



TCEQ WATER RIGHTS PERMIT APPLICATION PACKAGE

INNER HARBOR

Prepared for:

City of Corpus Christi

January 17, 2020

Prepared by:

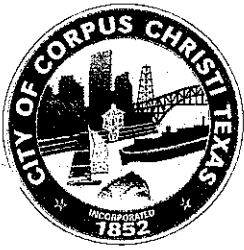
FREESE AND NICHOLS, INC.

800 N. Shoreline Blvd.

Ste 1600 N.

Corpus Christi, Texas 78401

361-561-6500



January 17, 2020

WATER UTILITIES

*Maintenance of Lines
& Treatment*
2726 Holly Road
Corpus Christi
Texas 78415
Phone 361-826-1800
Fax 361-826-1889
www.cctexas.com

Texas Commission on Environmental Quality
Attn: Bert Galvan
P.O. Box 13087 (MC160)
Austin, Texas, 78711

**Subject: TCEQ Water Rights Permitting Application
City of Corpus Christi (CN: 600131858)**

Dear Mr. Galvan,

The City of Corpus Christi is requesting a Water Rights Permit from the Texas Commission on Environmental Quality for a proposed desalination plant at the above location.

The proposed system will divert up to 83.1 million gallons per day (MGD) to provide municipal water through the process of desalination.

The purpose of this project is to provide sustainable water source that is not dependent on freshwater sources. Please find enclosed a water rights permit application with all required attachments.

If you have questions, please contact Steve Ramos at 361-826-3294 or by email at estebanr2@cctexas.com.

Respectfully,

Daniel M. Grimsbo, P.E.
Executive Director of Water Utilities
City of Corpus Christi

**Texas Commission on Environmental Quality
TCEQ Water Rights Permitting Application
City of Corpus Christi
Proposed Desalination Plant
Inner Harbor**

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8. Drought Contingency Plan

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

TCEQ WATER RIGHTS PERMITTING APPLICATION

ADMINISTRATIVE INFORMATION CHECKLIST

Complete and submit this checklist for each application. See Instructions Page. 5.

APPLICANT(S): _____

Indicate whether the following items are included in your application by writing either Y (for yes) or N (for no) next to each item (all items are not required for every application).

Y/N

- _____ **Administrative Information Report**
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Y/N

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- _____ **Worksheet 7.0**
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- _____ Fees

For Commission Use Only:

Proposed/Current Water Right Number: _____

Basin: _____ Watermaster area Y/N: _____

ADMINISTRATIVE INFORMATION REPORT

The following information is required for all new applications and amendments.

***** Applicants are strongly encouraged to schedule a pre-application meeting with TCEQ Staff to discuss Applicant's needs prior to submitting an application. Call the Water Rights Permitting Team to schedule a meeting at (512) 239-4691.**

1. TYPE OF APPLICATION (Instructions, Page. 6)

Indicate, by marking X, next to the following authorizations you are seeking.

New Appropriation of State Water

Amendment to a Water Right *

Bed and Banks

****If you are seeking an amendment to an existing water rights authorization, you must be the owner of record of the authorization. If the name of the Applicant in Section 2, does not match the name of the current owner(s) of record for the permit or certificate or if any of the co-owners is not included as an applicant in this amendment request, your application could be returned. If you or a co-applicant are a new owner, but ownership is not reflected in the records of the TCEQ, submit a change of ownership request (Form TCEQ-10204) prior to submitting the application for an amendment. See Instructions page. 6. Please note that an amendment application may be returned, and the Applicant may resubmit once the change of ownership is complete.***

Please summarize the authorizations or amendments you are seeking in the space below or attach a narrative description entitled "Summary of Request."

2. APPLICANT INFORMATION (Instructions, Page. 6)

a. Applicant

Indicate the number of Applicants/Co-Applicants _____
(Include a copy of this section for each Co-Applicant, if any)

What is the Full Legal Name of the individual or entity (applicant) applying for this permit?

(If the Applicant is an entity, the legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal documents forming the entity.)

If the applicant is currently a customer with the TCEQ, what is the Customer Number (CN)?
You may search for your CN on the TCEQ website at

<http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch>

CN : _____ (leave blank if you do not yet have a CN).

What is the name and title of the person or persons signing the application? Unless an application is signed by an individual applicant, the person or persons must submit written evidence that they meet the signatory requirements in 30 TAC § 295.14.

First/Last Name:

Title:

Have you provided written evidence meeting the signatory requirements in 30 TAC § 295.14, as an attachment to this application?

What is the applicant’s mailing address as recognized by the US Postal Service (USPS)? You may verify the address on the USPS website at

<https://tools.usps.com/go/ZipLookupAction!input.action>.

Name:

Mailing Address:

City:

State:

ZIP Code:

Indicate an X next to the type of Applicant:

- | | |
|---|---|
| <input type="checkbox"/> Individual | <input type="checkbox"/> Sole Proprietorship-D.B.A. |
| <input type="checkbox"/> Partnership | <input type="checkbox"/> Corporation |
| <input type="checkbox"/> Trust | <input type="checkbox"/> Estate |
| <input type="checkbox"/> Federal Government | <input type="checkbox"/> State Government |
| <input type="checkbox"/> County Government | <input type="checkbox"/> City Government |
| <input type="checkbox"/> Other Government | <input type="checkbox"/> Other _____ |

For Corporations or Limited Partnerships, provide:

State Franchise Tax ID Number: _____ SOS Charter (filing) Number: _____

3. APPLICATION CONTACT INFORMATION (Instructions, Page. 9)

If the TCEQ needs additional information during the review of the application, who should be contacted? Applicant may submit their own contact information if Applicant wishes to be the point of contact.

First and Last Name:

Title:

Organization Name:

Mailing Address:

City:

State:

ZIP Code:

Phone No.:

Extension:

Fax No.:

E-mail Address: estebanr2@cctexas.com

4. WATER RIGHT CONSOLIDATED CONTACT INFORMATION (Instructions, Page. 9)

This section applies only if there are multiple Owners of the same authorization. Unless otherwise requested, Co-Owners will each receive future correspondence from the Commission regarding this water right (after a permit has been issued), such as notices and water use reports. Multiple copies will be sent to the same address if Co-Owners share the same address. Complete this section if there will be multiple owners and all owners agree to let one owner receive correspondence from the Commission. Leave this section blank if you would like all future notices to be sent to the address of each of the applicants listed in section 2 above.

I/We authorize all future notices be received on my/our behalf at the following:

First and Last Name:

Title:

Organization Name:

Mailing Address:

City:

State:

ZIP Code:

Phone No.:

Extension:

Fax No.:

E-mail Address:

5. MISCELLANEOUS INFORMATION (Instructions, Page. 9)

a. The application will not be processed unless all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol by all applicants/co-applicants. If you need assistance determining whether you owe delinquent penalties or fees, please call the Water Rights Permitting Team at (512) 239-4691, prior to submitting your application.

1. Does Applicant or Co-Applicant owe any fees to the TCEQ? **Yes / No**

If **yes**, provide the following information:

Account number:

Amount past due:

2. Does Applicant or Co-Applicant owe any penalties to the TCEQ? **Yes / No**

If **yes**, please provide the following information:

Enforcement order number:

Amount past due:

b. If the Applicant is a taxable entity (corporation or limited partnership), the Applicant must be in good standing with the Comptroller or the right of the entity to transact business in the State may be forfeited. See Texas Tax Code, Subchapter F. Applicant's may check their status with the Comptroller at <https://mycpa.cpa.state.tx.us/coa/>

Is the Applicant or Co-Applicant in good standing with the Comptroller? **Yes / No**

c. The commission will not grant an application for a water right unless the applicant has submitted all Texas Water Development Board (TWDB) surveys of groundwater and surface water use - if required. See TWC §16.012(m) and 30 TAC § 297.41(a)(5).

Applicant has submitted all required TWDB surveys of groundwater and surface water? **Yes / No**

6. SIGNATURE PAGE (Instructions, Page. 11)

Applicant:

I, Peter Zanoni
(Typed or printed name)

City Manager of Corpus Christi
(Title)

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under Title 30 Texas Administrative Code §295.14 to sign and submit this document and I have submitted written evidence of my signature authority.

Signature: *Peter Zanoni*
(Use blue ink)

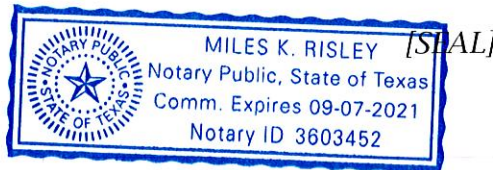
Date: January 17, 2020

Subscribed and Sworn to before me by the said Peter Zanoni

on this 17th day of January, 20 20.

My commission expires on the 9th day of September, 20 21.

Miles K. Risley
Notary Public



Nueces
County, Texas

If the Application includes Co-Applicants, each Applicant and Co-Applicant must submit an original, separate signature page

TECHNICAL INFORMATION REPORT

WATER RIGHTS PERMITTING

This Report is required for applications for new or amended water rights. Based on the Applicant's responses below, Applicants are directed to submit additional Worksheets (provided herein). A completed Administrative Information Report is also required for each application.

Applicants are strongly encouraged to schedule a pre-application meeting with TCEQ Permitting Staff to discuss Applicant's needs and to confirm information necessary for an application prior to submitting such application. Please call Water Availability Division at (512) 239-4691 to schedule a meeting. Applicant attended a pre-application meeting with TCEQ Staff for this Application? Y / N (If yes, date : _____).

1. New or Additional Appropriations of State Water. Texas Water Code (TWC) § 11.121 (Instructions, Page. 12)

State Water is: *The water of the ordinary flow, underflow, and tides of every flowing river, natural stream, and lake, and of every bay or arm of the Gulf of Mexico, and the storm water, floodwater, and rainwater of every river, natural stream, canyon, ravine, depression, and watershed in the state. TWC § 11.021.*

- a. Applicant requests a new appropriation (diversion or impoundment) of State Water? Y / N
- b. Applicant requests an amendment to an existing water right requesting an increase in the appropriation of State Water or an increase of the overall or maximum combined diversion rate? Y / N (If yes, indicate the Certificate or Permit number: _____)

If Applicant answered yes to (a) or (b) above, does Applicant also wish to be considered for a term permit pursuant to TWC § 11.1381? Y / N

- c. Applicant requests to extend an existing Term authorization or to make the right permanent? Y / N (If yes, indicate the Term Certificate or Permit number: _____)

If Applicant answered yes to (a), (b) or (c), the following worksheets and documents are required:

- **Worksheet 1.0 - Quantity, Purpose, and Place of Use Information Worksheet**
- **Worksheet 2.0 - Impoundment/Dam Information Worksheet** (submit one worksheet for each impoundment or reservoir requested in the application)
- **Worksheet 3.0 - Diversion Point Information Worksheet** (submit one worksheet for each diversion point and/or one worksheet for the upstream limit and one worksheet for the downstream limit of each diversion reach requested in the application)
- **Worksheet 5.0 - Environmental Information Worksheet**
- **Worksheet 6.0 - Water Conservation Information Worksheet**
- **Worksheet 7.0 - Accounting Plan Information Worksheet**
- **Worksheet 8.0 - Calculation of Fees**
- **Fees calculated on Worksheet 8.0 - see instructions Page. 34.**
- **Maps - See instructions Page. 15.**
- **Photographs - See instructions Page. 30.**

Additionally, if Applicant wishes to submit an alternate source of water for the project/authorization, see Section 3, Page 3 for Bed and Banks Authorizations (Alternate sources may include groundwater, imported water, contract water or other sources).

Additional Documents and Worksheets may be required (see within).

2. Amendments to Water Rights. TWC § 11.122 (Instructions, Page. 12)

This section should be completed if Applicant owns an existing water right and Applicant requests to amend the water right. *If Applicant is not currently the Owner of Record in the TCEQ Records, Applicant must submit a Change of Ownership Application (TCEQ-10204) prior to submitting the amendment Application or provide consent from the current owner to make the requested amendment. See instructions page. 6.*

Water Right (Certificate or Permit) number you are requesting to amend: _____

Applicant requests to sever and combine existing water rights from one or more Permits or Certificates into another Permit or Certificate? **Y / N** (if yes, complete chart below):

List of water rights to sever	Combine into this ONE water right

a. Applicant requests an amendment to an existing water right to increase the amount of the appropriation of State Water (diversion and/or impoundment)? **Y / N**

*If yes, application is a new appropriation for the increased amount, complete **Section 1 of this Report (PAGE. 1) regarding New or Additional Appropriations of State Water.***

b. Applicant requests to amend existing Term authorization to extend the term or make the water right permanent (remove conditions restricting water right to a term of years)? **Y / N**

*If yes, application is a new appropriation for the entire amount, complete **Section 1 of this Report (PAGE. 1) regarding New or Additional Appropriations of State Water.***

c. Applicant requests an amendment to change the purpose or place of use or to add an additional purpose or place of use to an existing Permit or Certificate? **Y / N**

If yes, submit:

- **Worksheet 1.0 – Quantity, Purpose, and Place of Use Information Worksheet**
- **Worksheet 1.2 - Notice: “Marshall Criteria”**

d. Applicant requests to change: diversion point(s); or reach(es); or diversion rate? **Y / N**

*If yes, submit: **Worksheet 3.0 - Diversion Point Information Worksheet** (submit one worksheet for each diversion point or one worksheet for the upstream limit and one worksheet for the downstream limit of each diversion reach)*

e. Applicant requests amendment to add or modify an impoundment, reservoir, or dam? **Y / N**

*If yes, submit: **Worksheet 2.0 - Impoundment/Dam Information Worksheet** (submit one worksheet for each impoundment or reservoir)*

f. Other - Applicant requests to change any provision of an authorization not mentioned above? **Y / N** *If yes, call the Water Availability Division at (512) 239-4691 to discuss.*

Additionally, all amendments require:

- **Worksheet 8.0 – Calculation of Fees; and Fees calculated – see instructions Page.34**
- **Maps – See instructions Page. 15.**
- **Additional Documents and Worksheets may be required (see within).**

3. Bed and Banks. TWC § 11.042 (Instructions, Page 13)

- a. Pursuant to contract, Applicant requests authorization to convey, stored or conserved water to the place of use or diversion point of purchaser(s) using the bed and banks of a watercourse? TWC § 11.042(a). Y/N

If yes, submit a signed copy of the Water Supply Contract pursuant to 30 TAC §§ 295.101 and 297.101. Further, if the underlying Permit or Authorization upon which the Contract is based does not authorize Purchaser's requested Quantity, Purpose or Place of Use, or Purchaser's diversion point(s), then either:

- 1. Purchaser must submit the worksheets required under Section 1 above with the Contract Water identified as an alternate source; or*
- 2. Seller must amend its underlying water right under Section 2.*

- b. Applicant requests to convey water imported into the state from a source located wholly outside the state using the bed and banks of a watercourse? TWC § 11.042(a-1). Y / N

If yes, submit: worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 7.0, 8.0, Maps and fees from the list below.

- c. Applicant requests to convey Applicant's own return flows derived from privately owned groundwater using the bed and banks of a watercourse? TWC § 11.042(b). Y / N

If yes, submit: worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 7.0, 8.0, Maps, and fees from the list below.

- d. Applicant requests to convey Applicant's own return flows derived from surface water using the bed and banks of a watercourse? TWC § 11.042(c). Y / N

If yes, submit: worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, Maps, and fees from the list below.

****Please note, if Applicant requests the reuse of return flows belonging to others, the Applicant will need to submit the worksheets and documents under Section 1 above, as the application will be treated as a new appropriation subject to termination upon direct or indirect reuse by the return flow discharger/owner.***

- e. Applicant requests to convey water from any other source, other than (a)-(d) above, using the bed and banks of a watercourse? TWC § 11.042(c). Y / N

If yes, submit: worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 7.0, 8.0, Maps, and fees from the list below.

Worksheets and information:

- **Worksheet 1.0 – Quantity, Purpose, and Place of Use Information Worksheet**
- **Worksheet 2.0 - Impoundment/Dam Information Worksheet** (submit one worksheet for each impoundment or reservoir owned by the applicant through which water will be conveyed or diverted)
- **Worksheet 3.0 - Diversion Point Information Worksheet** (submit one worksheet for the downstream limit of each diversion reach for the proposed conveyances)
- **Worksheet 4.0 – Discharge Information Worksheet** (for each discharge point)
- **Worksheet 5.0 – Environmental Information Worksheet**
- **Worksheet 6.0 – Water Conservation Information Worksheet**
- **Worksheet 7.0 – Accounting Plan Information Worksheet**
- **Worksheet 8.0 – Calculation of Fees; and Fees calculated – see instructions Page. 34**
- **Maps – See instructions Page. 15.**
- **Additional Documents and Worksheets may be required (see within).**

4. General Information, Response Required for all Water Right Applications (Instructions, Page 15)

- a. Provide information describing how this application addresses a water supply need in a manner that is consistent with the state water plan or the applicable approved regional water plan for any area in which the proposed appropriation is located or, in the alternative, describe conditions that warrant a waiver of this requirement (*not required for applications to use groundwater-based return flows*). Include citations or page numbers for the State and Regional Water Plans, if applicable. Provide the information in the space below or submit a supplemental sheet entitled “Addendum Regarding the State and Regional Water Plans”:

Regional Water Planning Group is included as Attachment 2.

- b. Did the Applicant perform its own Water Availability Analysis? **Y / N**

If the Applicant performed its own Water Availability Analysis, provide electronic copies of any modeling files and reports.

- C. Does the application include required Maps? (Instructions **Page. 15**) **Y / N**
Att.3 (USGS) and 4 (Detailed)

WORKSHEET 1.0

Quantity, Purpose and Place of Use

1. New Authorizations (Instructions, Page. 16)

Submit the following information regarding quantity, purpose and place of use for requests for new or additional appropriations of State Water or Bed and Banks authorizations:

Quantity (acre- feet) <i>(Include losses for Bed and Banks)</i>	State Water Source (River Basin) or Alternate Source <i>*each alternate source (and new appropriation based on return flows of others) also requires completion of Worksheet 4.0</i>	Purpose(s) of Use	Place(s) of Use <i>*requests to move state water out of basin also require completion of Worksheet 1.1 Interbasin Transfer</i>
	(Nueces-Rio Grande Coastal Basin)		

_____ Total amount of water (in acre-feet) to be used annually (*include losses for Bed and Banks applications*)

If the Purpose of Use is Agricultural/Irrigation for any amount of water, provide:

1. Location Information Regarding the Lands to be Irrigated

i) Applicant proposes to irrigate a total of _____ acres in any one year. This acreage is all of or part of a larger tract(s) which is described in a supplement attached to this application and contains a total of _____ acres in _____ County, TX.

ii) Location of land to be irrigated: In the _____ Original Survey No. _____, Abstract No. _____.

A copy of the deed(s) or other acceptable instrument describing the overall tract(s) with the recording information from the county records must be submitted. Applicant's name must match deeds.

If the Applicant is not currently the sole owner of the lands to be irrigated, Applicant must submit documentation evidencing consent or other documentation supporting Applicant's right to use the land described.

Water Rights for Irrigation may be appurtenant to the land irrigated and convey with the land unless reserved in the conveyance. 30 TAC § 297.81.

2. Amendments - Purpose or Place of Use (Instructions, Page. 12)

a. Complete this section for each requested amendment changing, adding, or removing Purpose(s) or Place(s) of Use, complete the following:

Quantity (acre-feet)	Existing Purpose(s) of Use	Proposed Purpose(s) of Use*	Existing Place(s) of Use	Proposed Place(s) of Use**

**If the request is to add additional purpose(s) of use, include the existing and new purposes of use under "Proposed Purpose(s) of Use."*

***If the request is to add additional place(s) of use, include the existing and new places of use under "Proposed Place(s) of Use."*

Changes to the purpose of use in the Rio Grande Basin may require conversion. 30 TAC § 303.43.

- b. For any request which adds Agricultural purpose of use or changes the place of use for Agricultural rights, provide the following location information regarding the lands to be irrigated:
 - i) Applicant proposes to irrigate a total of _____ acres in any one year. This acreage is all of or part of a larger tract(s) which is described in a supplement attached to this application and contains a total of _____ acres in _____ County, TX.
 - ii) Location of land to be irrigated: In the _____ Original Survey No. _____, Abstract No. _____.
A copy of the deed(s) describing the overall tract(s) with the recording information from the county records must be submitted. Applicant's name must match deeds. If the Applicant is not currently the sole owner of the lands to be irrigated, Applicant must submit documentation evidencing consent or other legal right for Applicant to use the land described.

Water Rights for Irrigation may be appurtenant to the land irrigated and convey with the land unless reserved in the conveyance. 30 TAC § 297.81.
- c. Submit Worksheet 1.1, Interbasin Transfers, for any request to change the place of use which moves State Water to another river basin.
- d. See Worksheet 1.2, Marshall Criteria, and submit if required.
- e. See Worksheet 6.0, Water Conservation/Drought Contingency, and submit if required.

WORKSHEET 1.1

INTERBASIN TRANSFERS, TWC § 11.085

Submit this worksheet for an application for a new or amended water right which requests to transfer State Water from its river basin of origin to use in a different river basin. A river basin is defined and designated by the Texas Water Development Board by rule pursuant to TWC § 16.051.

