partial suspension of the passage of inflow through the reservoir as described above when the City implements, and requires its customers to implement, water conservation and drought management measures at diminished Reservoir System levels, as set forth in subparagraphs b.(2) and b.(3).

c. For purposes of this Agreed Order, Reservoir System storage capacity shall be determined by the most recently completed bathymetric survey of each reservoir. As of 2001, completed bathymetric surveys of each reservoir reports conservation storage capacities of 695,271 acre-feet (below 220.5 feet mean sea level) for Choke Canyon Reservoir (Volumetric Survey of Choke Canyon Reservoir, TWDB September 23, 1993) and 241,241 acre-feet (below 94 feet mean sea level) for Lake Corpus Christi (Regional Water Supply Planning Study-Phase I Nueces River Basin, HDR, December, 1990).

d. Percentage of the Reservoir System capacity shall be determined on a daily basis and shall govern, in part, the inflow to be passed through the reservoir during the remaining days of the month.

e. Within the first ten days of each month, the City of Corpus Christi shall submit to the Commission a monthly report containing the daily capacity of the Reservoir System in percentages and mean sea levels as recorded for the previous month as well as reservoir surface areas and estimated inflows to Lake Corpus Christi assuming no impoundment of inflows at Choke Canyon Reservoir. The report shall indicate which gages or measuring devices were used to determine Reservoir System capacity and estimate inflows to Lake Corpus Christi.

f. Concurrent with implementing subparagraphs 2.b.(1) through 2.b.(3), the City shall proceed to:

1. Acquire land rights to properties necessary to re-open the Nueces River Overflow Channel and make the Nueces River Overflow Channel and Rincon Bayou Overflow Channel permanent features of the Rincon Bayou Diversion;

2. Construct and operate a conveyance facility to deliver up to 3,000 acre-feet per month of required Reservoir System "pass-throughs" directly from the Calallen Pool into the Upper Rincon Bayou by use of one or two of the five authorized points of diversion under Certificate of Adjudication No. 2464, being the existing San Patricio Municipal Water District point of diversion and/or a point on the North bank of the Calallen Pool located at Latitude 27.8823°N, Longitude 97.6254°W, also bearing S 27° 24' W, 4,739 feet from the southwest corner of the J.H.W. Ottman Survey, Abstract No. 212, San Patricio County, Texas, where the water will be pumped at the maximum rate of 45,000 gpm; and

3. Implement an on-going monitoring and assessment program designed to facilitate an "adaptive management" program for freshwater inflows into the Nueces Estuary.

4. Construction necessary to implement subparagraph 2.f.1. shall be accomplished by December 31, 2001 and work necessary to accomplish subparagraph 2.f.2. shall be accomplished by December 31, 2002.

5. In the event the City fails to timely complete the work set forth in subparagraphs 2.f.1. and 2.f.2., this amendment shall automatically terminate and the provisions of the Agreed Order of April 28, 1995 shall be reinstated and become operative despite this amendment, unless the Executive Director grants a modification after considering the recommendations of the Nueces Estuary Advisory Council.

g. The Executive Director is delegated authority to make modifications to subparagraph 2.f., after considering the recommendations of the Nueces Estuary Advisory Council. However, changes may be made through this process only with the City's consent if the changes result in increased costs to the City.

If the Executive Director makes modifications to subparagraph 2.f. as authorized in this paragraph, any affected person may file with the chief clerk a motion for reconsideration of the Executive Director's action no later than 23 days after the date the Executive Director mails notice of the modification to the City. This motion shall be considered under the provisions of 30 Texas Administrative Code § 50.39(d) and (e).

h. The City shall obtain all necessary permits from the Commission before beginning these projects. The deadlines set out above include time necessary to apply for, process and, if necessary, complete hearings on these permits.

3. a. The City of Corpus Christi, with the assistance and/or participation of federal, state and local entities, shall maintain a monitoring program to assess the effect of this

operating plan on Nueces Bay. The cornerstone of this program is the development of a salinity monitoring program. The program shall include at least two monitoring stations, one in upper Nueces Bay (Lat. 27°51'02", Long. 97°28'52") and one in mid Nueces Bay (Lat. 27°51'25", Long. 97°25'28") with the capability of providing continuous salinity and/or conductivity data, temperature, pH, and dissolved oxygen levels. Additional stations may be established at the recommendation of the Advisory Council (continued by paragraph 4 of this Agreed Order) to assess inflow effects throughout the estuarine system, but the City shall not be obligated to establish such additional stations except to the extent authorized by its City Council.

b. The City of Corpus Christi or its designated representatives shall monitor salinity levels in Upper and Mid-Nueces Bay. The lower (SLB) and upper (SUB) salinity bounds (in parts per thousand-ppt) developed for application of the Texas Estuarine Mathematical Programming Model and considered appropriate for use herein, are as follows:

	SLB	SUB		SLB	SUB
January	5	30	July	2	25
February	5	30	August	2	25
March	5	30	September	5	20
April	5	30	October	5	30
May	1	20	November	5	30
June	1	20	December	5	30

c. When the average salinity for the third week (the third week includes the seven days from the 15th through 21st) of any month is at or below the subsequent month's established SLB for upper Nueces Bay (Lat. 27°51'02", Long. 97°28'52"), no releases from the Reservoir System to satisfy targeted Nueces Bay inflow mounts shall be required for that subsequent month.

d. All data collected as a result of the monitoring program required by paragraph 3 of this Agreed Order shall be submitted monthly to the Commission within the first ten days of the immediately following month. The Nueces Estuary Advisory Council shall study the feasibility of developing a method of granting credits for inflows which exceed the required amounts to replace the credits that are set out in subparagraph 1.e.(l) and make recommendations to the Commission for possible implementation. That method shall have as its goal the maintenance of the proper ecological environment and health of related living marine resources and the provision of maximum reasonable credits towards monthly inflow requirements.

4. a. To assist the Commission in monitoring implementation of this Order and making recommendations to the Commission relating to any changes to this Agreed Order and the establishment of future operating procedures, the Nueces Estuary Advisory

Council shall be continued. Its members shall include, but are not limited to a qualified representative chosen by each of the following entities or groups: the Executive Director of the Texas Natural Resource Conservation Commission, whose representative shall serve as chair;the Texas Water Development Board; the Texas Parks and Wildlife Department; the Texas Department of Health; the General Land Office; the holders of Certificate of Adjudication No. 21-3214 (the Cities of Corpus Christi and Three Rivers and the Nueces River Authority; the University of Texas Marine Science Institute; Texas A&M University - Corpus Christi; Save Lake Corpus Christi; Corpus Christi Chamber of Commerce; the City of Mathis; Coastal Bend Bays and Estuaries Program, Inc.; a commercial bay fishing group; a conservation group (e.g. the Sierra Club and the Coastal Bend Bays Foundation); wholesale water suppliers who are customers of the Certificate Holders (e.g., the South Texas Water Authority and the San Patricio Municipal Water District); the Port of Corpus Christi Authority; and a representative of industry. The representatives should have experience and knowledge relating to current or future water use and management or environmental and economic needs of the Coastal Bend area.

b. No modification shall be made to this Order without the unanimous consent of the Certificate Holders, except to the extent provided by law.

c. Matters to be studied by the Nueces Estuary Advisory Council and upon which the Executive Director shall certify recommendations to the Commission shall include, but are not limited to:

(1) the effectiveness of the inflow requirements contained in this Agreed Order on Nueces Estuary and any recommended changes;

(2) the effect of the releases from the Reservoir System upon the aquatic and wildlife habitat and other beneficial and recreational uses of Choke Canyon Reservoir and Lake Corpus Christi;

(3) the development and implementation of a short and long-term regional water management plan for the Coastal Bend Area;

(4) the salinity level to be applied in Paragraphs 1.e. and 3.c., at which targeted inflows in the subsequent month may be suspended;

(5) the feasibility of discharges at locations where the increased biological productivity justifies an inflow credit computed by multiplying the amount of discharge by a number greater than one; and development of a methodology for granting credits for inflows which exceed the required amount to replace the credits that are set out in subparagraph 1.e. That methodology shall have as its goal the maintenance of the proper ecological

environment and health of related living marine resources and the provision of maximum reasonable credits towards monthly inflow requirements; and,

(6) any other matter pertinent to the conditions contained in this Agreed Order.

5. This Agreed Order shall remain in effect until amended or superseded by the Commission.

Issued date: APR 05 2001

TEXAS NATURAL RESOURCE
CONSERVATION COMMISSION

Robert J. Huston, Chairman

Appendix B

Reservoirs Operating Plan

OPERATIONS PLAN FOR THE

LAKE CORPUS CHRISTI-CHOKE CANYON RESERVOIR SYSTEM

The following operations plan for the Lake Corpus Christi –Choke Canyon Reservoir water system provides for the two reservoirs to be operated as a regional water supply with primary purpose to be furnishings a dependable supply to the people in the Coastal Bend area. The plan also recognizes the need for the recreational facilities for public use and the Texas Water Commission adjudicated water permit which requires a minimum flow of 151,000 acre-feet of water annually to bays and estuaries from return flows, spills, or fresh water releases from Lake Corpus Christi once Choke Canyon Reservoir fills.

The Plan consists of four phases of operation depending on the water levels in the two reservoirs.

PHASE I - This phase applies only to the initial filling period of Choke Canyon Reservoir. It is necessary that this reservoir be filled at the earliest opportunity so that all structures and mechanical equipment can be tested. Initial filling of the reservoir also triggers the requirement that minimal flows be made available for bays and estuaries.