Applicant requests to transfer State Water to another river basin within the State? Y / N **Y**

1. Interbasin Transfer Request (Instructions, Page. 20)

- a. Provide the Basin of Origin. _____
- b. Provide the quantity of water to be transferred (acre-feet). _____
- c. Provide the Basin(s) and count(y/ies) where use will occur in the space below:

2. Exemptions (Instructions, Page. 20), TWC § 11.085(v)

Certain interbasin transfers are exempt from further requirements. Answer the following:

- a. The proposed transfer, which in combination with any existing transfers, totals less than 3,000 acre-feet of water per annum from the same water right. Y/N
- b. The proposed transfer is from a basin to an adjoining coastal basin? Y/N
- c. The proposed transfer from the part of the geographic area of a county or municipality, or the part of the retail service area of a retail public utility as defined by Section 13.002, that is within the basin of origin for use in that part of the geographic area of the county or municipality, or that contiguous part of the retail service area of the utility, not within the basin of origin? Y/N
See Attachment 5
- d. The proposed transfer is for water that is imported from a source located wholly outside the boundaries of Texas, except water that is imported from a source located in the United Mexican States? Y/N

3. Interbasin Transfer Requirements (Instructions, Page. 20)

For each Interbasin Transfer request that is not exempt under any of the exemptions listed above Section 2, provide the following information in a supplemental attachment titled "Addendum to Worksheet 1.1, Interbasin Transfer":

- a. the contract price of the water to be transferred (if applicable) (also include a copy of the contract or adopted rate for contract water);
- b. a statement of each general category of proposed use of the water to be transferred and a detailed description of the proposed uses and users under each category;
- c. the cost of diverting, conveying, distributing, and supplying the water to, and treating the water for, the proposed users (example - expert plans and/or reports documents may be provided to show the cost);

- d. describe the need for the water in the basin of origin and in the proposed receiving basin based on the period for which the water supply is requested, but not to exceed 50 years (the need can be identified in the most recently approved regional water plans. The state and regional water plans are available for download at this website: (<http://www.twdb.texas.gov/waterplanning/swp/index.asp>);
- e. address the factors identified in the applicable most recently approved regional water plans which address the following:
 - (i) the availability of feasible and practicable alternative supplies in the receiving basin to the water proposed for transfer;
 - (ii) the amount and purposes of use in the receiving basin for which water is needed;
 - (iii) proposed methods and efforts by the receiving basin to avoid waste and implement water conservation and drought contingency measures;
 - (iv) proposed methods and efforts by the receiving basin to put the water proposed for transfer to beneficial use;
 - (v) the projected economic impact that is reasonably expected to occur in each basin as a result of the transfer; and
 - (vi) the projected impacts of the proposed transfer that are reasonably expected to occur on existing water rights, instream uses, water quality, aquatic and riparian habitat, and bays and estuaries that must be assessed under Sections 11.147, 11.150, and 11.152 in each basin (*if applicable*). If the water sought to be transferred is currently authorized to be used under an existing permit, certified filing, or certificate of adjudication, such impacts shall only be considered in relation to that portion of the permit, certified filing, or certificate of adjudication proposed for transfer and shall be based on historical uses of the permit, certified filing, or certificate of adjudication for which amendment is sought;
- (f) proposed mitigation or compensation, if any, to the basin of origin by the applicant; and
- (g) the continued need to use the water for the purposes authorized under the existing Permit, Certified Filing, or Certificate of Adjudication, if an amendment to an existing water right is sought.

WORKSHEET 1.2 NOTICE. “THE MARSHALL CRITERIA”

This worksheet assists the Commission in determining notice required for certain **amendments** that do not already have a specific notice requirement in a rule for that type of amendment, and *that do not change the amount of water to be taken or the diversion rate*. The worksheet provides information that Applicant **is required** to submit for such amendments which include changes in use, changes in place of use, or other non-substantive changes in a water right (such as certain amendments to special conditions or changes to off-channel storage). These criteria address whether the proposed amendment will impact other water right holders or the on-stream environment beyond and irrespective of the fact that the water right can be used to its full authorized amount.

*This worksheet is **not required for Applications in the Rio Grande Basin** requesting changes in the purpose of use, rate of diversion, point of diversion, and place of use for water rights held in and transferred within and between the mainstems of the Lower Rio Grande, Middle Rio Grande, and Amistad Reservoir. See 30 TAC § 303.42.*

*This worksheet is **not required for amendments which are only changing or adding diversion points, or request only a bed and banks authorization or an IBT authorization**. However, Applicants may wish to submit the Marshall Criteria to ensure that the administrative record includes information supporting each of these criteria*

1. The “Marshall Criteria” (Instructions, Page. 21)

Submit responses on a supplemental attachment titled “Marshall Criteria” in a manner that conforms to the paragraphs (a) – (g) below:

- a. Administrative Requirements and Fees. Confirm whether application meets the administrative requirements for an amendment to a water use permit pursuant to TWC Chapter 11 and Title 30 Texas Administrative Code (TAC) Chapters 281, 295, and 297. An amendment application should include, but is not limited to, a sworn application, maps, completed conservation plan, fees, etc.
- b. Beneficial Use. Discuss how proposed amendment is a beneficial use of the water as defined in TWC § 11.002 and listed in TWC § 11.023. Identify the specific proposed use of the water (e.g., road construction, hydrostatic testing, etc.) for which the amendment is requested.
- c. Public Welfare. Explain how proposed amendment is not detrimental to the public welfare. Consider any public welfare matters that might be relevant to a decision on the application. Examples could include concerns related to the well-being of humans and the environment.
- d. Groundwater Effects. Discuss effects of proposed amendment on groundwater or groundwater recharge.

- e. State Water Plan. Describe how proposed amendment addresses a water supply need in a manner that is consistent with the state water plan or the applicable approved regional water plan for any area in which the proposed appropriation is located or, in the alternative, describe conditions that warrant a waiver of this requirement. The state and regional water plans are available for download at:
<http://www.twdb.texas.gov/waterplanning/swp/index.asp>.
- f. Waste Avoidance. Provide evidence that reasonable diligence will be used to avoid waste and achieve water conservation as defined in TWC § 11.002. Examples of evidence could include, but are not limited to, a water conservation plan or, if required, a drought contingency plan, meeting the requirements of 30 TAC Chapter 288.
- g. Impacts on Water Rights or On-stream Environment. Explain how proposed amendment will not impact other water right holders or the on-stream environment beyond and irrespective of the fact that the water right can be used to its full authorized amount.

WORKSHEET 2.0

Impoundment/Dam Information

This worksheet **is required** for any impoundment, reservoir and/or dam. Submit an additional Worksheet 2.0 for each impoundment or reservoir requested in this application.

If there is more than one structure, the numbering/naming of structures should be consistent throughout the application and on any supplemental documents (e.g. maps).

1. Storage Information (Instructions, Page. 21)

- a. Official USGS name of reservoir, if applicable: _____
- b. Provide amount of water (in acre-feet) impounded by structure at normal maximum operating level: _____.
- c. The impoundment is on-channel _____ or off-channel _____ (mark one)
 1. Applicant has verified on-channel or off-channel determination by contacting Surface Water Availability Team at (512) 239-4691? Y / N
 2. If on-channel, will the structure have the ability to pass all State Water inflows that Applicant does not have authorization to impound? Y / N
- d. Is the impoundment structure already constructed? Y / N
 - i. For already constructed **on-channel** structures:
 1. Date of Construction: _____
 2. Was it constructed to be an exempt structure under TWC § 11.142? Y / N
 - a. If Yes, is Applicant requesting to proceed under TWC § 11.143? Y / N
 - b. If No, has the structure been issued a notice of violation by TCEQ? Y / N
 3. Is it a U.S. Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service (SCS)) floodwater-retarding structure? Y / N
 - a. If yes, provide the Site No. _____ and watershed project name _____;
 - b. Authorization to close "ports" in the service spillway requested? Y / N
 - ii. For **any** proposed new structures or modifications to structures:
 1. Applicant **must** contact TCEQ Dam Safety Section at (512) 239-0326, *prior to submitting an Application*. Applicant has contacted the TCEQ Dam Safety Section regarding the submission requirements of 30 TAC, Ch. 299? Y / N
Provide the date and the name of the Staff Person _____
 2. As a result of Applicant's consultation with the TCEQ Dam Safety Section, TCEQ has confirmed that:
 - a. No additional dam safety documents required with the Application. Y / N
 - b. Plans (with engineer's seal) for the structure required. Y / N
 - c. Engineer's signed and sealed hazard classification required. Y / N
 - d. Engineer's statement that structure complies with 30 TAC, Ch. 299 Rules required. Y / N

3. Applicants **shall** give notice by certified mail to each member of the governing body of each county and municipality in which the reservoir, or any part of the reservoir to be constructed, will be located. (30 TAC § 295.42). Applicant must submit a copy of all the notices and certified mailing cards with this Application. Notices and cards are included? **Y / N**

iii. Additional information required for **on-channel** storage:

1. Surface area (in acres) of on-channel reservoir at normal maximum operating level:_____.
2. Based on the Application information provided, Staff will calculate the drainage area above the on-channel dam or reservoir. If Applicant wishes to also calculate the drainage area they may do so at their option.
Applicant has calculated the drainage area. **Y/N**
If yes, the drainage area is _____ sq. miles.
(If assistance is needed, call the Surface Water Availability Team prior to submitting the application, (512) 239-4691).

2. Structure Location (Instructions, Page. 23)

- a. On Watercourse (if on-channel) (USGS name):_____
- b. Zip Code: _____
- c. In the _____ Original Survey No. _____, Abstract No. _____, _____ County, Texas.

**** A copy of the deed(s) with the recording information from the county records must be submitted describing the tract(s) that include the structure and all lands to be inundated.***

*****If the Applicant is not currently the sole owner of the land on which the structure is or will be built and sole owner of all lands to be inundated, Applicant must submit documentation evidencing consent or other documentation supporting Applicant's right to use the land described.***

- d. A point on the centerline of the dam (on-channel) or anywhere within the impoundment (off-channel) is:

Latitude _____°N, Longitude _____°W.

****Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places***

- di. Indicate the method used to calculate the location (examples: Handheld GPS Device, GIS, Mapping Program):_____
- dii. Map submitted which clearly identifies the Impoundment, dam (where applicable), and the lands to be inundated. See instructions Page. 15. **Y / N**

WORKSHEET 3.0

DIVERSION POINT (OR DIVERSION REACH) INFORMATION

This worksheet **is required** for each diversion point or diversion reach. Submit one Worksheet 3.0 for **each** diversion point and two Worksheets for **each** diversion reach (one for the upstream limit and one for the downstream limit of each diversion reach).

The numbering of any points or reach limits should be consistent throughout the application and on supplemental documents (e.g. maps).

1. Diversion Information (Instructions, Page. 24)

- a. This Worksheet is to add new (select 1 of 3 below):
 - 1. _____ Diversion Point No.
 - 2. _____ Upstream Limit of Diversion Reach No.
 - 3. _____ Downstream Limit of Diversion Reach No. **1.**
- b. Maximum Rate of Diversion for **this new point** _____ cfs (cubic feet per second) or _____ gpm (gallons per minute)
- c. Does this point share a diversion rate with other points? **Y / N**
*If yes, submit Maximum **Combined** Rate of Diversion for all points/reaches _____ cfs or _____ gpm*
- d. For amendments, is Applicant seeking to increase combined diversion rate? **Y / N**

*** An increase in diversion rate is considered a new appropriation and would require completion of Section 1, New or Additional Appropriation of State Water.*

- e. Check (√) the appropriate box to indicate diversion location and indicate whether the diversion location is existing or proposed):

Check one		Write: Existing or Proposed
	Directly from stream	
	From an on-channel reservoir	
	From a stream to an on-channel reservoir	
	Other method (explain fully, use additional sheets if necessary)	

- f. Based on the Application information provided, Staff will calculate the drainage area above the diversion point (or reach limit). If Applicant wishes to also calculate the drainage area, you may do so at their option.

Applicant has calculated the drainage area. **Y / N**

If yes, the drainage area is _____ sq. miles.

(If assistance is needed, call the Surface Water Availability Team at (512) 239-4691, prior to submitting application)

2. Diversion Location (Instructions, Page 25)

- a. On watercourse (USGS name): _____
- b. Zip Code: _____
- c. Location of point: In the _____ Original Survey No. _____, Abstract No. _____, _____ County, Texas.

A copy of the deed(s) with the recording information from the county records must be submitted describing tract(s) that include the diversion structure. For diversion reaches, the Commission cannot grant an Applicant access to property that the Applicant does not own or have consent or a legal right to access, the Applicant will be required to provide deeds, or consent, or other documents supporting a legal right to use the specific points when specific diversion points within the reach are utilized. Other documents may include, but are not limited to: a recorded easement, a land lease, a contract, or a citation to the Applicant's right to exercise eminent domain to acquire access.

- d. Point is at:
Latitude _____°N, Longitude _____°W.
Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places
- e. Indicate the method used to calculate the location (examples: Handheld GPS Device, GIS, Mapping Program): _____
- f. Map submitted must clearly identify each diversion point and/or reach. See instructions Page. 38.
Map is Attachment 4
- g. If the Plan of Diversion is complicated and not readily discernable from looking at the map, attach additional sheets that fully explain the plan of diversion.

WORKSHEET 3.0

DIVERSION POINT (OR DIVERSION REACH) INFORMATION

This worksheet **is required** for each diversion point or diversion reach. Submit one Worksheet 3.0 for **each** diversion point and two Worksheets for **each** diversion reach (one for the upstream limit and one for the downstream limit of each diversion reach).

The numbering of any points or reach limits should be consistent throughout the application and on supplemental documents (e.g. maps).

1. Diversion Information (Instructions, Page. 24)

- a. This Worksheet is to add new (select 1 of 3 below):
 - 1. _____ Diversion Point No.
 - 2. _____ Upstream Limit of Diversion Reach No.
 - 3. _____ Downstream Limit of Diversion Reach No. **1.**

- b. Maximum Rate of Diversion for **this new point** _____ cfs (cubic feet per second) or _____ gpm (gallons per minute)

- c. Does this point share a diversion rate with other points? **Y / N**
*If yes, submit Maximum **Combined** Rate of Diversion for all points/reaches _____ cfs or _____ gpm*

- d. For amendments, is Applicant seeking to increase combined diversion rate? **Y / N**

*** An increase in diversion rate is considered a new appropriation and would require completion of Section 1, New or Additional Appropriation of State Water.*

- e. Check (√) the appropriate box to indicate diversion location and indicate whether the diversion location is existing or proposed):

Check one		Write: Existing or Proposed
	Directly from stream	
	From an on-channel reservoir	
	From a stream to an on-channel reservoir	
	Other method (explain fully, use additional sheets if necessary)	

- f. Based on the Application information provided, Staff will calculate the drainage area above the diversion point (or reach limit). If Applicant wishes to also calculate the drainage area, you may do so at their option.

Applicant has calculated the drainage area. **Y / N**

If yes, the drainage area is _____ sq. miles.

(If assistance is needed, call the Surface Water Availability Team at (512) 239-4691, prior to submitting application)

2. Diversion Location (Instructions, Page 25)

- a. On watercourse (USGS name): _____
- b. Zip Code: _____
- c. Location of point: In the _____ Original Survey No. _____, Abstract No. _____, _____ County, Texas.

A copy of the deed(s) with the recording information from the county records must be submitted describing tract(s) that include the diversion structure. For diversion reaches, the Commission cannot grant an Applicant access to property that the Applicant does not own or have consent or a legal right to access, the Applicant will be required to provide deeds, or consent, or other documents supporting a legal right to use the specific points when specific diversion points within the reach are utilized. Other documents may include, but are not limited to: a recorded easement, a land lease, a contract, or a citation to the Applicant's right to exercise eminent domain to acquire access.

- d. Point is at:
Latitude _____°N, Longitude _____°W.
Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places
- e. Indicate the method used to calculate the location (examples: Handheld GPS Device, GIS, Mapping Program): _____
- f. Map submitted must clearly identify each diversion point and/or reach. See instructions Page. 38.
Map is Attachment 4
- g. If the Plan of Diversion is complicated and not readily discernable from looking at the map, attach additional sheets that fully explain the plan of diversion.

WORKSHEET 4.0 DISCHARGE INFORMATION

This worksheet required for any requested authorization to discharge water into a State Watercourse for conveyance and later withdrawal or in-place use. Worksheet 4.1 is also required for each Discharge point location requested. **Instructions Page. 26. Applicant is responsible for obtaining any separate water quality authorizations which may be required and for insuring compliance with TWC, Chapter 26 or any other applicable law.**

- a. The purpose of use for the water being discharged will be _____.
- b. Provide the amount of water that will be lost to transportation, evaporation, seepage, channel or other associated carriage losses _____% and explain the method of calculation: _____

Is the source of the discharged water return flows? Y / N If yes, provide the following information:

1. The TPDES Permit Number(s). _____ (attach a copy of the **current** TPDES permit(s))
2. Applicant is the owner/holder of each TPDES permit listed above? Y / N

PLEASE NOTE: If Applicant is not the discharger of the return flows, the application should be submitted under Section 1, New or Additional Appropriation of State Water, as a request for a new appropriation of state water. If Applicant is the discharger, then the application should be submitted under Section 3, Bed and Banks.

3. Monthly WWTP discharge data for the past 5 years in electronic format. (Attach and label as "Supplement to Worksheet 4.0").
 4. The percentage of return flows from groundwater _____, surface water _____?
 5. If any percentage is surface water, provide the base water right number(s) _____.
- c. Is the source of the water being discharged groundwater? Y / N If yes, provide the following information:
1. Source aquifer(s) from which water will be pumped: _____
 2. Any 24 hour pump test for the well if one has been conducted. If the well has not been constructed, provide production information for wells in the same aquifer in the area of the application. See <http://www.twdb.texas.gov/groundwater/data/gwdbbrpt.asp>. Additionally, provide well numbers or identifiers _____.
 3. Indicate how the groundwater will be conveyed to the stream or reservoir.
 4. A copy of the groundwater well permit if it is located in a Groundwater Conservation District (GCD) or evidence that a groundwater well permit is not required.
- ci. Is the source of the water being discharged a surface water supply contract? Y / N
If yes, provide the signed contract(s).

cii. Identify any other source of the water _____

WORKSHEET 4.1 DISCHARGE POINT INFORMATION

This worksheet is required for **each** discharge point. Submit one Worksheet 4.1 for each discharge point. If there is more than one discharge point, the numbering of the points should be consistent throughout the application and on any supplemental documents (e.g. maps).
Instructions, Page 27.

For water discharged at this location provide:

- a. The amount of water that will be discharged at this point is _____ acre-feet per year. The discharged amount should include the amount needed for use and to compensate for any losses.
- b. Water will be discharged at this point at a maximum rate of _____ cfs or _____ gpm.
- c. Name of Watercourse as shown on Official USGS maps: _____
- d. Zip Code: _____
- f. Location of point: In the _____ Original Survey No. _____, Abstract No. _____, _____ County, Texas.
- g. Point is at:
Latitude _____°N, Longitude _____°W.
****Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places***
- h. Indicate the method used to calculate the discharge point location (examples: Handheld GPS Device, GIS, Mapping Program): _____

Map submitted must clearly identify each discharge point. See instructions Page. 15.

WORKSHEET 5.0 ENVIRONMENTAL INFORMATION

This worksheet is required for new appropriations of water in the Canadian, Red, Sulphur, and Cypress Creek Basins. The worksheet is also required in all basins for: requests to change a diversion point, applications using an alternate source of water, and bed and banks applications. **Instructions, Page 28.**

1. New Appropriations of Water (Canadian, Red, Sulphur, and Cypress Creek Basins only) and Changes in Diversion Point(s)

Description of the Water Body at each Diversion Point or Dam Location. (Provide an Environmental Information Sheet for each location),

a. Identify the appropriate description of the water body.

Stream

Reservoir

Average depth of the entire water body, in feet: _____

Other, specify: _____

b. Flow characteristics

If a stream, was checked above, provide the following. For new diversion locations, check one of the following that best characterize the area downstream of the diversion (check one).

Intermittent - dry for at least one week during most years

Intermittent with Perennial Pools - enduring pools

Perennial - normally flowing

Check the method used to characterize the area downstream of the new diversion location.

USGS flow records

Historical observation by adjacent landowners

Personal observation

Other, specify: _____

c. Waterbody aesthetics

Check one of the following that best describes the aesthetics of the stream segments affected by the application and the area surrounding those stream segments.

- Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional
- Natural Area: trees and/or native vegetation common; some development evident (from fields, pastures, dwellings); water clarity discolored
- Common Setting: not offensive; developed but uncluttered; water may be colored or turbid
- Offensive: stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

d. Waterbody Recreational Uses

Are there any known recreational uses of the stream segments affected by the application?

- Primary contact recreation (swimming or direct contact with water)
- Secondary contact recreation (fishing, canoeing, or limited contact with water)
- Non-contact recreation

Submit the following information in a Supplemental Attachment, labeled Addendum to Worksheet 5.0:

1. Photographs of the stream at the diversion point or dam location. Photographs should be in color and show the proposed point or reservoir and upstream and downstream views of the stream, including riparian vegetation along the banks. Include a description of each photograph and reference the photograph to the map submitted with the application indicating the location of the photograph and the direction of the shot.
2. Measures the applicant will take to avoid impingement and entrainment of aquatic organisms (ex. Screens on the new diversion structure).
3. If the application includes a proposed reservoir, also include:
 - i. A brief description of the area that will be inundated by the reservoir.
 - ii. If a United States Army Corps of Engineers (USACE) 404 permit is required, provide the project number and USACE project manager.
 - iii. A description of how any impacts to wetland habitat, if any, will be mitigated if the reservoir is greater than 5,000 acre-feet.

2. Alternate Sources of Water and/or Bed and Banks Applications

For all bed and banks applications:

- a. Indicate the measures the applicant will take to avoid impingement and entrainment of aquatic organisms (ex. Screens on the new diversion structure).

- b. An assessment of the adequacy of the quantity and quality of flows remaining after the proposed diversion to meet instream uses and bay and estuary freshwater inflow requirements.

If the alternate source is treated return flows, provide the TPDES permit number _____

If groundwater is the alternate source, or groundwater or other surface water will be discharged into a watercourse provide:

- a. Reasonably current water chemistry information including but not limited to the following parameters in the table below. Additional parameters may be requested if there is a specific water quality concern associated with the aquifer from which water is withdrawn. If data for onsite wells are unavailable; historical data collected from similar sized wells drawing water from the same aquifer may be provided. However, onsite data may still be required when it becomes available. Provide the well number or well identifier. Complete the information below for each well and provide the Well Number or identifier.

Parameter	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Sulfate, mg/L					
Chloride, mg/L					
Total Dissolved Solids, mg/L					
pH, standard units					
Temperature*, degrees Celsius					

* Temperature must be measured onsite at the time the groundwater sample is collected.

- b. If groundwater will be used, provide the depth of the well _____ and the name of the aquifer from which water is withdrawn _____.

WORKSHEET 6.0

Water Conservation/Drought Contingency Plans

This form is intended to assist applicants in determining whether a Water Conservation Plan and/or Drought Contingency Plans is required and to specify the requirements for plans.

Instructions, Page 31.

*The TCEQ has developed guidance and model plans to help applicants prepare plans. Applicants may use the model plan with pertinent information filled in. For assistance submitting a plan call the Resource Protection Team (Water Conservation staff) at 512-239-4691, or e-mail wras@tceq.texas.gov. The model plans can also be downloaded from the TCEQ webpage. **Please use the most up-to-date plan documents available on the webpage.***

1. Water Conservation Plans

- a. The following applications must include a completed Water Conservation Plan (30 TAC § 295.9) for each use specified in 30 TAC, Chapter 288 (municipal, industrial or mining, agriculture - including irrigation, wholesale):

1. Request for a new appropriation or use of State Water.
2. Request to amend water right to increase appropriation of State Water.
3. Request to amend water right to extend a term.
4. Request to amend water right to change a place of use.
**does not apply to a request to expand irrigation acreage to adjacent tracts.*
5. Request to amend water right to change the purpose of use.
**applicant need only address new uses.*
6. Request for bed and banks under TWC § 11.042(c), when the source water is State Water
**including return flows, contract water, or other State Water.*

- b. If Applicant is requesting any authorization in section (1)(a) above, indicate each use for which Applicant is submitting a Water Conservation Plan as an attachment:

1. ____ Municipal Use. See 30 TAC § 288.2. ** **Att.7**
2. ____ Industrial or Mining Use. See 30 TAC § 288.3.
3. ____ Agricultural Use, including irrigation. See 30 TAC § 288.4.
4. ____ Wholesale Water Suppliers. See 30 TAC § 288.5. ** **Att.7**

****If Applicant is a water supplier, Applicant must also submit documentation of adoption of the plan. Documentation may include an ordinance, resolution, or tariff, etc. See 30 TAC §§ 288.2(a)(1)(J)(i) and 288.5(1)(H). Applicant has submitted such documentation with each water conservation plan? Y / N **Att.8****

- c. Water conservation plans submitted with an application must also include data and information which: supports applicant's proposed use with consideration of the plan's water conservation goals; evaluates conservation as an alternative to the proposed

appropriation; and evaluates any other feasible alternative to new water development. See 30 TAC § 288.7.

Applicant has included this information in each applicable plan? Y / N **Att.7**

2. Drought Contingency Plans

- a. A drought contingency plan is also required for the following entities if Applicant is requesting any of the authorizations in section (1) (a) above - indicate each that applies:
 1. ____Municipal Uses by public water suppliers. See 30 TAC § 288.20. **Att.8**
 2. ____Irrigation Use/ Irrigation water suppliers. See 30 TAC § 288.21.
 3. ____Wholesale Water Suppliers. See 30 TAC § 288.22. **Att.8**
- b. If Applicant must submit a plan under section 2(a) above, Applicant has also submitted documentation of adoption of drought contingency plan (*ordinance, resolution, or tariff, etc. See 30 TAC § 288.30*) Y / N **Att.8**

WORKSHEET 7.0

ACCOUNTING PLAN INFORMATION WORKSHEET

The following information provides guidance on when an Accounting Plan may be required for certain applications and if so, what information should be provided. An accounting plan can either be very simple such as keeping records of gage flows, discharges, and diversions; or, more complex depending on the requests in the application. Contact the Surface Water Availability Team at 512-239-4691 for information about accounting plan requirements, if any, for your application. **Instructions, Page 34.**

1. Is Accounting Plan Required

Accounting Plans are generally required:

- For applications that request authorization to divert large amounts of water from a single point where multiple diversion rates, priority dates, and water rights can also divert from that point;
- For applications for new major water supply reservoirs;
- For applications that amend a water right where an accounting plan is already required, if the amendment would require changes to the accounting plan;
- For applications with complex environmental flow requirements;
- For applications with an alternate source of water where the water is conveyed and diverted; and
- For reuse applications.

2. Accounting Plan Requirements

- a. A **text file** that includes:
 1. an introduction explaining the water rights and what they authorize;
 2. an explanation of the fields in the accounting plan spreadsheet including how they are calculated and the source of the data;
 3. for accounting plans that include multiple priority dates and authorizations, a section that discusses how water is accounted for by priority date and which water is subject to a priority call by whom; and
 4. Should provide a summary of all sources of water.

- b. A **spreadsheet** that includes:
 1. Basic daily data such as diversions, deliveries, compliance with any instream flow requirements, return flows discharged and diverted and reservoir content;
 2. Method for accounting for inflows if needed;
 3. Reporting of all water use from all authorizations, both existing and proposed;
 4. An accounting for all sources of water;
 5. An accounting of water by priority date;
 6. For bed and banks applications, the accounting plan must track the discharged water from the point of delivery to the final point of diversion;
 7. Accounting for conveyance losses;
 8. Evaporation losses if the water will be stored in or transported through a reservoir. Include changes in evaporation losses and a method for measuring reservoir content resulting from the discharge of additional water into the reservoir;
 9. An accounting for spills of other water added to the reservoir; and
 10. Calculation of the amount of drawdown resulting from diversion by junior rights or diversions of other water discharged into and then stored in the reservoir.

WORKSHEET 8.0 CALCULATION OF FEES

This worksheet is for calculating required application fees. Applications are not Administratively Complete until all required fees are received. **Instructions, Page. 34**

1. NEW APPROPRIATION

	Description	Amount (\$)
Filing Fee	Circle fee correlating to the total amount of water* requested for any new appropriation and/or impoundment. Amount should match total on Worksheet 1, Section 1. Enter corresponding fee under Amount (\$) . <u>In Acre-Feet</u> a. Less than 100 \$100.00 b. 100 - 5,000 \$250.00 c. 5,001 - 10,000 \$500.00 d. 10,001 - 250,000 \$1,000.00 e. More than 250,000 \$2,000.00	
Recording Fee		\$25.00
Agriculture Use Fee	<i>Only for those with an Irrigation Use.</i> Multiply 50¢ x _____ Number of acres that will be irrigated with State Water. **	
Use Fee	<i>Required for all Use Types, excluding Irrigation Use.</i> Multiply \$1.00 x _____ Maximum annual diversion of State Water in acre-feet. **	
Recreational Storage Fee	<i>Only for those with Recreational Storage.</i> Multiply \$1.00 x _____ acre-feet of in-place Recreational Use State Water to be stored at normal max operating level.	
Storage Fee	<i>Only for those with Storage, excluding Recreational Storage.</i> Multiply 50¢ x _____ acre-feet of State Water to be stored at normal max operating level.	
Mailed Notice	Cost of mailed notice to all water rights in the basin. Contact Staff to determine the amount (512) 239-4691.	
TOTAL		\$

2. AMENDMENT OR SEVER AND COMBINE

	Description	Amount (\$)
Filing Fee	Amendment: \$100 OR Sever and Combine: \$100 x ___ of water rights to combine	
Recording Fee		\$12.50
Mailed Notice	Additional notice fee to be determined once application is submitted.	
TOTAL INCLUDED		\$

3. BED AND BANKS

	Description	Amount (\$)
Filing Fee		\$100.00
Recording Fee		\$12.50
Mailed Notice	Additional notice fee to be determined once application is submitted.	
TOTAL INCLUDED		\$

ATTACHMENT 1

WRITTEN EVIDENCE OF SIGNATURE AUTHORITY

Resolution authorizing the submission of applications to the Texas Commission on Environmental Quality for La Quinta Channel and Inner Harbor water rights diversion and discharge permits necessary for development of two seawater desalination plants and authorizing payment of permit fees in total amount not to exceed \$450,000

WHEREAS, the City is in the process of preparing water rights and discharge permit applications to be submitted to the Texas Commission on Environmental Quality (TCEQ);

WHEREAS, the City is seeking a water right to divert up to 186,295 acre feet per year at a maximum rate of 166.2 million gallons per day from La Quinta Channel in Corpus Christi Bay to supply process water for a seawater desalination plant;

WHEREAS, the City is also seeking a water right to divert up to 93,148 acre feet per year at a maximum rate of 83.1 million gallons per day from the Inner Harbor, a tributary of Corpus Christi Bay, to supply process water for a seawater desalination plant;

WHEREAS, the City is also seeking discharge permits from TCEQ to allow discharge up to 68 million gallons per day into the Inner Harbor and discharge up to 91 million gallons per day into La Quinta Channel;

WHEREAS, TCEQ regulations provide that if the applicant is a municipality, the application shall be signed by a duly authorized official; and TCEQ regulations regarding water rights permits further provide that written evidence in the form of bylaws, charters, or resolutions which specify the authority of the official to take such action shall be submitted to the TCEQ.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CORPUS CHRISTI, TEXAS:

SECTION 1. The City Manager and any of the City's Assistant City Managers are each hereby duly authorized to execute the Water Rights Permitting Applications and Discharge Permit Applications described herein to be submitted to the TCEQ in accordance with TCEQ regulations.

SECTION 2. The City Manager and any of the City's Assistant City Managers are also each hereby duly authorized to execute all documents necessary for the TCEQ's consideration and approval of these water rights and water discharge permits.

SECTION 3. Payment of permit fees in the amount not to exceed \$450,000 is hereby approved.

PASSED AND APPROVED on the 17th day of December, 2019:

Joe McComb	<u>Aye</u>
Roland Barrera	<u>Aye</u>
Rudy Garza	<u>No</u>
Paulette M. Guajardo	<u>Aye</u>
Gil Hernandez	<u>No</u>
Michael Hunter	<u>Aye</u>
Ben Molina	<u>Aye</u>
Everett Roy	<u>Aye</u>
Greg Smith	<u>Aye</u>

ATTEST:

CITY OF CORPUS CHRISTI

Rebecca Huerta
Rebecca Huerta
City Secretary

Joe McComb
Joe McComb
Mayor

ATTACHMENT 2

LETTER FROM COASTAL BEND REGIONAL WATER PLANNING GROUP

Coastal Bend Regional Water Planning Group

602 North Staples Street, Suite 280, Corpus Christi, Texas 78401

Phone: 361-653-2110; Fax: 361-653-2115

EXECUTIVE COMMITTEE

Water Districts

Mr. Scott Bledsoe, III, Co-Chair

Water Utilities

Ms. Carola Serrato, Co-Chair

GMA 13

Mr. Lonnie Stewart, Secretary

River Authorities

Mr. Tom Reding, Jr.

Small Business

Dr. Pancho Hubert,

VOTING MEMBERS:

Agriculture

Mr. Chuck Burns

Mr. Charles Ring

Counties

Mr. Lavoyger Durham

Mr. Bill Stockton

Electric Utilities

Mr. Gary Eddins

Environmental

Ms. Teresa Carrillo

Mr. Jace Tunnell

Industries

Mr. Joe Almaraz

Mr. Robert Kunkel

Municipalities

Ms. Barbara Reaves

Mr. Mark Scott

Public

Ms. Donna Rosson

Other

Mr. John Burriss

Mr. Carl Crull

Small Business

Mr. Bill Dove

GMA 15

Mr. Mark Sugarek

GMA 16

Mr. Andy Garza

NON-VOTING MEMBERS:

TWDB

Ms. Connie Townsend

NRCS

Mr. Tomas Dominguez

TPWD

Dr. Jim Tolan

TDA

Ms. Nelda Barrera

Liaison Region M

Judge Humberto Gonzalez

Liaison Region L

Mr. Con Mims

STAFF:

Nueces River Authority

Ms. Rocky Freund

September 26, 2019

Dr. Kathy Alexander

Technical Specialist, Water Availability Division

Texas Commission on Environmental Quality

MC-160 P.O. Box 13087

Austin, Texas 78711-13087

Dear Dr. Alexander

Re: City of Corpus Christi's water right applications for proposed desal water diversions from the Corpus Christi Inner Harbor and Corpus Christi Bay and General Consistency with Coastal Bend Regional Water Planning Group's 2016 Plan (the Plan)

The Coastal Bend Regional Water Planning Group provides this letter to you at the request of the City of Corpus Christi, Region N's largest wholesale water provider. The City of Corpus Christi is in the process of applying for two water right applications for diversions from the Corpus Christi Inner Harbor and Corpus Christi Bay. The diversions are associated with the development of two seawater desalination plants, one in Nueces County and the other in San Patricio County. According to information provided by the City of Corpus Christi, the plants will provide additional water supplies to meet increasing municipal and industrial demands in the Coastal Bend Region.

The December 2015 *Coastal Bend Regional Water Planning Area Region N Executive Summary and Regional Water Plan (2016 Region N Water Plan)* includes seawater desalination as a recommended water management strategy. The Plan shows a total supply of 22,420 acre-feet (20 MGD) from seawater desalination to meet manufacturing and steam-electric demands in Nueces County and manufacturing demands in San Patricio County (pages 5-42, 5-44, and 5-50 of the Plan). The Plan shows that the City of Corpus Christi and the San Patricio Municipal Water District are project sponsors of the seawater desalination water management strategy (pages 5-43 and 5-49). Section 5D.9 of the Plan describes the strategy and includes cost estimates based on the best information available at the time of Plan submittal.

Since completion of the 2016 Region N Water Plan, the City of Corpus Christi has continued to study implementation of seawater desalination to meet demands in the region. The City's current plan is to develop two seawater desalination facilities that total 30 MGD production initially and are capable of expanding to 70 MGD. As stated above and based on information provided by the sponsor to the region, one plant will be located in San Patricio County and will serve municipal and industrial demands in San Patricio and Aransas Counties and the

other will be located in Nueces County and will serve municipal and industrial demands in Nueces, Kleberg, and possibly Aransas Counties. The City of Corpus Christi's water right applications would permit diversions for these plants.

One of the requirements in Texas water right permitting is consistency with the appropriate Regional Water Plan. Specifically, Texas Commission on Environmental Quality regulations say that a permit can be granted only if it "addresses a water supply need in a manner that is consistent with the state water plan and the relevant approved regional water plan for any area in which the proposed appropriation is located, unless the commission determines that new, changed, or unaccounted for conditions warrant waiver of this requirement" (30 Texas Administrative Code Section 297.41(a)(3)(E)). Since the proposed projects for which water rights applications are being sought differ from the strategy in the current Plan, this letter is being provided stating that although the applications may be for different amounts and different project configurations than indicated in the Plan, the applications are consistent with the Plan and are will not affect other strategies in the current Plan.

The projects differ from the strategy in the 2016 Region N Water Plan in the following ways: (1) two desalination plants are being proposed (one was shown in the Plan), (2) the initial project yield is 30 MGD (up from the 20 MGD shown in the Plan) and scalable up to 70 MGD (not shown in the Plan), and (3) strategy is now intended to serve both industrial and municipal customers (the 2016 Plan showed strategy to meet industrial needs only and had no municipal shortages identified).

The Coastal Bend Regional Water Planning Group represents that the water right applications are not inconsistent with the 2016 Region N Water Plan, as both locations were cited as possible project locations in the Plan. The seawater desalination water management strategy and associated water rights being sought addresses a projected water supply need for manufacturing users in a manner that is consistent with the approved *2016 Region N Water Plan*. The 2016 Region N Water Plan did not show any municipal needs for the City of Corpus Christi or their customers.

The change from one seawater desalination plant to two and the change in plant size is the sort of revision that occurs as more specific plans and designs are developed to implement water management strategies. The requested water rights and the proposed water management strategy that it supports will not have a negative impact on other water management strategies in the currently approved 2016 Region N Water.

The Coastal Bend is currently developing a new regional water plan. At this time, the proposed seawater desalination plants will be a recommended water management strategy in the plan under development. Preliminary information from the 2021 Region N Plan currently under development shows manufacturing needs within the 2020-2070 planning period which the project can be shown to address, but does not identify municipal needs for the City of Corpus Christi or their customers. The requested water rights and the proposed water management strategy that it supports are not expected to have a negative impact on other water management strategies anticipated to be in the regional water plan currently under development assuming that the proposed intake and outfall locations are not in close proximity to alternate water management strategies that may become recommended during the course of the new regional water plan currently under development.



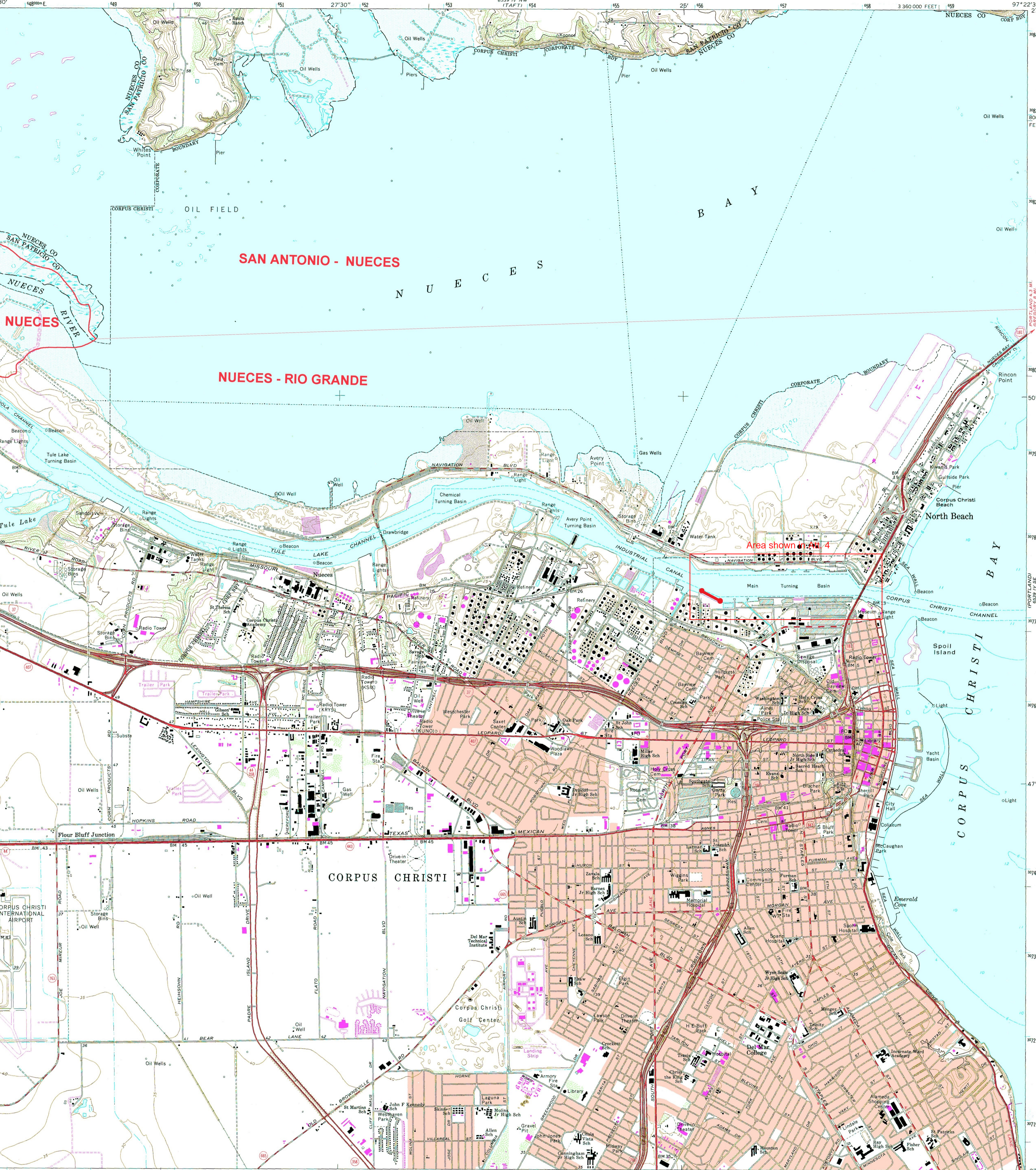
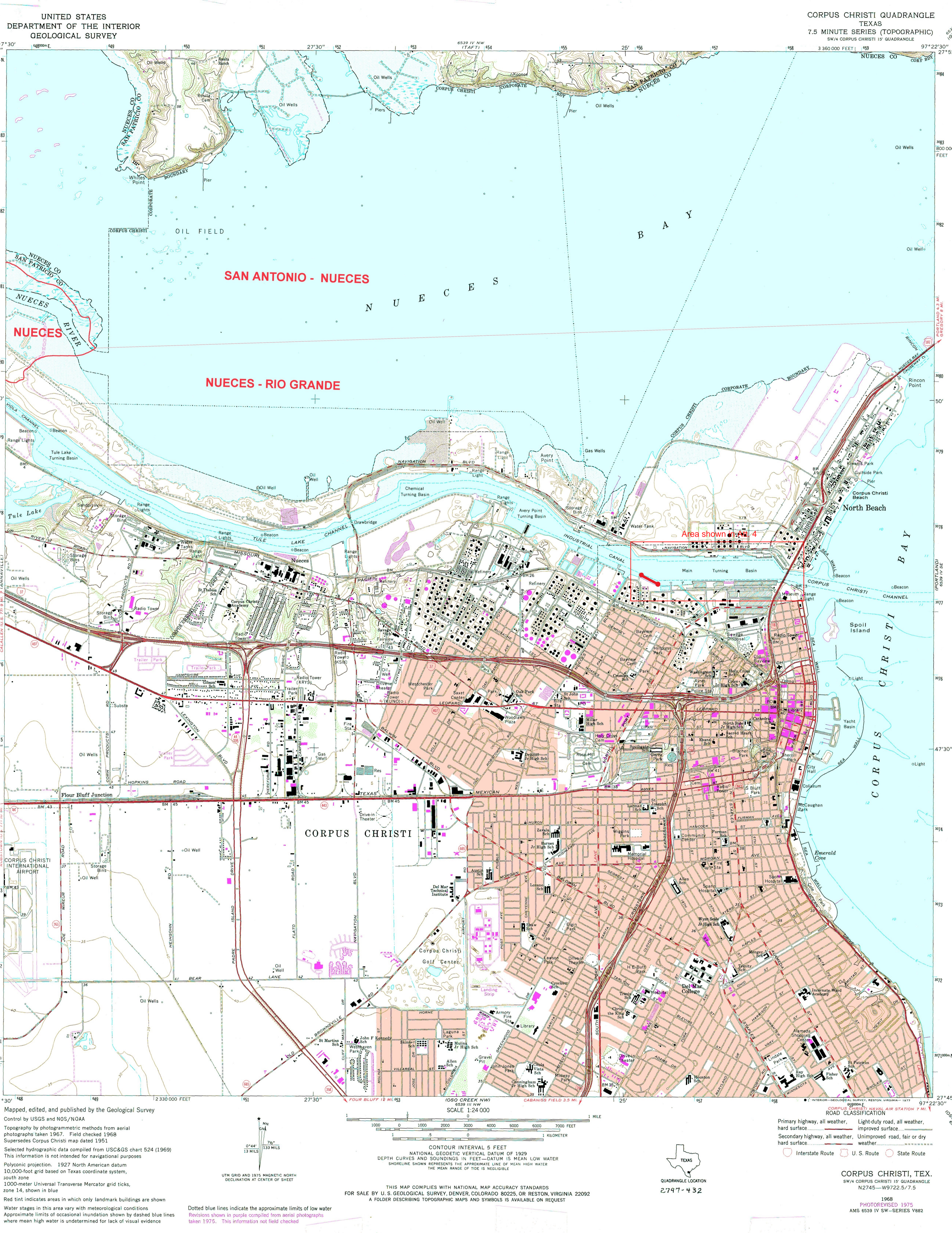
Ms. Carola Serrato
Co-Chair, Coastal Bend Regional Water Planning Group