1. During the initial period, only the releases requires required by agreement between the City of Corpus Christi and the Texas Parks and Wildlife Department, varying between 15 and 33 cubic feet per second depending on the reservoir level, will be made unless Lake Corpus Christi elevation falls below elevation 86 feet.

2. If water user demand is less than 200,000 acre-feet annually and Lake Corpus Christi is at elevation 86 feet, water will be released from Choke Canyon to maintain this elevation until Choke Canyon Reservoir falls to elevation 184 feet.

3. When Lake Corpus Christi has fallen to elevation 86 feet and Choke Canyon has fallen to elevation 184 feet, Lake Corpus Christi will be allowed to drop to elevation 76 feet, at which time water will be released from Choke Canyon to allow user's intake structures at Lake Corpus Christi to be used.

4. Should water user demand excess 200,000 acre-feet annually, the water level of Lake Corpus Christi will be allowed to drop to elevation 76 feet prior to releases from Choke Canyon Reservoir.

PHASE II - This phase applies after Choke Canyon Reservoir is filled and water user demand is less than 150,000 acre-feet annually.

1. A minimum of 2,000 acre-feet per month will be released from Choke Canyon Reservoir to meet conditions of the release agreement between City of Corpus Christi and the Texas Parks and Wildlife Department.

2. Whenever Lake Corpus Christ water surface falls to elevation 88 feet and Choke Canyon Reservoir surface elevation is above 204 feet, releases will be made from Choke Canyon Reservoir to maintain Lake Corpus Christi surface at elevation 88 feet.

3. Whenever Lake Corpus Christi water surface is at or below elevation 88 feet and Choke Canyon Reservoir surface elevation is below 204 feet, the Choke Canyon release for the current month is made equal to the Lake Corpus Christi release from the preceding month. This minimizes drawdown at Lake Corpus Christi for recreation purposes and promotes a more constant quality of water by mixing Choke Canyon Reservoir releases with Lake Corpus Christi content.

PHASE III - This phase applies after Choke Canyon Reservoir is filled and water user demand is between 150,000 and 200,000 acre-feet annually. During this period, water release plan prepared by the Bureau of Reclamation will be followed to produce a dependable yield of 252,000 acre-feet.

1. A minimum of 200,000 acre-feet per month will be releases from Choke Canyon Reservoir to meet conditions of the release agreement between the City of Corpus Christi and the Texas Parks and Wildlife Department.

2. Whenever Lake Corpus Christi water surface is at or below elevation 88 feet, and the ratio of Choke Canyon Reservoir content to Lake Corpus Christi content (both at the end of the preceding month) exceeds the corresponding ratio with 6-foot drawdown at both reservoirs, the Choke Canyon Reservoir release for the current month is made equal to the Lake Corpus Christi release during the preceding month. This equalizes drawdown at the two reservoirs for recreation purposes and promotes a more constant quality of water by mixing Choke Canyon Reservoir releases with Lake Corpus Christi content.

PHASE IV - This phase applies after Choke Canyon Reservoir is filled, water user demand exceeds 200,000 acre-feet annually, and developed long-term supply is less than 300,000 acre-feet annually.

1. A minimum of 2,000 acre-feet per month will be released from Choke Canyon Reservoir to meet conditions of the release agreement between the City of Corpus Christi and the Texas Parks and Wildlife Department.

2. In order to provide maximum dependable yield from the two reservoirs, the water level in Lake Corpus Christi will be allowed to drop top elevation 74.0 feet (Ordinance Changed #022661) before water is released from Choke Canyon Reservoir in excess of the 2,000 acre-feet per month requirement. When the elevation of Choke Canyon Reservoir drops to 155 feet, Lake Corpus Christi will be lowered to its minimum elevation.

LAKE CORPUS CHRISTI-CHOKE CANYON RESERVOIR STATISTICAL DATA

	Capacity, Acre-Feet*	Water Elevation When Full, Feet	Minimum Functional Elevation, Feet
Lake Corpus Christi	272,000	94.0	76.0
Choke Canyon Reservoir	692,000	220.5	147.5

Intake Structure Elevations of Customers Withdrawing Water Directly from Lake Corpus Christi:

	Elevation, Feet
City of Mathis	73.0
Beeville Water Authority	74.0
Alice Water Authority	67.0
City of Corpus Christi	55.0

Annual Lake Corpus Christi Withdrawals:

Fiscal Year	Total Withdrawn From Lake, Acre-Feet
1975-76	86,416
1976-77	86,408
1977-78	101,596
1978-79	96,029
1979-80	106,851
1980-81	104,657
1981-82	107,002
1982-83	107,348
1983-84	119,701
1984-85	90,226
1985-86	105,469

* 1 acre-foot = 325,850 gallons