Mr. Scott Bledsoe III
Co-Chair, Coastal Bend Regional Water Planning Group

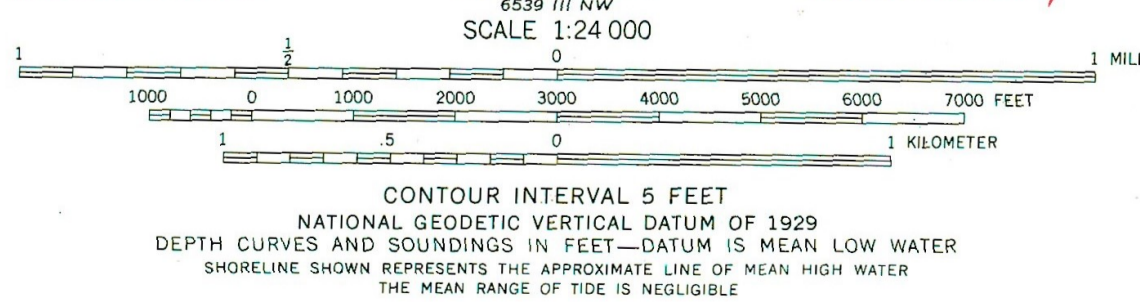
ATTACHEMENT 3

USGS MAP

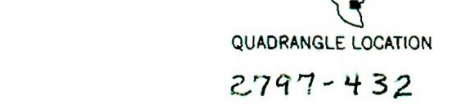


Mapped, edited, and published by the Geological Survey
Control by USGS and NOS/NOAA
Topography by photogrammetric methods from aerial photographs taken 1967. Field checked 1968
Supersedes Corpus Christi map dated 1951
Selected hydrographic data compiled from USC&GS chart 524 (1969)
This information is not intended for navigational purposes
Polyconic projection. 1927 North American datum
10,000-foot grid based on Texas coordinate system,
south zone
1000-meter Universal Transverse Mercator grid ticks,
zone 14, shown in blue
Red tint indicates areas in which only landmark buildings are shown
Water stages in this area vary with meteorological conditions
Approximate limits of occasional inundation shown by dashed blue lines
where mean high water is undetermined for lack of visual evidence

Dotted blue lines indicate the approximate limits of low water
Revisions shown in purple compiled from aerial photographs taken 1975. This information not field checked



ROAD CLASSIFICATION
Primary highway, all weather, improved surface
Secondary highway, all weather, unimproved road, fair or dry weather
Interstate Route
U. S. Route
State Route




THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

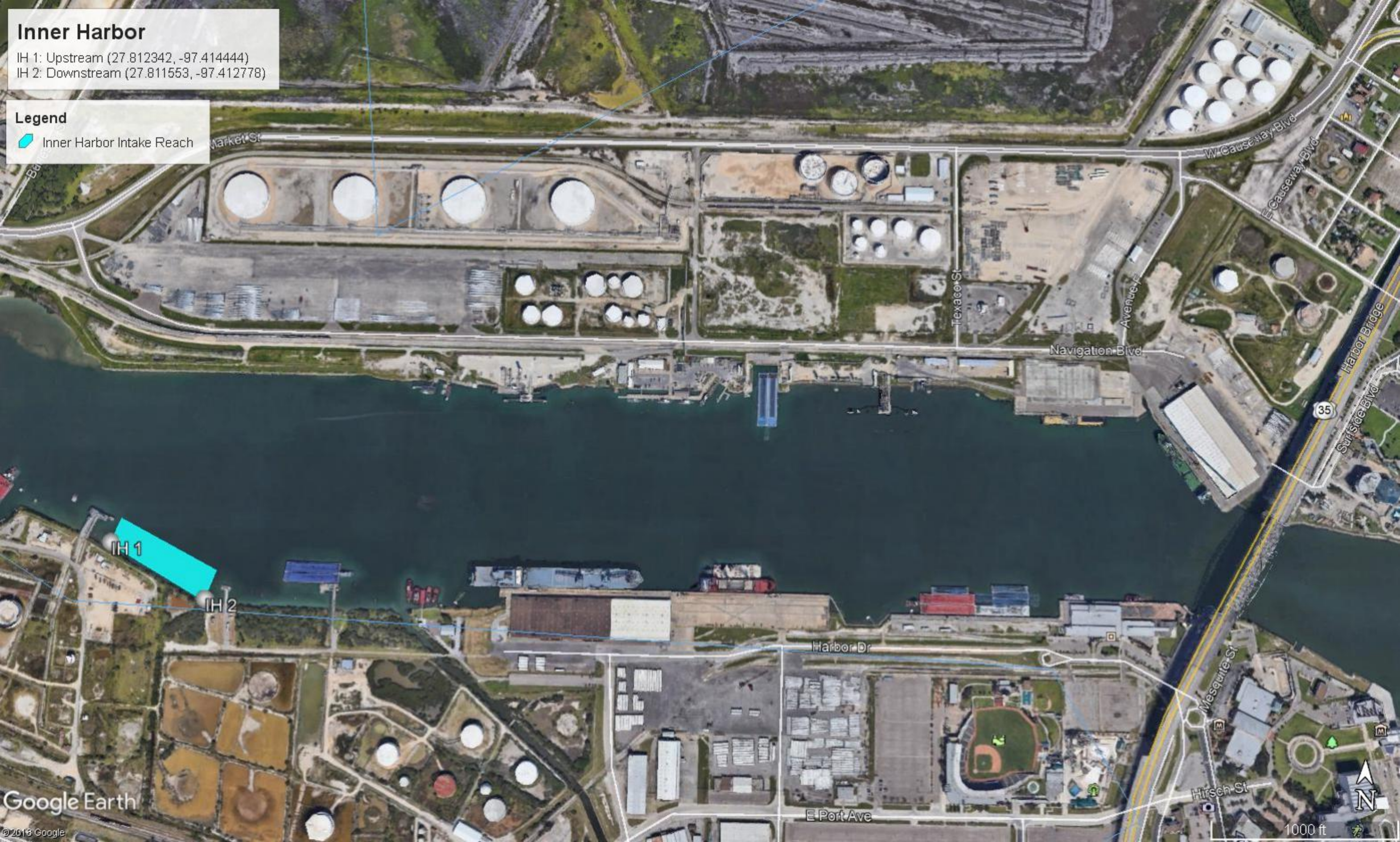
ATTACHMENT 4
MAP SHOWING PROJECT DETAILS

Inner Harbor

IH 1: Upstream (27.812342, -97.414444)
IH 2: Downstream (27.811553, -97.412778)

Legend

 Inner Harbor Intake Reach



ATTACHMENT 5
ADDENDUM TO WORKSHEET 1.1

Attachment 5 to Inner Harbor

Worksheet 1.1, 1.c, Basin(s) and count(y/ies) where use will occur:

Nueces-Rio Grande Coastal Basin in Kleberg and Nueces Counties. No interbasin transfer.

Transfer up to 93,148 acre-feet per year to Nueces Basin in Nueces County. Meets exception 2.C on Worksheet 1.1 because Nueces County is partially in the Nueces-Rio Grande Coastal Basin.

Transfer up to 93,148 acre-feet per year to the City of Corpus Christi service area in the San Antonio – Nueces Coastal Basin in Nueces and San-Patricio Counties. This meets exemption 2.C on Worksheet 1.1 because the City of Corpus Christi service area is partially in the San Antonio-Nueces Coastal Basin and Nueces County is partially located in the Nueces Rio-Grande Coastal Basin.

Transfer up to 93,148 acre-feet per year to San Antonio – Nueces Basin in Nueces County. Use in Nueces County meets exemption 2.C in Worksheet 1.1 because Nueces County is partially in the Nueces – Rio Grande Coastal Basin.

Transfer up to 2,999 per year to San Antonio-Nueces Basin in Aransas County. Use in Aransas County will not exceed 2,999 acre-feet per year and meets exemption 2.A in Worksheet 1.1.

2. Exemptions 2.A and 2.C – see above.

ATTACHMENT 6
RECORDED DEEDS FOR DIVERSION POINTS

Comptroller's Online Eminent Domain Database (COEDD)

City of Corpus Christi

Filings by this entity for: [2020](#) [2019](#) [2018](#) [2017](#) [2016](#)

About This Entity

Category: Governmental
Entity Type: City
Taxpayer ID: 17460005741
Eminent Domain Public Id: 201003860

Eminent domain information as reported to the
 Comptroller by this entity

Report Year: 2020
Condemnation Petition Filed in 2019: NO
Date Authority Acquired: 9/1852
Record last updated: Nov 01, 2019

Physical Address

1201 LEOPARD ST City Hall Bldg, Legal Department, 5th
 floor
 CORPUS CHRISTI, TX 78401-2120
 Nueces County
 361-826-3360

Mailing Address

1201 LEOPARD ST City Hall Bldg, Legal Department, 5th
 floor
 CORPUS CHRISTI, TX 78401-2120
 Nueces County

To obtain additional information from this entity, the
 public may contact:

Miles Risley
 City Attorney
 miles@cctexas.com
 361-826-3360

Projects, focus or scope of the eminent domain authority purportedly granted to the entity:

Jail or other law enforcement detention facility, including juvenile delinquency facilities
 Hospitals or other health care facilities
 School buildings or other educational facilities
 Public utilities - internet and/or cable
 Public utilities - electric
 Municipal buildings such as city halls, police stations, fire stations or libraries
 Streets, boulevards, alleys, or other public ways
 Transportation, storage and other processing of oil, gases or substances and derivatives thereof
 Incinerators or garbage disposal plants
 Airports or landing fields
 Shipping terminals or facilities
 Water or sewage infrastructure
 Public utilities - telephone
 Drainage or storm water facilities
 Animal treatment facilities
 Parks or playgrounds
 Pipelines or related facilities
 Public utilities - natural gas

This entity has reported to the Comptroller that it possesses eminent domain authority pursuant to the following provisions of Texas law:

Local Government Code	Section 335.071
Local Government Code	552.002
Local Government Code	Section 374.015
Local Government Code	Section 331.003
Local Government Code	552.017
Local Government Code	Section 572.013
Local Government Code	601.040
Local Government Code	601.040
Health and Safety Code	Section 262.028
Natural Resources Code	Section 183.057
Transportation Code	Section 224.002
Local Government Code	Section 392.061
Texas Constitution	Article 11, Section 5
Transportation Code	Section 311.032
Health and Safety Code	Section 265.052
Texas Constitution	Article 1, Section 17
Local Government Code	Section 241.903
Local Government Code	552.102
Local Government Code	552.011
Local Government Code	571.004
Tax Code	Section 311.008
Transportation Code	Section 311.092
Utilities Code	Section 186.054
Government Code	Section 1505.114
Local Government Code	Section 572.012
Local Government Code	Section 392.056
Local Government Code	Section 571.004
Local Government Code	Section 251.001
Local Government Code	601.027
Local Government Code	601.027
Local Government Code	Section 280.001
Transportation Code	Section 022.011
Transportation Code	Section 317.007
Local Government Code	552.013
Transportation Code	Section 173.159
Local Government Code	281.050
Local Government Code	Section 331.001
Local Government Code	Section 214.136
Local Government Code	281.051
Transportation Code	Section 314.011
Local Government Code	Section 280.003
Transportation Code	Section 311.033
Water Code	Section 11.033
Government Code	Section 1506.060
Local Government Code	Section 273.001

ATTACHMENT 7

SUPPLEMENT TO CORPUS CHRISTI WATER CONSERVATION PLAN TO ADDRESS TAC § 288.7

WATER CONSERVATION PLAN

**Supplement to Corpus Christi Water Conservation Plan
To Address TAC § 288.7**

Water Conservation Plans Submitted with a Water Right Application for New or Additional State Water

This supplement to Corpus Christi's Water Conservation Plan addresses the requirement of §288.7 of the Texas Administrative Code that a water conservation plan submitted with an application for a new or additional appropriation of water must include data and information which:

1. Supports the applicant's proposed use of water with consideration of the water conservation goals of the WCP;
2. Evaluates conservation as an alternative to the proposed appropriation; and
3. Evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and marketing, regionalization, and optimum water management practices and procedures.

Applicant's proposed use of water. The applicant (City of Corpus Christi) proposes to use the water as requested from the Inner Harbor and La Quinta Channel by desalination and use for municipal purposes within Aransas, Kleberg, Nueces and San Patricio Counties. This water would be used to meet water supply needs within those counties, including retail sales to residential, commercial, manufacturing and institutional customers. Water needs were identified through the state water planning process, which considers reduced per capita water use that is consistent with the goals of Corpus Christi's WCP.

Conservation as an alternative to the requested appropriation. As part of the regional planning process, the planning groups are required to perform a comprehensive analysis of potentially feasibly water management strategies, including consideration of water conservation. The proposed water right application supports a recommended project in the 2016 Region N Water Plan and 2017 State Water Plan. The five-year and ten-year per capita goals outlined in Corpus Christi's WCP are consistent with the 2016 Region N projections. In addition, this project promotes regionalization and serves as an alternative to existing fresh water supplies that further promotes conservation of existing fresh water supplies.

Other feasible alternatives. The proposed amount of appropriation outlined in the application is consistent with the 2016 Region N Plan as evidenced by a letter attached with the water right application.

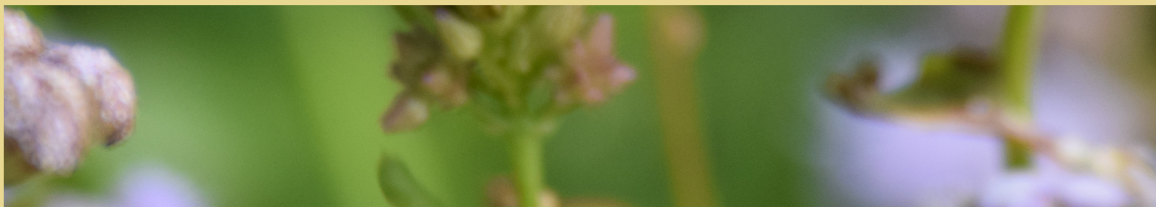
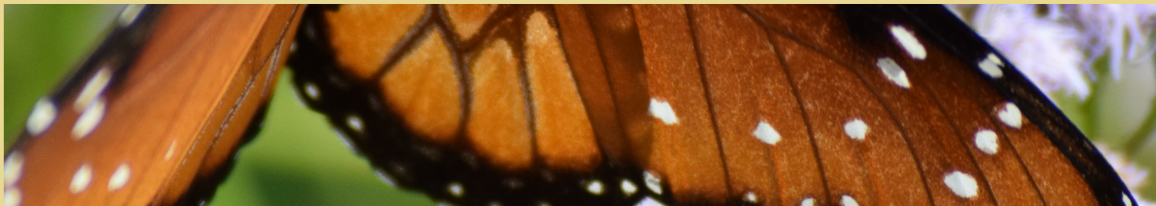
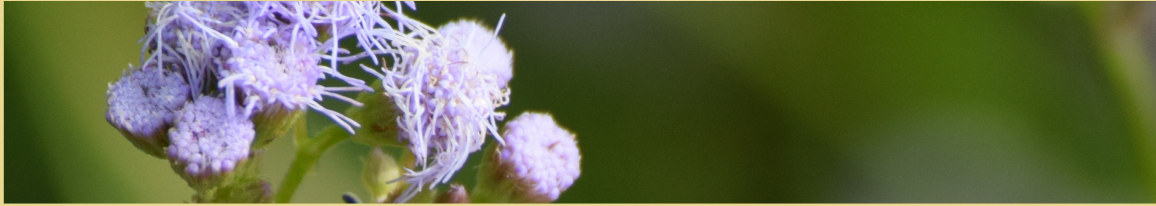
The 2016 Region N Plan identified additional potentially feasible alternatives to the proposed desalination project to meet needs in Nueces County which include:

- GBRA Lower Basin Off-Channel Reservoir
- Additional Reuse – Corpus Christi
- Manufacturing Water Conservation
- O.N. Stevens WTP Improvements

The 2016 Region N Plan identified additional potentially feasible alternatives to the proposed desalination project to meet needs in San Patricio County which include:

- GBRA Lower Basin Off-Channel Reservoir
- Manufacturing Water Conservation
- Portland Reuse Pipeline
- SPMWD Industrial WTP Improvements

Desalination is the only recommended strategy that has sufficient quantity to meet the projected needs in these counties.



City of Corpus Christi
WATER CONSERVATION
PLAN 2019



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Water Conservation Plan

2019

City of Corpus Christi, Texas



Water Conservation Plan

1. Introduction

This Water Conservation Plan (WCP) is a guidebook and reference manual for the City of Corpus Christi Water Utilities, its partners and customers. This introduction chapter outlines the background of the City of Corpus Christi's Water Utilities, the purpose and reasoning of the WCP, expected results, and an overview of its layout and organization.

1.1 Background of the Water Department

The City of Corpus Christi Water Utilities has been in operation for over 100 years. It currently serves nearly 500,000 residents of Corpus Christi and the Coastal Bend Region.

Its mission is to effectively manage the City's water supply, production, and distribution system through the operation and maintenance of the water supply system in order to meet water supply needs; to provide safe drinking water; to review design and construction of water facilities that will ensure water system quantity and reliability to meet projected growth; and to identify and meet consumer needs and expectations.

The Water Utilities supplies water for municipal and industrial use in a seven-county service area. Major raw (untreated) water customers include municipalities (Alice Water Authority, Beeville Water Supply District, City of Mathis, and San Patricio Municipal Water District) and industries (Celanese and Flint Hills Resources). Treated water customers include Nueces County Water Improvement District No. 4 (Port Aransas), San Patricio Municipal Water District, South Texas Water Authority, and the Violet Water Supply Corporation. The Water Utilities operates a water laboratory and water maintenance activity that oversees the repair and replacement of transmission and distribution service water lines. .

The Water Utilities also has a well-established conservation program. The City was the first in Texas to develop a Drought Contingency Plan in 1986, which served as a guide for state officials. Since 1988 there has been a conservation coordinator and/or team of professionals developing and implementing outreach programs to help reduce water waste and improve efficiency. Conservation outreach includes everything from school education to the Xeriscape Garden and is explained in detail in Chapter 5.

1.2 Purpose of the Plan

The purpose of this WCP is to ensure long-term water security and efficiency for the residents and businesses served by the City of Corpus Christi Water Utilities. This long-term planning and management is critical so that supplies of water will always meet and exceed the demands of Coastal Bend customers. It allows water supplies to be sustainable as the region grows. Short-term water security and planning during dry times is explained in a separate Drought Contingency Plan, which is included as a supporting document.

As a water supplier, the City of Corpus Christi is also required to have its Plan adhere to Title 30, of the Texas Administrative Code (TAC) Chapter 288 (30 TAC § 288). This Plan contains all of the provisions required in 30 TAC § 288, including conservation plans for municipal users and wholesale providers, and a drought contingency plan.

General and specific goals of the Plan are explained in Chapter 4.

1.3 Public Involvement

The City provided opportunity for citizens to receive information about the Plan, at multiple meeting with the Water Resource Advisory Committee on December 6, 2018, August 16, 2018 and March 28, 2019. The notice was posted on the official electronic bulletin board in the atrium of Corpus Christi City Hall.

1.4 Organization of the Water Conservation Plan

This revised WCP is organized in a way to make information easy to find and understand. This plan is a separate document from the Drought Contingency Plan (DCP). The chapters guide the reader through the most important issues and are shown below. The end of the WCP contains appendices of other documents that are useful for the reader to understand main chapters.

- **Chapter 1:** Introduction – the basics of the Water Department, purpose of the Plan, and organization of the Plan.
- **Chapter 2:** Supply Profile – details of the supply of the Water Department including the water sources, distribution system, and water treatment plant.
- **Chapter 3:** Demand Profile – details of the current customer population and demand, and estimated projections of future population and demands. Demands are provided in totals and divided into sectors.
- **Chapter 4:** Goals – benefits of conservation; overall water planning and conservation goals; quantifiable five- and ten-year conservation goals and water loss goals based on per capita consumption.
- **Chapter 5:** Water Conservation Practices – efforts that encourage and/or enforce the conservation of water, or that increase the efficiency of water use.
- **Appendices:** includes the Utility Profile, Summary of TCEQ 2001 Agreed Order Provisions, Water Rates, and Reservoir Operating Plan.

2. Supply Profile

This Chapter explains the four sources from which the City gets water supply to its customers in the Coastal Bend region. In addition to the supply sources, the distribution system, water treatment plant, and the wastewater utility profile are briefly explained.

2.1 Supply Sources

The City of Corpus Christi Water Utilities obtains its raw water solely from surface water sources. These surface water bodies are Lake Corpus Christi, Choke Canyon Reservoir, Lake Texana and the Colorado River of each of these water bodies are explained below.

Lake Corpus Christi

Lake Corpus Christi is a water storage reservoir located approximately 33 miles northwest of the City. It was completed on April 26, 1958 with the dedication of the Wesley Seale Dam. When full, the lake level is 94 feet above sea level and has a capacity of 256,339 acre-feet (83.5 billion gallons). The surface area of the reservoir is 19,748 acres (30.8 mi²).

Lake Corpus Christi is part of the Nueces River Basin (or watershed). It receives inflow from the Nueces, Frio, and Atascosa Rivers. Inflow from the Frio River also goes through the Choke Canyon Reservoir. Supply in Lake Corpus Christi relies on rainfall from the whole Nueces/Frio River basin. These two watersheds covers a combined area of 16,764 square miles and reach as far north as Rocksprings in Edwards county, and west close to Eagle Pass in Maverick County.

Choke Canyon Reservoir

Choke Canyon Reservoir is located approximately 70 miles northwest of Corpus Christi. It has a capacity of 662,821 acre-feet (215 billion gallons). When it is full, the water level is 220.5 feet above sea level, and the surface area is 25,989 acres (39.7 mi²).

The United States Bureau of Reclamation financed, designed, and built the reservoir, which was dedicated on June 8, 1982. The City operates and maintains the facility.

Choke Canyon Reservoir receives inflow from the Frio River Basin. This watershed covers an area of 5,529 square miles from Three Rivers in the south to Kerr County in the north. Water from the reservoir drains into the Frio River, which drains into the Nueces River and then Lake Corpus Christi.

Lake Texana

The third surface source of water for the City is Lake Texana in Jackson County, located approximately 90 miles northeast of Corpus Christi. When full, the lake has a capacity of 161,085 acre-feet (52.5 billion gallons) and the water level is 44 feet above sea level. Its surface area when full is 9,727 acres (15.2 mi²).

Lake Texana was formed with the completion of the Palmetto Bend Dam in 1980 by the U.S. Bureau of Reclamation. It is on the Navidad River, which is part of the Lavaca River Basin and mainly flows through Lavaca and Jackson Counties. The Lake is currently owned and operated by the Lavaca-Navidad River Authority (LNRA).

The City contracted 41,840 acre-feet from LNRA in the 1990s after a severe drought between 1993 and 1996. During that time, Nueces River Basin stream-flows were the lowest recorded, even lower than the much-remembered 1950s Drought. The current water supply contract is for 31,440 acre-feet after the LNRA recalled 10,400 acre-feet.

To deliver that water to Corpus Christi, the City, the Nueces River Authority, the Port of Corpus Christi and the Lavaca-Navidad River Authority worked together to deliver water via a new pipeline from Lake Texana. The 101-mile-long pipeline was named for the late Mary Rhodes, mayor of Corpus Christi from 1991 to 1997, in recognition of her special contribution to the development of water resources for the residents and industries of the Coastal Bend. The pipeline came online in September 1998. It pumps water through a 64-inch pipeline from Lake Texana directly to the O.N. Stevens Water Treatment Plant in Calallen. Approximately 40 to 70 percent of the water used by Corpus Christi comes from Lake Texana through the Mary Rhodes Pipeline.

Colorado River

On September 22nd 1992 the City of Corpus Christi entered into a contract with the Garwood Irrigation Company to purchase up to 35,000 acre-foot per year portion of the Garwood's 168,000 acre-foot per year water right. In 2010 the City of Corpus Christi began the initial steps of planning and designing Mary Rhodes Pipeline Phase II and construction of the 42-mile pipeline started in April 2014. The project consisted of a pipeline, pump station and a sedimentation basin that starts at the Colorado River near Bay City and connect to Phase I of the pipeline at Lake Texana.

A map of the regional water supply system and watershed is show on the next page in Figure 2.1.

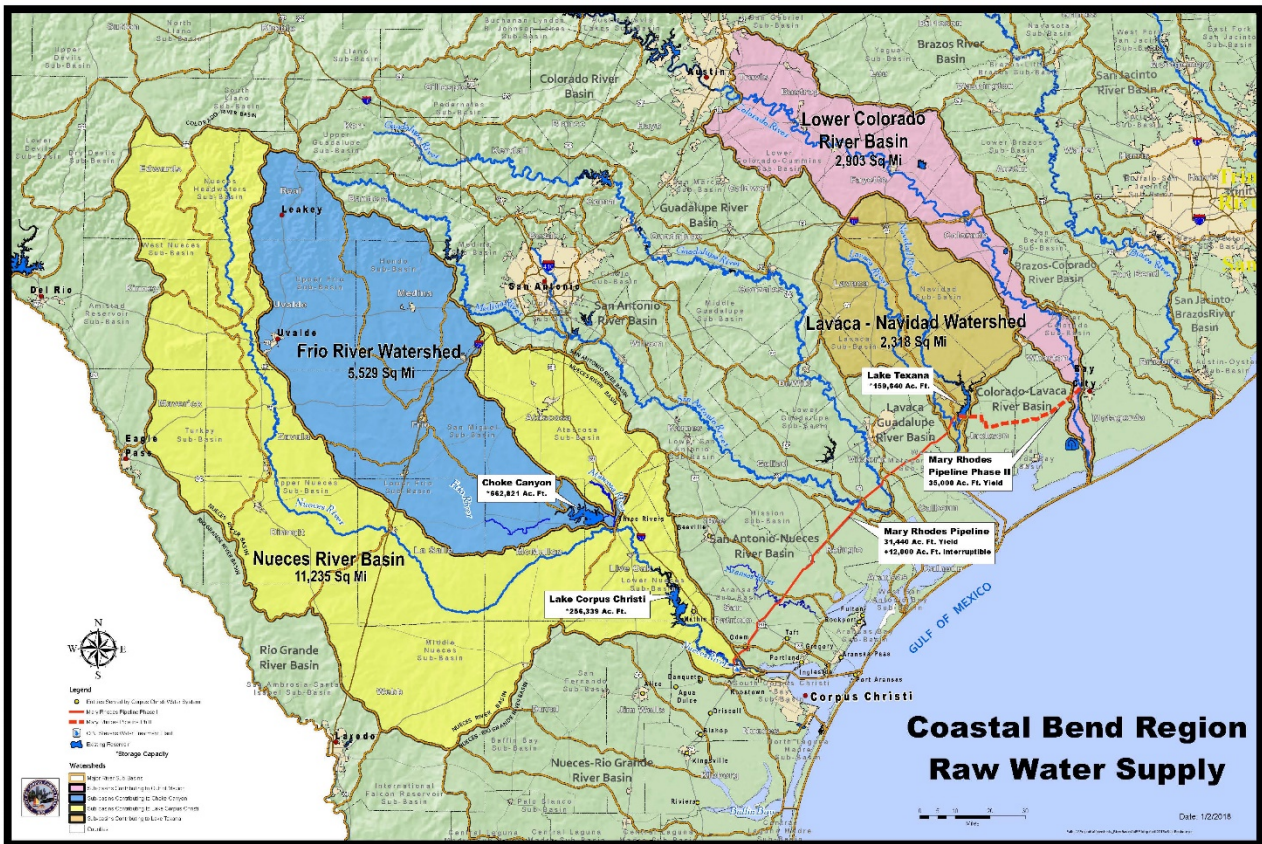


Figure 2.1. Map of the Coastal Bend Regional Water Supply, including the three surface water supply reservoirs

2.2 Potential Future Sources (Undeveloped Sources)

To meet the demands of a growing community, the City has been taking steps to ensure future water supplies.

The City is involved with the Corpus Christi Aquifer Storage and Recovery Conservation District (CCASRCD). This groundwater conservation district was formed in 2005 by the 79th Texas Legislature and is:

"...dedicated to protecting groundwater supplies within the District, developing and maintaining an aquifer storage and recovery program, providing the most efficient use of groundwater resources to supplement existing supplies, while controlling and preventing waste of groundwater."

The CCASRCD is currently exploring the possibility of using groundwater aquifers as storage for extra supply for the City. During wetter-than-normal years, the City would pump excess, partially-treated water into the aquifer storage area, which is not subject to water loss from evaporation. Water from the storage area could then be used during drought periods. A similar project by the San Antonio Water System stores over 90,000 acre-feet of water as an emergency supply.

The City of Corpus Christi is also working on the early development activities for a procurement of a Seawater Desalination project with a base design output from 10 to 20 MGD produced at either 1 or 2 plants located on the Corpus Christi Ship Channel or La Quinta Channel area in the Coastal Bend.

Other potential future sources of water supply are still being researched and explored. A detailed list of water management solutions for the Coastal Bend Region can be found in the Region N 2016 Regional Water Plan, found at:

<https://www.twdb.state.tx.us/waterplanning/rwp/regions/n/>.

2.3 Water Customers

The City has both wholesale and retail customers who purchase water from the supply system.

Wholesale Customers

The wholesale customers are water utilities or businesses who purchase the water in bulk, and then bill their own respective customers. The City provides both raw and treated water to wholesale customers. Those wholesale customers receiving raw water pump it directly from the source. The following wholesale customers receive raw water: Alice, Beeville, Mathis, Robstown, and San Patricio Municipal Water District (MWD). In addition, Celanese and Flint Hills Resources receive raw water, but are industrial, not wholesale customers. Those utilities/companies have their own water treatment facilities to treat the water to potable levels. Other wholesale customers purchase the water from the City after it has been treated at the O.N. Stevens Water Treatment Plant (explained in next section). These customers include: Port Aransas, San Patricio MWD, South Texas Water Authority, and Violet Water Supply.

Retail Customers

The remaining customers receive their water directly from the City. These retail customers are billed individually. They receive their water after it has gone through the O.N. Stevens Water Treatment Plant.

2.4 Water Treatment Plant

The O.N. Stevens Water Treatment Plant, located in Calallen, is the only water treatment facility for the City. All raw water is pumped directly to the Plant from either the Nueces River or Lake Texana (via the Mary Rhodes Pipeline). Once in the Plant, Nueces River water is blended with Lake Texana water and then treated to meet drinking water standards of the Texas Commission on Environmental Quality (TCEQ). After being treated for human consumption, large master pumps help to distribute water into the City and to its wholesale water customers.

Approximately 25 billion gallons of water are treated each year. The O. N. Stevens Water Treatment Plant has a rated capacity of 167 million gallons per day, well above the current peak summer demand of around 100 million gallons per day.

2.5 Distribution

The Water Department has an extensive distribution network that transports water from the O.N. Stevens Water Treatment Plan throughout the City to every customer, both individual and wholesale. The Water Department operates five pumping stations and four elevated storage tanks, and maintains 1,600 miles of pipeline.

2.6 Master Meter

In order to keep track of diverted water, the City uses a series of Master Meters from its points of diversion. The City itself uses meters to track water use from the Nueces River system and Mary Rhodes Pipeline. In addition, City staff keeps monthly records through meters of seven other wholesale and industrial customers who divert raw water from City's water supply.

2.7 Wastewater Utility Profile

The Utility Profile, a detailed summary of the City's water and wastewater systems is included in Appendix A.

3. Demand Profile

This chapter explains demands placed on the water supply system of the City. Water demand is a measure of how much water is being used. Knowing current demand is critical for the City's daily operations. Projecting future demands helps City workers plan for future growth.

The region's population provides the basis of its water demands. Therefore this chapter will begin in 3.1 with an overview of current population figures of Corpus Christi and the Coastal Bend Region.

The water demands in the Coastal Bend area are complex because of the various customers that the City serves. Besides its own retail customers in and around Corpus Christi, the City provides wholesale water to utilities that serve 18 *other* cities and 2 businesses. These people and businesses have their own unique water demands. In addition, there are other demands on the supply system, including evaporation from the reservoirs and environmental inflows into the Nueces Bay and Delta.

Because the demands on the supply system are so complex, the next sections are divided as follows: Section 3.2 will discuss demands based on *raw water* diversions, or water taken directly from the supply source. Section 3.3 will include evaporation and environmental inflows. Section 3.4 will discuss demand on *treated water*, or water that is consumed in the City. This section will also look at demand based on customer type. Section 3.5 will discuss seasonal demand, including summertime peaks. In Section 3.6, projected demands and populations will be discussed.

3.1 Current Population

According to the Texas demographic Information the population of the Water Department’s total customer area was close to a half a million people. The majority of this was in the City of Corpus Christi with a population of 305,215. The other 18 cities that depend on Corpus Christi for their water, and their estimated 2017 populations, are show in Table 3.1.

Table 3.1 Estimated 2017 populations for the cities in the Coastal Bend serviced by the City of Corpus Christi Water Department.

City	Population (2010)	City	Population (2010)
Alice	18,499	Kingsville	25,595
Aqua Dulce	830	Mathis	4,821
Aransas Pass	8,952	Odem	2,423
Banquete	774	Port Aransas	4,206
Beeville	12,224	Portland	21,619
Bishop	3,222	Riviera	1,960
Driscoll	738	Robstown	11,392
Fulton	1,588	Rockport	10,635
Gregory	1,967	Taft	2,999
Ingleside	9,748	Three Rivers	1,925

3.2 Raw Water Diversions

The raw water demand is the amount of water taken directly (diverted) out of the water supply system. It provides the most basic view of demand on the system and gives an overview of where the water is going. As was explained in Chapter 2, the City has several raw water customers in addition to diverting its own water.

After raw water has been diverted from either the Nueces River System or Lake Texana, it is pumped to a water treatment plant. All of the raw water customers have their own water treatment facilities, which clean and disinfect the water before sending it to *their* customers. Each have their own demands, based on retail customer characteristics (Treated water demands are explained in Section 3.4).

In 2018, the total amount of raw water diverted from the City's water supplies for consumption was 102,880 acre-feet (33.5 bil gal). This included water from both the Nueces River System and Lake Texana. The raw water demands of each customer from the Nueces River System are shown below in Table 3.2.

Table 3.2 Raw water demands (diversions) in 2018 from Nueces River System by customer (acre-feet and million gallons).

Raw Water Customer	Diversion Amount (ac-ft)	Diversion Amount (MG)
Alice	3,955	1,288
Beeville	3,665	1,194
Mathis	767	249
Celanese	2,065	672
Flint Hill Resources	2,522	821
San Patricio MWD	9,825	3201
Corpus Christi	37,201	12,121

The raw water demands of the San Patricio MWD and Corpus Christi from Lake Texana and Mary Rhodes Pipeline are shown below in Table 3.3.

Table 3.3. Raw water demand (diversions) in 2011 from Lake Texas & Mary Rhodes Pipeline by Customer (acre-ft and million gallons).

Raw Water Customer	Diversion Amount (ac-ft)	Diversion Amount (MG)
San Patricio MWD	10,645	3,468
Corpus Christi	32,210	10,495

In 2018, the City of Corpus Christi received 60% of its raw water from the Nueces River System and 40% from Lake Texana and the Mary Rhodes Pipeline.

3.3 Other Raw Water Demands

One uncontrolled demand of water placed on the supply system is evaporation. As mentioned in Chapter 2, the two reservoirs of the Nueces River supply system cover a large surface area of 45,186 acres when full. Because of this large area, combined with high evapotranspiration rates, water loss to evaporation is high, especially in recent hot, dry years.

Another raw water demand is environmental flow. After the impoundment of Choke Canyon Reservoir in 1982, freshwater flowing in the Nueces River Delta decreased dramatically. In order to maintain an ecosystem balance in the Delta, the City worked with TCEQ, the Nueces River Authority, and the City of Three Rivers to develop an Agreed Order in 1995. This document, revised in 2001, outlines required monthly freshwater inflows by the City into the Delta (Table 3.4). The 2001 Agreed Ordered is included in Appendix B.

Table 3.4. Target Inflows to Nueces Bay from the 2001 Agreed Order (*When lake levels are above 70%)

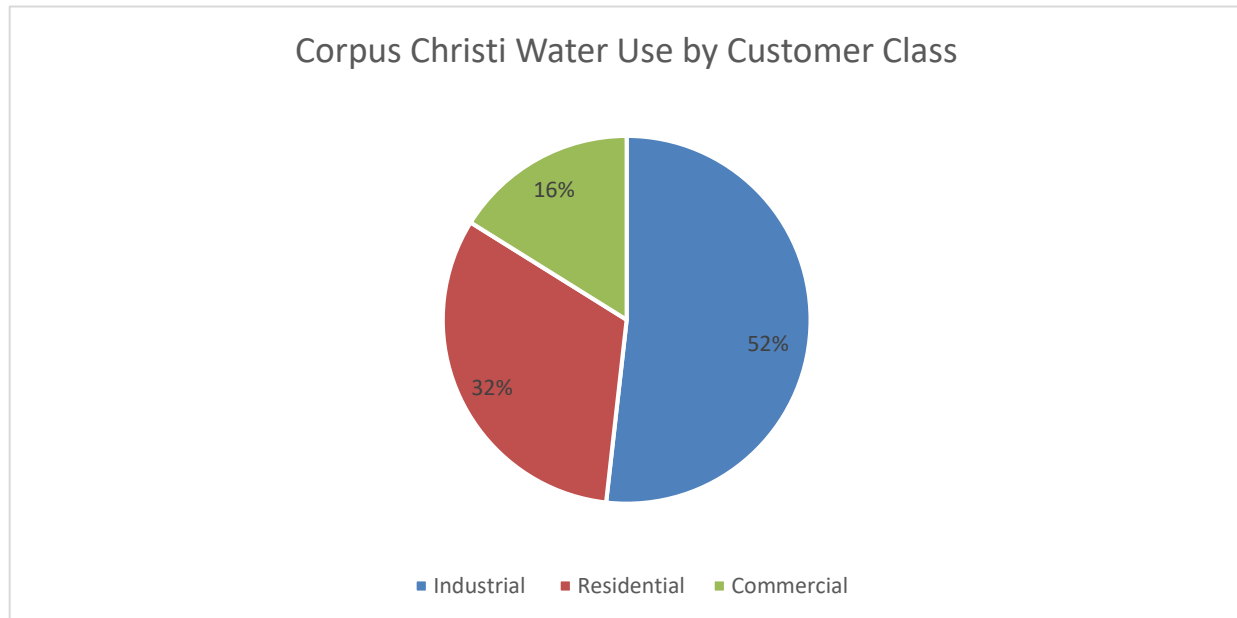
Month	Target Inflows (ac-ft)	Month	Target Inflows (ac-ft)
January	2,500	July	6,500
February	2,500	August	6,500
March	3,500	September	28,500
April	3,500	October	20,000
May	25,500	November	9,000
June	25,000	December	4,500

3.4 Treated Water Demands

In 2018, the Corpus Christi Utility Business Office billed the use of 99,819 ac-ft (32.5 bil gal) of water, coming from the O.N. Stevens Water Treatment Plant in Calallen.

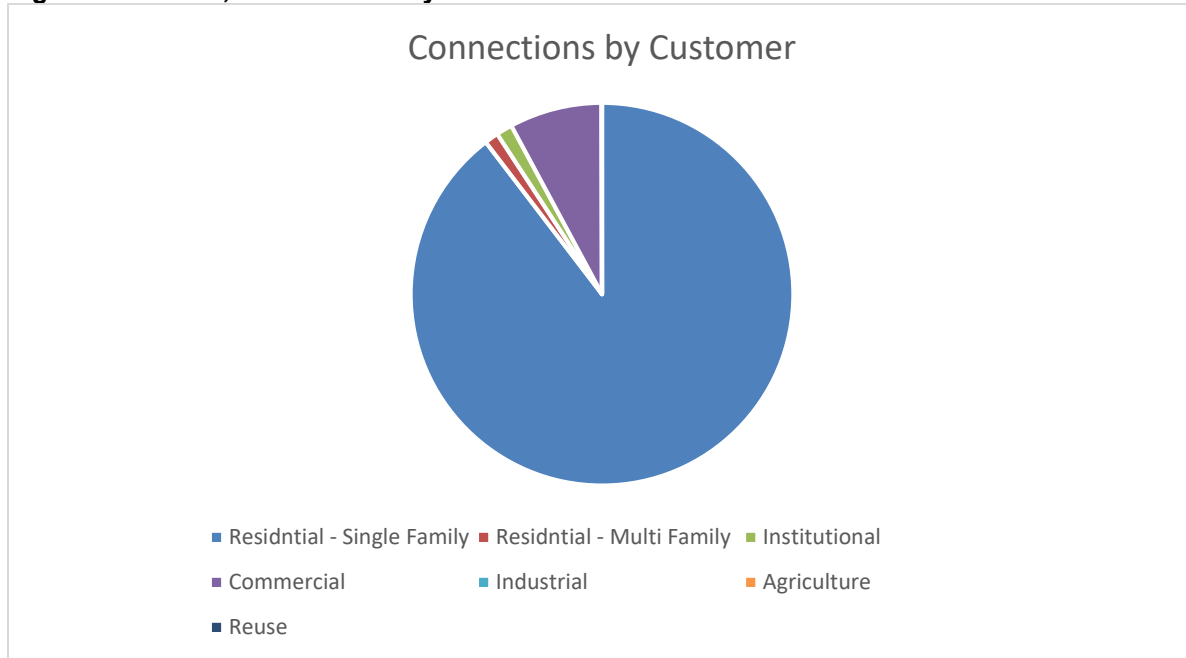
Separating treated demand by customer class, industrial customers represent the highest demand. Of the 99,819 ac-ft billed usage in 2018, industrial customers used just over 34,000 ac-ft or 52 percent of the total. Residential customers consumed 21,201 ac-ft, representing 32 percent of the total. See Figure 3.4 below.

Figure 3.4. Water Use by Customer Class



In 2018, there was approximately 95,803 treated water connections. These connections can be divided into the customer classes of residential, multi-family, commercial, industrial, wholesale, and government use. Figure 3.4.1. Below shows a breakdown of connections by customer type. Both Institutional (1,307 connections) and industrial (31 connections) customers have so few connections that they constitute far less than the total connections. Residential Single Family customers make up the largest percentage of connections with 90 percent.

Figure 3.4.1 2018, Connections by Customer



3.5 Seasonal Demands

Seasonal demands by customers lead to “peak demands.” These peak demands put the most amount of stress on operations, including distribution and treatment. It is extremely important that peak demand for the city remains under 167 million gallons per day, which is the maximum volume that the O.N. Stevens Water Treatment Plant can treat. Figure 3.5 below shows daily treatment plant production volumes for each month of 2018 as minimums, maximums, and averages. The maximum values of each month (in green) represent the peak demand volume for that month. 2018 was a dry year, maximum production never reached above 100 MGD.

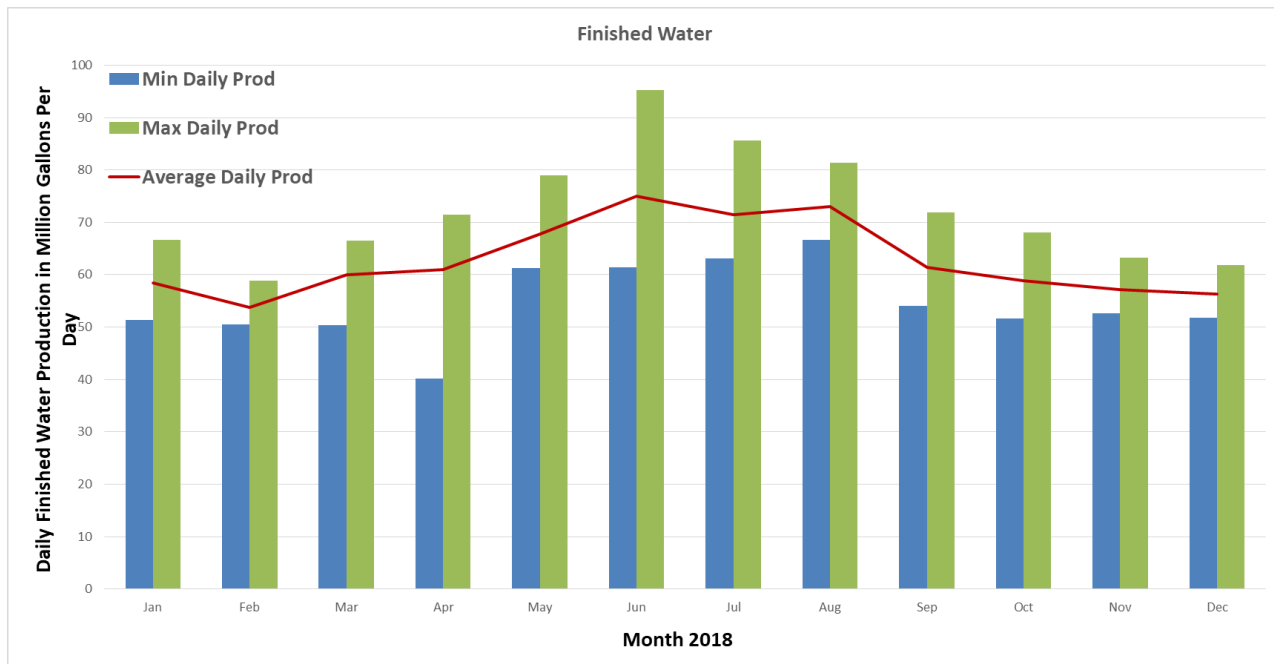


Figure 3.5. Daily production volumes of the O.N. Stevens Water Treatment Plant, showing seasonal demand as minimums, maximums, and averages for each month of 2018.

3.6 Projected Populations and Demands

The Texas Water Development Board estimates population projections for regional water planning groups. For Corpus Christi, they estimate that the population could reach 403,638 by the year 2060. This increase in population will result in an increase in water demand.

The TWDB estimates that municipal water demand (residential and commercial) for Corpus Christi will increase 40% by 2060, reaching 86,962 ac-ft per year. These projections are for the City of Corpus Christi only. Other cities that rely on Corpus Christi for water will also have increases in population and demand, resulting in an even higher demand on the supply system.

However, these projections only factor in a minor decrease in per capita water use from conservation measures. A more aggressive conservation program could help municipal demand level off or decrease, even with an increase in population. A goal of 1% annual reduction in municipal consumption (greater than the 0.9% population growth) would defer the need for additional supplies. This goal, along with others, is explained next in Chapter 4.

Projecting industrial consumption, which comprises over 30% of the City's water use, is challenging considering the large volumes that one additional customer can demand. The Region N Water Planning Group projects treated industry water demand could increase by 5,422 acre-feet by 2060. Other industrial demands not receiving treated water from the City are expected to increase by 29,000 acre-feet by 2060.

4. Goals

This Chapter explains the water conservation goals of the City. These goals are what the City aims to achieve by the implementation of this Plan. Included in these goals are both qualitative goals and measurable, quantifiable goals. Before these goals are discussed, the first section (4.1) explains the benefits of conservation. This will give reason and justification for the City's conservation efforts and provide a driving factor for the goals.

4.1 Benefits of Conservation

There are several benefits to having a strong conservation program for Corpus Christi. These benefits not only include maintaining the City's water supply, but also include saving the City and residents money by deferring capital expenses. Other benefits may be more difficult to quantify or may take years to materialize, but that does not lessen their importance. Each benefit of conservation listed below will help the City of Corpus Christi grow and thrive at a sustainable rate. The benefits of conservation include:

- **Sustainable Water Supply** – By reducing per capita water use, the City can grow without compromising supplies for future generations.
- **Reduces Peak Demand** – Peak demand puts the most stress on the Water Department's operations. Conservation measures would help to reduce this peak demand.
- **Reduces Energy Costs** – The City spends a significant portion of its electric bill on moving water through its distribution system. Conservation would reduce the amount of water pumped, thus reducing electric costs.
- **Reduces Wastewater Costs** – Less water being used by residents equals less wastewater that needs to be treated. Having less wastewater will save the City in treatment costs.

4.2 Water Planning/Conservation Goals and Objectives

The main, overall goal of this Plan is to *reduce total per capita consumption by one percent annually over the next decade*. This goal uses the 2018 figure of 209 gallons per capita per day (gpcd) as the benchmark for reduction. Another related goal is to reduce summertime peak demand. To achieve these goals, the City has several specific conservation objectives. Those objectives include:

- Reduce water loss by one percent annually
- Educate the public on water conservation practices
- Educate the public on the City's water resources
- Implement incentive and/or rebate programs to encourage conservation
- Convert some drought restrictions into regular conservation measures
- Adopt new water conservation regulations
- Enforce the conservation regulations
- Implement conservation measures at city-owned facilities

4.3 Five and Ten-Year Quantifiable Conservation Goals

As mentioned in the previous section, the goal of the Plan is to decrease total per capita water consumption by one percent each year. To track the progress of the goal, the City records the gpcd every year and sets five and ten year goals. This gpcd is measured by taking the volume of water produced by the O.N. Steven Water Treatment Plant, excluding water sold to treated wholesale customers, and dividing it by the permanent population and then dividing it by 365 days. Because industry uses close to 52% of the treated water, Corpus Christi’s gpcd is greater than most Texas cities. In addition, there is high variability in annual consumption due to changes in weather. Residents tend to use much more water in dry years to keep landscape vegetation alive. The total gpcd, residential gpcd, and water loss are show in Tables 4.1-4.3 below. The five and ten year goals listed below in Table 4.4, and are based on a 1% annual reduction from the 2018 consumption of 209 gpcd.

Table 4.1. Total Gallons Per Capita Per Day (gpcd) in 2018

Total System Input in Gallons ¹	Permanent Population	Total gpcd ²
24,790,604,708	325,605	209

1. Equals water produced + wholesale imported – wholesale exported
2. Equals system input ÷ permanent population ÷ 365 days

Table 4.2. Residential Gallons Per Capita Per Day (gpcd) in 2018

Residential Use in Gallons (single + multi-family)	Residential Population	Residential gpcd ²
7,932,993,506	325,605	66

1. Single family + multi-family
2. Equals residential use ÷ residential population ÷ 365 days

Table 4.3. Total Water Loss (Fiscal Year 2018)

Total Water Loss in Gallons ¹	Permanent Population	Water Loss ²	
		GPCD	Percent
1,661,530,363	325,605	14	6.70

1. Equals real + apparent + unidentified losses
2. Equals total water loss ÷ permanent population ÷ 365 days

Table 4.4. Targets and Goals

Achieve Date	Target for Total GPCD	Target for Residential GPCD	Target for Water Loss	Target for Water Loss Percentage
Five-Year Target Date: 2024	195	60	1,611,000,000	6.5
Ten-Year Target Date: 2029	184	56	1,487,000,000	6.0

4.4 Schedule for Implementing Plan

In order to achieve the targets and goals of the plan, the City will use the schedule below in Table 4.5 to gradually introduce new or strengthen existing conservation measures and programs. These programs will utilize all and possibly additional measures as detailed in Chapter 5. The measures aim to reduce per capita water use through changes in habit, improvements in efficient devices, decreases in water waste, and smart planning. This schedule is not all inclusive and is a living document and is therefore subject to change.

Conservation Measures	Purpose	Target Date
Plumber to people	Reduce leak in homes of lower income residents	Planning
School education	Educate youth about water resources and the importance of conservation	Ongoing
Public information	Educate the public about water conservation through several media outlets	Ongoing
Xeriscape education	Educate the public about Xeriscaping through the Xeriscape garden, fliers and the annual symposium	Ongoing
Use of Reclaimed Water	Reduce potable demand by increasing the number of golf courses parks etc. that are using reclaimed water for irrigation	Ongoing
System Water Audit and Water Loss	To identify areas of water loss to target remediation efforts	Annually
Park Water Conservation	Reduce consumption by the City by improving irrigation	Ongoing
Prohibition on wasting water	Reduce consumption by prohibiting the wasting of water regardless of drought conditions	Ongoing

Irrigation Timing	To reduce evaporative loss and waste by prohibiting sprinkler irrigation between 10am and 6pm regardless of drought conditions	Ongoing
Restaurant water saving	Reducing water waste by requiring restaurants to only serve water upon request	Ongoing
Rainwater harvesting rebate	Reduce potable demand by encouraging rainwater harvesting	Ongoing
Changes to Unified Development Code	Make change in the UDC to include certain requirements in new construction for rainwater harvesting condensate collection car washes cooling towers, laundry facilities and site appropriate turf grass	Ongoing

5. Water Conservation Practices

5.1 Introduction

Water conservation is any practice that reduces the use of water, whether through changes in practices or improvements in the efficiencies of water devices. Reducing the use of water reduces the stress placed on water supplies and their ecosystems. It also frees up water supplies to allow for population and economic growth without having to search for “new” water. Conservation is a cost-effective and commonsense approach to ensuring a sustainable water supply for generations to come.

The City has a long-standing commitment to promoting water conservation in the community. It has adopted several practices, ranging from public education to conservation pricing, that encourage a reduction in excessive water use. As was mentioned in Chapter 4 (Goals), the long term goal of the conservation program is to *reduce per capita water use by one percent per year over the next decade*. This Chapter highlights all of the ways that the City intends to reach that goal.

Chapter 5 begins with conservation measures (5.2). These are regulated best-management practices that are in effect year-round, regardless of the drought condition or the levels of the City’s reservoirs. Section 5.3 explains planned changes to development and building codes that would make buildings and landscapes more water efficient, while Section 5.4 explains the current code related to landscaping. Section 5.5 explains Rebates and Incentives, which include Plumbers to People, Rainwater Harvesting Rebate, and an Irrigation Consultation Program. Section 5.6, discusses City-Led Programs, including reclaimed water use, improvements to City-Owned properties, park water conservation, metering, system audits, and a water conservation staff. This is followed by Section 5.7, which highlights the educational efforts by the City, including both schools and public programs, and Section 5.8 on water conservation pricing. The last two parts of Section 5 explain coordination with the Region N Water Planning Group, methods to monitor the effectiveness of the various conservation practices, and means of implementation and enforcement.

5.2 Water Conservation Measures

As water demands increase and water supplies become less available, it is critical that water conservation measures become regular, year-round best management practices. They are common sense approaches that reduce water waste and improve efficiency. This section lists those water conservation measures that are regulated and enforceable. They are the only measures in the WCP that are enforceable. The Water Resource Management Ordinance (Section 55) gives the City the authority to enforce these measures and is included in Appendix A. Explanations of each of these conservation measures are shown below:

5.2.1 Prohibition on Wasting Water

Under the Prohibition on Wasting Water Conservation Measure, it is unlawful to waste water. Actions leading to the wasting of water are prohibited and will be enforced. No person shall:

1. Allow water to run off property into gutters or streets.
2. Permit or maintain defective plumbing in a home, business establishment or any location where water is used on the premises. Defective plumbing includes out-of-repair water closets, underground leaks, defective or leaking faucets and taps.
3. Allow water to flow constantly through a tap, hydrant, valve, or otherwise by any use of water connected to the City water system.
4. Use any non-recycling decorative water fountain.
5. Allow irrigation heads or sprinklers to spray directly on paved surfaces such as driveways, parking lots, and sidewalks in public right-of-ways;
6. Operate an irrigation system at water pressure higher than recommended, causing heads to mist, or to operate with broken heads.

5.2.2 Irrigation Timing

Landscape irrigation is most efficient during early-morning or nighttime hours, when there is less potential for evaporation from the sun. This conservation measure prohibits irrigation by spray or sprinklers between the hours of 10 am and 6 pm. It is still permissible to water by hand or by drip irrigation at any time of the day.

5.2.3 Restaurant Water Saving

Under this conservation measure, commercial dining facilities must only serve water upon request. In addition, any hand-held dish-rinsing wand must have an automatic shut-off.

5.2.4 Voluntary Conservation Measures

When the combined storage in the Choke Canyon/Lake Corpus Christi reservoir system 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 the total system storage capacity.

5.3 Future Updates to Codes

Another water conservation practice that will help to conserve water in the long term is updates and improvements to codes. The City has adopted several codes for development and construction, which are updated on a regular basis. There are several codes which could be updated or amended to include requirements for water conservation. A list of *potential* updates to codes is included below. The process of updating these codes is ongoing and will be included in the WCP as an amendment when complete. *These bulleted items are proposed updates only and are listed here as a placeholder.*

- **Car Wash Water Conservation** – Many commercial car washes in the region do not recycle water in their operations. Under this proposed measure, new car washes using an automatic system would need to reuse a minimum of fifty (50) percent of water from vehicle rinses in subsequent washes. All car washes that are self-service would have to have spray wands that do not emit more than three (3) gallons of water per minute.
- **Water Saving Plumbing Fixtures** – This proposed conservation measure would require plumbing fixtures to meet or exceed the standards set by the WaterSense label of the Environmental Protection Agency (EPA). The fixtures would include gravity flush toilets, bathroom aerators, showerheads, and urinals. This measure would apply to new plumbing installations
- **Laundry Facility Conservation** – Under this proposed measure, any new installation of a coin-operated washing machine would have to meet or exceed the standards for the most current Energy Star label of the EPA and Department of Energy. This measure applies to any location that may have a coin operated facility, such as laundromats, apartment communities, or university residential buildings.
- **Cooling Tower Recycling** – This proposed conservation measure would require newly constructed cooling towers to utilize recycled water for a minimum of four (4) cycles.
- **Rainwater Harvesting** – This proposed conservation measure would require any new building construction with a minimum roof surface area of ten-thousand (10,000) square feet to install a rainwater collection system. The stored water could be used for non-potable indoor use and/or outdoor irrigation.
- **Condensate Collection** – Under this proposed measure, any new commercial building with an air conditioning system would be required to divert and collect the condensate water. This water could be used in cooling tower operation or landscape irrigation.
- **Xeriscaping Landscaping** – This proposed measure would allow xeriscaping as an option for landscaping in any residential neighborhood or subdivision, regardless of deed restrictions. It also would require homebuilders and/or developers who are constructing new, single-family residential homes to offer a xeriscaping option.

- **Turfgrass Species Requirement**—This proposed conservation measure would promote the use of turfgrass appropriately suited for a particular site in order to save on irrigation water. For any new construction, the turfgrass species/variety installed on a property would have to be chosen from a list of approved species. In addition, irrigated turfgrass would not be able to exceed 50% of the landscaped area.

5.4 Landscaping Standard

The City adopted a Landscape Standard as part of its Unified Development Code (Section 7.3 of the UDC). This standard requires landscape plantings within commercial developments to enhance the beauty of the City. The ordinance assigns points to the various plant materials. To encourage the use of water-wise landscaping, drought-tolerant and low-water-use species are assigned a higher point value. To comply, a landscape design must surpass an established threshold number of points, which is achieved more easily with the water-wise and drought-tolerant plants.

5.5 Rebates and Incentive Programs

This section explains the programs that the City offers to provide assistance to customers who wish to implement water conserving practices. These programs include the current Plumbers to People program and is planning an Irrigation Consultation Program. Additional rebate and incentive options are being researched.

5.5.1 Plumbers to People

Plumbers to People is an affordability program to provide plumbing assistance to low-income residential customers seeking to repair plumbing fixtures in their homes. The intent of the program is two-fold: (1) to eliminate the cycle of uncollected high water bills resulting from water leaks; (2) to promote water conservation.

Persons eligible for the program must contact the Utility Business Office (UBO) to identify their eligibility for the program. Eligibility is based on the individual's income limits and need for assistance.

The UBO office arranges for a contracted plumber to do repairs at the individual's home. The plumber will fix minor leaks or other issues, then send a report and invoice back to the UBO office.

5.5.2 Rainwater Harvesting Rebate

The City is has a rainwater harvesting rebate program. Under this program, customers of the Water Department will be eligible to purchase and installation of a rain barrel. There will be specific requirements, such as a minimal size (55 gallons) and mandatory screening to prevent mosquito entry. The Water Department plans to support the program.

5.5.3 Irrigation Consultation Program

The City is planning an Irrigation Consultation Program to reduce water waste and improve efficiency on large, existing irrigation systems. The service will be free to commercial sites and tells property owners how they can make meaningful changes to their irrigation system. It will begin with a consultation request from the property owner of a large irrigation system. The Water Department will coordinate a consultation with a contracted, licensed irrigator for that property. The licensed irrigator will perform a thorough inspection of the irrigation system's performance.

A report with recommendations will be provided to the property owner and the Water Department. The recommendations may include ways that the property owners can drastically reduce water consumption. The Water Department will analyze each report and may provide assistance with the recommended changes, depending on the cost and benefits. One year after the inspection, a follow-up will be performed to see if recommendations were implemented and how much water consumption was decreased.

5.6 City-Led Water Conservation Programs

This section explains the programs that the City has initiated in order to improve its own efficiency and promote conservation to its residents. These programs include the use of reclaimed water, improvements in City-owned properties, park water conservation, accurate water metering, and a system to audit water loss. It also includes the use of a permanent, full-time water conservation staff.

5.6.1 Use of Reclaimed Water

Reclaimed water by definition is, "Domestic or municipal wastewater which has been treated to a quality suitable for a beneficial use, pursuant to the provisions of this chapter and other applicable rules and permits" (30 TAC §210.3(24)). The City currently has five reclaimed water use customers and recognizes that the direct use of reclaimed water is an effective method of reducing potable water usage. Corpus Christi reclaimed water is used primarily for irrigating recreational tracts.

Historically, Corpus Christi began its reuse program in the early 1960s when it began delivering reclaimed effluent to its first customer, the Gabe Lozano Golf Course. Over the next several decades, the City acquired additional reuse customers which include other golf courses, parks, and recreational areas. Approximately 2.5 percent of the City's overall effluent flows are reused as reclaimed water.

In 2017, the City supplied 63 million gallons of reclaimed water to its irrigation customers, saving an estimated 100% of the same amount in potable water.

To facilitate expansion of its reuse program in the future, the City will identify and rank industrial, commercial, and institutional (ICI) customers according to volume of water use, and investigate the feasibility of using reclaimed water. The City will also investigate reuse opportunities within its own accounts or with third parties outside its service area. The City owns several public areas that are candidates for reuse.

5.6.2 Improvements in City-owned Properties

In order to be a representative of its conservation message, the City has pushed for increased Xeriscape landscaping of City-owned properties. This includes water-wise landscaping at the Water Department building, and the Xeriscape Design Garden and Learning Center at the Museum and Science and History in downtown Corpus Christi (see Section 5.6.3). The Water Department will encourage the future conversion of City landscaping to more water-wise design.

Also, the City has been proactive in replacing out-dated, inefficient plumbing fixtures in its buildings. In addition, the City plans to install a rainwater harvesting system at the Water Utilities building to be used for on-site irrigation.

5.6.3 Identifying and Repairing Leaks

The Water Department has a full team of employees committed to identifying and repairing leaks in water distribution throughout the City. A crew of round-the-clock responders follow the procedure below to find and fix a leak:

1. A first responder is sent to the location to identify and mark the priority of the leak. Response time is 30 minutes to an hour.
2. Crews begin to turn the needed valves to isolate the leaking line. Line locates are called in to mark all other utility lines in the area of the leak prior to repairs. Depending on the severity of the leak these locates can take up to approx. 24 hours
3. After line locates are complete, Distribution Leak crews respond to the leak and make all needed repairs.
4. After repairs are complete, the D & D crews back fill the area and replace grass as needed.

5.6.4 Park Water Conservation

The City of Corpus Christi Parks and Recreation Department manages two golf courses, two large City-wide parks, five recreation centers, four decorative fountains, eight public swimming pools, and more than 200 neighborhood parks, some with irrigated athletic fields.

Because many of the parks in the City require irrigation, it is critical that proper conservation measures are in place so the City demonstrates and promotes those measures to the public. The Water Department works with the Parks and Recreation Department to implement several water conservation practices within the park system. Some of these measures include:

1. Converting manual irrigation systems to automatic irrigation systems.
2. Including the parks properties in the water system audit.
3. Voluntarily adopting Landscape Ordinance provisions of the Corpus Christi Zoning Ordinance (explained in Section 5.2.12).
4. Replacing several spray irrigation heads with drip irrigation.

Some of the conservation measures that the City is pursuing for the future include:

1. Updating automatic irrigation systems with a “smart” Baseline Controller, which can remotely control up to 50 irrigation zones with 10 different programs. These include moisture sensors in the soil.
2. Implementing an irrigation consultation program to target specific areas where water efficiency improvements can be made.
3. Converting turfgrass species to more site-appropriate varieties to reduce water use.

To track the progress of water conservation in the parks, the Water Department will gather the following:

1. Water savings resulting from the offset of potable water use by irrigating with reclaimed waste water.
2. Water savings attributable to the repairs of leaks
3. Changes to irrigation systems, retrofits, or upgrades; regular leak detection; maintenance policies, and estimated water savings from conservation practices.
4. Estimated water savings attributable to the changes implemented.
5. Costs of repairs, equipment upgrades, or new equipment installed.

The Water Department will evaluate data from sites before and after significant irrigation system changes or upgrades. The City maintains performance measure software to monitor the progress of leaks repaired. The Maximo software will identify individual categories to estimate the volume of water savings attributable to repairs of leaks.

5.6.5 Metering All Connections

Metering is a critical aspect in water conservation. It provides a method for customers to relate their water usage to their utility bill. For the City, meters help keep track of water use in order to target areas of inefficiency or locate areas where there may be potential leaks. New technology allows the city to track water use remotely and alert employees when there are spikes in water use among customers.

The following elements are part of the City’s on-going metering program:

1. Required metering of all connections.
2. A policy for installation of adequate, proper-sized meters as determined by a customer's current water use patterns.
3. Direct utility metering of each duplex, triplex, and four-plex unit, whether each is on its own separate lot or there are multiple buildings on a single commercial lot.
4. Metering of all utility and publicly owned facilities.
5. Use of construction meters and access keys to account for water used in new

- construction.
6. Implementation of the State requirements in HB 2404, passed by the 77th Legislature Regular Session and implemented through Texas Water Code 13.502, which requires all new apartments be either directly metered by the utility or submetered by the owner.
 7. Annual testing and maintenance of all meters larger than two inches. Regular replacement of 5/8" and 3/4" meters after 15 years of service.
 8. Replacement of meter registers or entire meter every eight years.
 9. An accounting of water savings and revenue gains through the implementation of the Water Department's meter repair and replacement procedures.

Each year the Water Department estimates its annual water savings from the program. Savings can be estimated based upon a statistical sample analyzed as part of the meter repair and replacement program.

The City maintains a meter replacement policy based upon a customer's concern about the accuracy of his meter. Annual records of replaced meters are maintained through the City's Maximo software. Meter replacement takes precedence over meter repair due to the cost of repairing old meters. The City has improved efficiency and cut water loss by purging old meters and converting standard meters to automated meter reading (AMR.). The AMR program is a metering system that remotely records usage and accurately integrates that data into the billing system. Around 99 percent of the City's water meters have been installed with the AMR, benefiting the City by improving meter accuracy and reducing the cost of reading meters manually.

5.6.6 Record Management

The City's has a system of record management to classify customers by sector for billing purposes and to keep track of water consumption by class. The billing system has the ability to categorize customers into sectors that can be summarized into those required by the Texas Water Development Board and the Texas Commission on Environmental Quality. These sectors include: residential (including single-family and multi-family); commercial; institutional; industrial; and wholesale (the City does not have any agricultural customers).

5.6.7 System Water Audit and Water Loss

As with any aging infrastructure system, the City does have water loss between the treatment plant and the point of use. In order to reduce this water loss, the City performs an annual system water audit. This estimate of system water efficiency is achieved by comparing water delivered to the treatment plant, potable water produced, and water sold. The Water Department tracks numerous leak detection and repair activities and is able to evaluate its success using the asset management software to compile and track work orders. Using this data from the audit, the City is able to focus on specific areas where improvements in efficiency can be achieved.

5.6.8 Water Conservation Staff

The Water Department has two staff members who coordinate and implement water conservation programs for the City and its service area. These employees include the Water Resource Planner and the Management Assistant. They are critical to ensuring the success of the City's overall conservation program.

The *Water Resource Planner* is responsible for planning conservation programs; seeking and identifying new opportunities in conservation and water supply; program analysis; contributions as a member of regional workgroups (BBACS, GMAs, Region N, Nueces Feasibility, CCASRCD); assistance with educational/promotional material; planning Irrigation Consultation Program; meetings with stakeholders; assistance with marketing strategies for conservation programs; assistance with annual conservation budget; assistance to the Water Resource Advisory Committee; preparation and submittal of annual conservation status reports to Water Department management.

The *Management Assistant* is responsible for the City's water public relations and marketing; implementing conservation programs; conservation education and marketing; coordinating with other departments and wholesale customers; coordinating programs within the Water Department; development of marketing strategies for conservation programs; management of consultants, and contractors, when appropriate; preparation of annual conservation budget; assistance to the Water Resource Advisory Committee.

This conservation team takes part in several educational events and programs, which are explained in detail in section 5.7.

5.7 Education

One of the most effective ways to improve conservation and water-use efficiency is through education. The Water Department is very active in educating its customers and has several programs to do so. The Water Department has two purposes for its educational programs: to disseminate information and to change behavior. Information dissemination is education that makes the public aware of something timely, such as a current drought stage and its implications. A change in behavior occurs when education teaches the public practices that should be permanently adopted. Behavioral changes take place over a longer span of time than information dissemination, but both purposes are critical to a well-informed public.

This section highlights the educational programs that the Water Department plans, manages, and implements. These programs include school education, public information, and the water-wise landscape and conservation program.

5.7.1 School Education

School education programs increase the viability of water conservation efforts, enhance the utility's public image, contribute to the attainment of Texas state education goals by students, and increase customer goodwill. The message conveyed by students to their families based upon greater knowledge of water sources and conservation can lead to

behavioral changes resulting in both short- and long-term water savings.

The Water Department offers various school educational programs to all grade levels throughout the City of Corpus Christi. These programs include:

- Major Rivers – Part of the 4th grade curriculum, the program educates students on water conservation, supply, treatment, distribution and conservation. The self-contained program offers academic and hands-on activities in math, language arts, science, and social studies, with teacher's guide geared to the interdisciplinary curriculum, as well as an introductory video and home information leaflets.
- Learning to be Water Wise – This program is used in 5th grade classrooms to connect science, math, language arts, and social studies with water conservation activities. Boxed kits, which include a toilet water displacement bag, toilet leak detector tablets, showerhead and faucet aerators, and instructions for repairing common toilet leaks, are given to each student.
- Water Source Book – The Water Source Book, developed by the Water Environment Federation, reinforces water resource issues with hands-on classroom activities and experiments for grades 6 through 8. The classroom activities feature water, wastewater, and storm water experiments. This book is provided by the City to all local school resource libraries. Continuing education workshops introduce local classroom teachers to the Water Source Book. Teachers can utilize this teaching aid to satisfy certain TEKS objectives as established by the Texas Education Agency.
- Coastal Bend Teacher Resource Extravaganza – As a member of the Coastal Bend Informal Educators (CBIE), the City Water Department sponsors this event, which brings environmental resources to teachers throughout the Texas Education Agency Region 2 area. The City Water Department also participates in this annual event, offering valuable opportunities and resources for teachers, students and the general public.
- Museum of Science and History – The Corpus Christi Museum of Science and History houses an educational gazebo, targeted to children, featuring various showcases and an 8-foot interactive topographic map of the Nueces River Basin. The touch of a button activates lights and sound to explain the area's water resources. Displays throughout the Xeriscape Learning Center and Design Garden are used as teaching tools for children and adults.
- Other educational events – The Water Department provides age-appropriate water resources teaching materials at several public events. Materials include *Splash Activity Book*, *My Book About Water and How to Use it Wisely*, and *The Story of Drinking Water*. Spanish material is also available upon request.

The Water Department continues to offer the programs mentioned above, being sure to stay up-to-date on any changing information related to water. They also continue to stay connected to local schools in order to identify any new potential opportunities.

To keep track of the impact of these various programs, the Water Department records:

- The number of presentations made
- The number and type of curriculum materials developed and/or provided
- The number and percent of students reached by presentations and by curriculum
- Annual budget related to conservation.

5.7.2 Public Information

The Water Department employs several types of media resources and modes of mass communication to present a compelling and consistent message about the importance of conservation and water use efficiency. The overall goal of the public information program is to raise awareness among customers of the regional water resources and the importance of conservation. The public information is also used to convey urgent messages, such as those about drought or emergencies. Each year in June, the Water Department mails a Consumer Confidence Report to every customer. This report is available online to anyone including new customers. It explains water quality and explains to customers where they can get more information on water conservation.

The Water Department employs the following methods to raise water resources awareness and to instill the importance of conservation in the community:

- Multi-tiered media campaign – Annual television, radio, and print campaigns promoting water use efficiency. Agreements with radio and television stations provide for matching airtime for each ad purchased by the City.
- Billboard advertisement – Ads on billboards, bus benches, and other public spaces are used to promote water conservation and water quality.
- Website – The Department's Water Conservation website includes tips on outdoor and indoor conservation, Xeriscape landscaping, irrigation regulations, and educational materials for youth.
- Printed brochures – The City provides the public with printed brochures on various topics ranging from Xeriscaping to indoor water conservation. They are produced by several entities, including the Water Department, the Texas Water Development Board, and Texas A&M AgriLife Extension and are available at multiple City locations and programs.
- School Education – Programs targeted to grade schools.
- Xeriscape Learning Center and Design Garden – As part of the Corpus Christi Museum of Science and History, the Xeriscape Corpus Christi Steering Committee, in partnership with the City, maintains a Xeriscape demonstration garden with more than 100 plant varieties. Within the garden an educational gazebo, The Water Story Exhibit, showcases an 8-foot interactive topographic map of the Nueces River Basin. A second gazebo named the Learning Center features practical landscape ideas and photographs. Educational Walk 'n' Talk Tours are held annually to enhance public education.
- City Call Center and Request Line – The City's Call Center (361 826-CITY) was created to encourage customers to report water line breaks and to request service calls. Customers may also utilize a dedicated Water Hotline number (361 826-1600)

to request water conservation kits and other information.

To track the progress and effectiveness of this educational effort, the Water Department collects and tracks the following information:

- Number of activities, pieces of information distributed, and number of customers at an activity or program;
- Number of public school children who received instruction in water resources or water conservation;
- Number of news programs or advertisements that featured the water conservation message and how many customers had the opportunity to receive each message;
- Total budget by category for public information; and
- Results of annual or biannual customer survey and/or focus groups to determine the reach and impact of the program.

Water savings due to public information efforts are difficult to quantify. Water savings for other public information programs that result in specific actions by customers, such as changes in irrigation scheduling or reduction in water waste occurrences, may be quantified through surveys or analysis of water waste reporting in future years.

5.7.3 Water-Wise Landscape Design and Conservation Program

The use of water for outdoor irrigation can often account for over 50% of a customer's consumption. The purpose of this program is to decrease both peak summertime water consumption and overall water use through the installation of water-wise landscapes at residential and commercial properties, and through improved efficiency of existing landscapes. Water-wise landscaping involves not only plant selection, but continued attention to appropriate irrigation and landscape maintenance. The program is multifaceted, implemented through a landscape standard (Section 5.4), school education (Section 5.7.1), public outreach (Section 5.7.2), and city-implemented measures (Section 5.6).

Below are some public-outreach programs explained in more detail that specialize in water-wise landscaping or emphasize the importance of using less outdoor water.

- *Xeriscape To-Go: Planning and Designing a Gardener's Dream* – This brochure, available in both print and online, was designed to educate local residents on the benefits of Xeriscape landscaping. It features a list of plants suitable for the Coastal Bend and an explanation of the seven principles of Xeriscaping.
- *Xeriscape: Landscape with Less Water* – A brochure detailing the seven principles of Xeriscape.
- *Purple Water-Wise Plant Labels* – A brochure produced in cooperation with Xeriscape Corpus Christi, commercial nurseries, and Texas A&M AgriLife Extension to bring public awareness to lists of plants that are proven performers in the Coastal Bend since 2004. Water-wise plants are labeled with purple tags at commercial

nurseries for easy identification. Purple labels are affixed to water-wise and drought-tolerant plants offered at retail nurseries.

To encourage the seven principles of Xeriscape landscaping, the non-profit organization, Xeriscape Corpus Christi, was formed. The organization built and maintains a demonstration Xeriscape garden at the Museum of Science and History. The steering committee's members include the City of Corpus Christi Water Department, Storm Water Department, Park and Recreation Department, Corpus Christi Museum of Science and History, Friends of the Museum, Mayor's Water Conservation Advisory Committee, Nueces County Master Gardeners, and Texas A&M AgriLife Extension of Nueces County.

5.8 Water Conservation Pricing

One of the most effective methods to influence water consumption is through changes in price structure. Water conservation pricing is a type of structure that promotes conservation by making the water rate higher as consumption increases. Another term for this type of structure is increasing block rate. The City has an increasing block rate structure for residential customers which is not "promotional." It ensures that residents receive their most basic needed water at a reasonable price, which covers the fixed costs of the Water Department. They are billed on actual metered water use. As consumption goes into discretionary amounts, the price per gallon increases, resulting in a higher bill. A copy of the current water rate structure is attached as Appendix C.

At least annually, the Water Department staff will review consumption patterns (including seasonal use) and the income and expense levels to determine if the conservation rates are effective. They then make appropriate, regular rate structure adjustments as needed. In the past, such studies resulted in an elimination of the decreasing block rate for industrial accounts and increasing block rates for residential customers. In order to further encourage conservation, the Water Department will examine the follow potential pricing measures:

1. Seasonal rates to reduce peak demands during summer months.
2. Increasing block rates for other customer classes.
3. Restructuring of commercial rate structure to an increasing block rate.

The successful transition to a new rate structure will include public input and a process to educate the community about the new rate structure. Public involvement in the development and implementation of conservation rates helps to assure that the goals of the conservation pricing initiatives are met and accepted by local constituents. Public meetings, advisory groups, and public announcements are among ways to generate public involvement.

5.9 Coordination with Region N (Coastal Bend) Regional Water Planning Group

The service area of the City of Corpus Christi is located within the Coastal Bend, designated as Region N Planning area, and the City has provided a copy of its Water Conservation and Drought Contingency Plan to the Coastal Bend Regional Water Planning Group (RWPG). The Region N Planning Group was initially appointed by the Texas Water Development Board (TWDB), under the authority of Senate Bill 1, and includes representatives from 12 interests including the public, counties, municipalities, industries, agriculture, the environment, small businesses, electric-generating utilities, port authorities, river authorities, water districts, and

water utilities from across the region. This Plan is consistent with the City's role as a leader in water supply planning in Region N, and meets the standards for water conservation planning in TAC Chapter 288.

5.10 Method to Monitor the Effectiveness of Conservation Measures

The best way to monitor to the effectiveness of the conservation measures of this chapter is to track the per capita water use. As was mentioned in Chapter 4, the goal of this Plan is to reduce per capita water use (gcpd) by one percent each year over the next decade. Successful water conservation measures will result in a reduction of that per capita water use. Because water use can vary each year due to weather conditions, the City will consider rainfall amounts when analyzing water use.

5.11 Means of Implementation and Enforcement

The Water Resource Management Ordinance provides the legal authority for the City of Corpus Christi to enforce certain conservation measures and all drought contingency measures. A copy of the Water Resource Management Ordinance (Section 55) is attached as a supporting document.

5.12 Reservoir System Operating Plan

Because all customers rely on the reservoir systems for their supplies, they are subject to the Reservoir Operating Plan. A copy of this is included in Appendix D. Wholesale Customer Conservation

6. Wholesale Customer Conservation

6.1 Introduction

The City of Corpus Christi serves four wholesale customers with treated water and seven wholesale customers with raw water. As part of the 2019 Water Conservation Planning Process, the City has organized and held meetings with the customers to receive feedback on the revised Plan. Because these customers use the same source water as the City, it is important that they are kept informed and provide input into the City's decision making processes.

This chapter explains the conservation goals that the City encourages its wholesale customers to adopt. Though wholesale customers outside of city limits are not legally bound by the ordinances of Corpus Christi, the City requires the wholesale customers to adopt conservation measures outlined in the Plan. It helps to ensure the region's water security and also ensures that customers, both inside and out of the City, are treated equitably. Section 6.5 explains the contractual requirements between the City and its wholesale customers.

6.2 Wholesale Customer Targets and Goals

The best way to reduce water waste and increase conservation is to set targets and goals. As was mentioned in Chapter 4, the City of Corpus Christi has set a water conservation goal of one percent annual reduction in consumption. This amounts to 184 gpcd in 2023. The City,

though it has no authority to require it, suggests to each its wholesale customers to also try to achieve a one percent annual reduction in consumption. The Coastal Bend Regional Water Planning Group recommends consumption reductions and they are shown below in Table 6.1. The gpcd of each wholesale customer is shown with the 2017 and 2024 consumption goals. Though the group's targets are not as aggressive as the City's, they still help in conserving the region's water supplies.

Table 6.1 Wholesale Customer Consumption and Goals of Regional Water Planning Group (gpcd)

Wholesale Customer	2017 Consumption	2024 Consumption Goals
Alice Water Authority	155	135
Beeville Water Supply District	140	100
City of Mathis	119	112
Nueces County WCID 4 (Port Aransas)	187	179
San Patricio Municipal Water District	118	111
South Texas Water Authority	155	152
Violet Water Supply Corporation	151	148

6.3 Metering, Monitoring, and Records Management

The City meters all water diverted from the raw water supply to its wholesale customers. The City also meters all treated water delivered to its wholesale customers. By contrast, these meters are calibrated on a semiannual basis, and must be accurate within 2 percent. The meters are read on a monthly basis for billing purposes.

A summary report is prepared, which aggregates all meter readings from wholesale raw water meters, wholesale treated water meters, and all retail customers, as well as the readings from the meters at the intake to the O. N. Stevens Water Treatment.

6.4 Leak Detection and Repair

The treated water wholesale customers are supplied from portions of the City's distribution system. The meter location is the point of sale at which the water enters the customer's system. From there, it is the customer's responsibility to operate and maintain. The portions of the City's distribution system that serve these wholesale customers are subject to the same leak detection and repair program described Section 5.4.5, System Water Audit and Water Loss.

All raw water delivery systems to the wholesale customers are owned and operated by those customers. Therefore, they are responsible for any leak detection and repair programs as well as for unaccounted-for water. Wholesale customers are encouraged to voluntarily report their results to the City in order to promote cooperative efficiency efforts. In addition, wholesale customers are encouraged to keep their water loss rates below ten percent.

6.5 Contractual Requirements

The City has in place valid contracts with various wholesale customers including raw water contracts with municipal water suppliers: Alice Water Authority, Beeville Water Supply District, City of Mathis, and San Patricio Municipal Water District. Treated water customers include Nueces County Water Improvement District No. 4 (Port Aransas), San Patricio Municipal Water District, South Texas Water Authority, and the Violet Water Supply Corporation. Industrial wholesale customers include Celanese and Flint Hills Resources. All of these contracts contain language related to water use restrictions in drought situations. Each contract has a section requiring the customer to accept shortages in supply, should natural or unforeseen circumstances prevent the City from delivering the water. With the exceptions of the Beeville Water Supply District and San Patricio Municipal Water District contracts, the contracts further stipulate that should there be a shortage in the basic supply of water which requires the restriction or curtailing of any consumer of water within the city limits of Corpus Christi, *that the wholesale customer limit and restrict all of its customers to the same extent.*

The Beeville Water Supply District requires the district to reduce its average raw water consumption by specific percentages whenever the City declares water shortage conditions. The district is required to reduce its average raw water consumption by 10% when the reservoirs fall below 50% (Stage 1), 20% when the reservoirs fall below 40% (Stage 2), 30% when the reservoirs fall below 30% (Stage 3), and to cease raw water withdrawals when reservoir storage levels drop below 20% (Stage 4). In exchange, the District is excused from contract minimum payments during the time of shortage; and it has the discretion to supplement river water with groundwater in lieu of imposing water use restrictions on its customers.

The San Patricio Municipal Water District has the discretion to either implement water conservation and drought measures similar to those imposed by the City or to reduce the water it takes from the City's water supply system. If the district elects to reduce the amount of water it takes from the City's water supply system, the reductions are based on the average deliveries for the same month of the year over the three previous years. The percent of the reduction is based on the available water in the City's reservoir system. The required decrease in the amount of water that can be taken is 10% when the reservoirs fall below 50% (Stage 1), 20% when the reservoirs fall below 40% (Stage 2), 30% when the reservoirs fall below 30% (Stage 3), and 60% when the reservoirs fall below 20% (Stage 4). In the most recent contract with San Patricio Municipal Water District, language concerning year-round water conservation is included. As the need to renegotiate other contracts arises, the City will include contract language requiring conformance with applicable state and federal regulations concerning water conservation.

The City will require in every wholesale water supply contract entered into or renewed after official adoption of this Plan (by either ordinance, resolution, or tariff), including any contract extension, that each successive wholesale customer develop and implement a water conservation plan and drought contingency plan or water management measures using the applicable elements in this Plan and City's Drought Contingency Plan (City Ordinance 55-151). If the customer intends to resell the water, the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation and drought contingency requirements so that each successive customer in the resale of the water will be required to implement water conservation measures and drought contingency measures in accordance with

the provisions of this Plan and the Drought Contingency Plan.

6.6 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 Appendix D.

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

CONTACT INFORMATION

Name of Utility:

Public Water Supply Identification Number (PWS ID):

Certificate of Convenience and Necessity (CCN) Number:

Surface Water Right ID Number:

Wastewater ID Number:

Contact: First Name: Last Name:

Title:

Address: City: State:

Zip Code: Zip+4: Email:

Telephone Number: Date:

Is this person the designated Conservation Coordinator? Yes No

Regional Water Planning Group:

Groundwater Conservation District:

Our records indicate that you:

- Received financial assistance of \$500,000 or more from TWDB
- Have 3,300 or more retail connections
- Have a surface water right with TCEQ

A. Population and Service Area Data

1. Current service area size in square miles:

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

2. Historical service area population for the previous five years, starting with the most current year.

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Water Service
2018	325,733	0	
2017	324,074	0	
2016	320,435	229,565	
2015	320,231	180,000	
2014	320,321	0	

3. Projected service area population for the following decades.

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Water Service
2020	332,709	522,572	332,709
2030	362,388	565,243	362,388
2040	381,044	589,035	381,044
2050	391,967	607,332	391,967
2060	400,094	621,759	400,094

4. Described source(s)/method(s) for estimating current and projected populations.

Attached file(s):

File Name	File Description
TWDB supplied pop_Region_N_2021_plan.xlsx	2021 Regional Water Plan Population Projections

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

B. System Input

System input data for the previous five years.

Total System Input = Self-supplied + Imported – Exported

Year	Water Produced in Gallons	Purchased/Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2018	24,053,096,907	0	1,284,475,258	22,768,621,649	192
2017	22,903,189,691	0	1,344,741,237	21,558,448,454	182
2016	25,064,414,141	0	1,327,069,388	23,737,344,753	203
2015	23,269,618,947	15,099,738,852	12,668,445,835	25,700,911,964	220
2014	23,464,359,009	15,322,817,424	12,460,868,091	26,326,308,342	225
Historic Average	23,750,935,739	6,084,511,255	5,817,119,962	24,018,327,032	204

C. Water Supply System

1. Designed daily capacity of system in gallons
2. Storage Capacity
 - 2a. Elevated storage in gallons:
 - 2b. Ground storage in gallons:

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

D. Projected Demands

1. The estimated water supply requirements for the next ten years using population trends, historical water use, economic growth, etc.

Year	Population	Water Demand (gallons)
2020	332,709	34,122,925,486
2021	337,367	34,426,619,523
2022	342,090	34,733,016,437
2023	346,879	35,042,140,283
2024	351,736	35,354,015,332
2025	356,660	35,668,666,068
2026	361,653	35,986,117,196
2027	366,716	36,629,520,542
2028	371,850	36,955,523,275
2029	382,335	37,284,427,432

2. Description of source data and how projected water demands were determined.

The population projections were estimated with a 0.0892% population growth.
Water Demand was projections were estimated with 0.0892%

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

E. High Volume Customers

1. The annual water use for the five highest volume
RETAIL customers.

Customer	Water Use Category	Annual Water Use	Treated or Raw
Valero Corporation	Industrial	3,301,573,000	Treated
Citgo Corporation	Industrial	1,595,461,000	Treated
Flint Hills Resources	Industrial	1,515,210,000	Raw
Celanese Corporation	Industrial	672,885,000	Raw
Corpus Christi Cogeneration	Industrial	535,290,000	Treated

2. The annual water use for the five highest volume
WHOLESALE customers.

Customer	Water Use Category	Annual Water Use	Treated or Raw
San Patricio Municipal Water District	Municipal	6,671,200,000	Raw
City of Alice	Municipal	1,288,750,000	Raw
City of Beeville	Municipal	1,194,250,000	Raw
South Texas Water Authority	Municipal	536,677,300	Treated
Nueces County WCID #4	Municipal	337,100,000	Treated

F. Utility Data Comment Section

Additional comments about utility data.

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

Section II: System Data

A. Retail Water Supplier Connections

1. List of active retail connections by major water use category.

Water Use Category Type	Total Retail Connections (Active + Inactive)	Percent of Total Connections
Residential - Single Family	84,207	89.50 %
Residential - Multi-Family	1,868	1.99 %
Industrial	7	0.01 %
Commercial	7,441	7.91 %
Institutional	568	0.60 %
Agricultural	0	0.00 %
Total	94,091	100.00 %

2. Net number of new retail connections by water use category for the previous five years.

Net Number of New Retail Connections							
Year	Residential - Single Family	Residential - Multi-Family	Industrial	Commercial	Institutional	Agricultural	Total
2018							
2017							
2016							
2015							
2014							

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

B. Accounting Data

The previous five years' gallons of RETAIL water provided in each major water use category.

Year	Residential - Single Family	Residential - Multi-Family	Industrial	Commercial	Institutional	Agricultural	Total
2018	5,546,113,000	1,362,233,000	11,148,298,000	3,471,732,000	1,546,572,000	0	23,074,948,000
2017	6,034,448,450	1,494,068,000	8,188,363,000	3,043,424,000	678,662,000	0	19,438,965,450
2016	5,589,095,000	1,591,016,000	10,794,585,000	3,077,473,000	606,886,000	0	21,659,055,000
2015	6,058,677,000	1,655,549,000	10,927,064,000	3,150,832,000	928,322,000	0	22,720,444,000
2014	6,787,254,000	1,749,437,000	9,548,333,000	3,252,047,000	1,110,879,000		22,447,950,000

C. Residential Water Use

The previous five years residential GPCD for single family and multi-family units.

Year	Residential - Single Family	Residential - Multi-Family	Total Residential
2018	33	33	66
2017	32	32	64
2016	30	31	61
2015	33	33	66
2014	52	21	73
Historic Average	36	30	66

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

D. Annual and Seasonal Water Use

1. The previous five years' gallons of treated water provided to RETAIL customers.

Month	Total Gallons of Treated Water				
	2018	2017	2016	2015	2014
January	1,739,185,225	1,799,185,225	1,817,185,225	1,769,185,225	1,734,185,225
February	1,432,185,225	1,628,185,225	1,747,185,225	1,469,185,225	1,526,185,225
March	1,786,185,225	1,771,185,225	1,722,185,225	1,804,185,225	1,722,185,225
April	1,757,185,225	1,804,185,225	1,573,185,225	1,894,185,225	1,879,185,225
May	2,029,185,225	1,968,185,225	1,694,185,225	1,960,185,225	1,974,185,225
June	2,178,185,225	1,912,185,225	1,755,185,225	2,003,185,225	2,114,185,225
July	2,143,185,225	2,174,185,225	1,991,185,225	2,198,185,225	2,186,185,225
August	2,192,185,225	2,131,185,225	2,078,185,225	2,311,185,225	2,281,185,225
September	1,770,185,225	1,854,185,225	1,859,185,225	2,038,185,225	1,817,185,225
October	1,770,185,225	1,854,185,225	1,751,185,225	1,923,185,225	1,848,185,225
November	1,640,185,225	1,832,185,225	1,635,185,225	1,855,185,225	1,639,185,225
December	1,673,185,225	1,726,185,225	1,665,185,225	1,870,185,225	17,381,185,225
Total	22,111,222,700	22,455,222,700	21,289,222,700	23,096,222,700	38,103,222,700

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

2. The previous five years' gallons of raw water provided to RETAIL customers.

Month	Total Gallons of Raw Water				
	2018	2017	2016	2015	2014
January	115,828,400	184,678,400	96,608,900	45,776,200	99,710,406
February	150,378,000	147,539,000	68,863,800	143,190,200	125,778,486
March	135,481,000	187,304,000	114,625,900	100,729,600	159,992,841
April	181,971,500	153,458,360	120,504,600	73,477,016	167,161,563
May	184,758,200	143,048,640	94,475,200	125,432,194	169,442,520
June	60,706,000	36,786,400	53,759,600	55,820,390	170,094,222
July	120,239,019	60,681,400	183,442,900	148,819,200	171,723,477
August	99,710,406	103,786,000	119,090,200	158,387,000	181,499,007
September	67,777,008	90,382,900	79,231,000	130,416,700	167,212,067
October	153,475,821	146,291,000	145,655,397	145,981,248	192,858,430
November	104,272,320	93,214,400	136,531,569	29,978,292	154,201,400
December	119,913,168	103,185,400	126,756,039	37,147,014	106,544,900
Total	1,494,510,842	1,450,355,900	1,339,545,105	1,195,155,054	1,866,219,319

3. Summary of seasonal and annual water use.

	Summer RETAIL (Treated + Raw)	Total RETAIL (Treated + Raw)
2018	6,794,211,100	23,605,733,542
2017	6,418,809,475	23,905,578,600
2016	6,180,848,375	22,628,767,805
2015	6,875,582,265	24,291,377,754
2014	7,104,872,381	39,969,442,019
Average in Gallons	6,674,864,719.20	26,880,179,944.00

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

E. Water Loss

Water Loss data for the previous five years.

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss as a Percentage
2018	1,968,883,749	17	8.65 %
2017	1,945,982,363	16	9.02 %
2016	1,679,428,947	14	7.08 %
2015	2,597,051,964	22	10.10 %
2014	4,862,031,342	42	18.47 %
Average	2,610,675,673	22	10.66 %

F. Peak Day Use

Average Daily Water Use and Peak Day Water Use for the previous five years.

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2018	64,673,242	73850120	1.1419
2017	65,494,735	69769668	1.0653
2016	61,996,624	67183134	1.0837
2015	66,551,719	74734589	1.1230
2014	109,505,320	77226873	0.7052

G. Summary of Historic Water Use

Water Use Category	Historic Average	Percent of Connections	Percent of Water Use
Residential - Single Family	6,003,117,490	89.50 %	27.45 %
Residential - Multi-Family	1,570,460,600	1.99 %	7.18 %
Industrial	10,121,328,600	0.01 %	46.28 %
Commercial	3,199,101,600	7.91 %	14.63 %
Institutional	974,264,200	0.60 %	4.46 %
Agricultural	0	0.00 %	0.00 %

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

H. System Data Comment Section

Attached file(s):

File Name	File Description
Copy of Water Connections Report for 2018_UBO 31519.xlsx	C.C. Water Connections Report 2018

Section III: Wastewater System Data

A. Wastewater System Data

1. Design capacity of wastewater treatment plant(s) in gallons per day: 42,700,000

2. List of active wastewater connections by major water use category.

Water Use Category	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal		86,971	86,971	90.82 %
Industrial		1	1	0.00 %
Commercial		7,492	7,492	7.82 %
Institutional		1,302	1,302	1.36 %
Agricultural		0	0	0.00 %
Total		95,766	95,766	100.00 %

3. Percentage of water serviced by the wastewater system: 98.00 %

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

4. Number of gallons of wastewater that was treated by the utility for the previous five years.

Month	Total Gallons of Treated Water				
	2018	2017	2016	2015	2014
January	850,000,000	749,000,000	861,000,000	809,000,000	773,000,000
February	724,000,000	693,000,000	721,000,000	738,000,000	694,000,000
March	831,000,000	892,000,000	946,000,000	1,070,000,000	778,000,000
April	757,000,000	770,000,000	806,000,000	1,045,000,000	808,000,000
May	795,000,000	857,000,000	1,054,000,000	1,325,000,000	808,000,000
June	1,030,000,000	878,000,000	898,000,000	937,000,000	760,000,000
July	967,000,000	820,000,000	833,000,000	888,000,000	780,000,000
August	834,000,000	783,000,000	866,000,000	824,000,000	805,000,000
September	1,358,000,000	829,000,000	852,000,000	836,000,000	866,000,000
October	978,000,000	828,000,000	807,000,000	917,000,000	884,000,000
November	889,000,000	765,000,000	770,000,000	833,000,000	841,000,000
December	794,000,000	878,000,000	767,000,000	820,000,000	770,000,000
Total	10,807,000,000	9,742,000,000	10,181,000,000	11,042,000,000	9,567,000,000

5. Could treated wastewater be substituted for potable water?

Yes
 No

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

B. Reuse Data

1. Data by type of recycling and reuse activities implemented during the current reporting period.

Type of Reuse	Total Annual Volume (in gallons)
On-site Irrigation	
Plant wash down	
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (park,golf courses)	35,191,908
Agricultural	
Discharge to surface water	
Evaporation Pond	
Other	
Total	35,191,908

C. Wastewater System Data Comment

Additional comments and files to support or explain wastewater system data listed below.

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

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

- 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.(1) 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

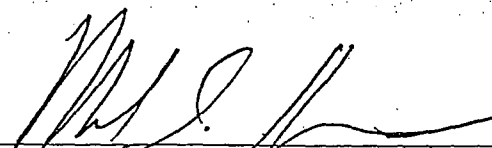
environment and health of related living marine resources and the provision of maximum reasonable credits towards monthly inflow requirements; and,

(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



CITY OF CORPUS CHRISTI
 UTILITY BUSINESS OFFICE
 UTILITY RATE SCHEDULE
 MONTHLY CHARGE FOR WATER SERVICE
 Effective January 1, 2018

MINIMUM MONTHLY CHARGE (FOR FIRST 2,000 GALLONS)

INSIDE CITY LIMITS:			
Meter Size		Residential	Minimum
5/8" x 3/4"	Residential	\$	12.70
5/8" x 3/4"	Commercial		12.70
1"			19.05
1 1/2"			31.70
2"			63.40
3"			101.40
4"			202.80
6"			316.90
8" or larger			633.75

OUTSIDE CITY LIMITS:			
Meter Size		Residential	Minimum
5/8" x 3/4"	Residential	\$	15.25
5/8" x 3/4"	Commercial		15.25
1"			22.85
1 1/2"			38.05
2"			76.05
3"			121.70
4"			243.40
6"			380.25
8" or larger			760.50

MONTHLY VOLUME CHARGES PER 1,000 GALLONS (above the minimum level)

INSIDE THE CITY LIMITS:			
PER 1000/GALLONS			
Residential			
First	2,000	Gallons	Minimum
Next	4,000	.....	\$ 6.35
Next	9,000	.....	7.30
Over	15,000	.....	7.95

OUTSIDE THE CITY LIMITS:			
PER 1000/GALLONS			
Residential			
First	2,000	Gallons	Minimum
Next	4,000	.....	\$ 2.45
Next	9,000	.....	3.05
Over	15,000	.....	3.85

Commercial			
First	2,000	Gallons	Minimum
Over 2,000		\$ 7.05

Commercial			
First	2,000	Gallons	Minimum
Over 2,000		\$ 3.30

Large Volume-			
Minimum		Gallons	Minimum
First	10,000,000		\$ 23,797.00
Over	10,000,000	.....	5.80

Large Volume-			
Minimum		Gallons	Minimum
First	10,000,000		\$ 39,706.00
Over	10,000,000	.....	2.20

Residential Irrigation Water on separate meter			
First	2,000	Gallons	Minimum
Over 2,000		\$ 7.95

Residential Irrigation Water on separate meter			
First	2,000	Gallons	Minimum
Over 2,000		\$ 3.85

Agency for Resale			
Metered at the site of treatment			
First	2,000	Gallons	Minimum
Over 2,000		\$ 1.404

Agency for Resale			
Water delivered through City facilities			
First	2,000	Gallons	Minimum
Over 2,000		\$ 2.075

Monthly charge for Raw Water	
Effective January 1, 2018	
Raw water rate payers ICL & OCL	\$0.992/TGAL
Raw water non rate payers ICL & OCL	\$1.023/TGAL

Golf Course/Athletic Field Irrigation			
First	2,000	Gallons	Minimum
Over 2,000		\$ 3.40

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 Christi 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

	<u>Capacity, Acre-Feet*</u>	<u>Water Elevation When Full, Feet</u>	<u>Minimum Functional Elevation, Feet</u>
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:

	<u>Elevation, Feet</u>
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:

<u>Fiscal Year</u>	<u>Total Withdrawn From Lake, Acre-Feet</u>
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

ARTICLE XII. - WATER RESOURCE MANAGEMENT [\[7\]](#)

Footnotes:

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Editor's note— Ord. No. 24396, § 1, adopted Mar. 20, 2001, amended art. XII, in its entirety, to read as herein set out. Former art. XII pertained to similar subject matter. See the Code Comparative Table.

Sec. 55-150. - Scope, purpose, authorization, and definitions.

- (a) *Scope.* There is hereby established a City of Corpus Christi Water Conservation Plan and Drought Contingency Plan. The City of Corpus Christi Water Conservation Plan approved on May 28, 2013 and the Drought Contingency Plan Revised 2018 edition, approved January 30, 2018, as amended by ordinance, a true copy of which is on file in the office of the city secretary, is adopted, and shall be followed in matters concerning water conservation, drought management, and water supply enhancement programs.
- (b) *Declaration of policy.*
 - (1) It is hereby declared that the general welfare requires that the water resources available to the city be put to the maximum beneficial use to the extent to which they are capable, and that the waste or unreasonable use, or unreasonable method of use of water be prevented, and the conservation of such water is to be extended with a view to the reasonable and beneficial use thereof in the interests of the people of the area served by the city's water resources and for the public welfare.
 - (2) In making decisions under this article concerning the allocation of water between conflicting interests, highest priority will be given to allocation necessary to support human life and health; i.e., the minimum amount of water necessary for drinking, prevention of disease, and the like. Second highest priority will be given to allocations which will result in the least loss of employment to persons whose income is essential to their families.
- (c) *Authorization.* The city manager, or his designee, upon the recommendation of the assistant city manager, public works and utilities, is hereby authorized and directed to implement the applicable provisions of this article upon their determination that such implementation is necessary to protect the public welfare and safety.
- (d) *Definitions.* The following terms used in this article are defined as follows:
 - (1) "*City manager*" means the city manager or the city manager's designee.
 - (2) "*Drip irrigation*" means an irrigation system that applies water at a controlled low-flow levels directly to the soil.
 - (3) "*Fountain*" means an artificially created jet or stream of water; a structure, often decorative, from which a jet or stream of water issues.
 - (4) "*Industrial customers use of water for processing*" means the use of water in processes designed to convert materials of lower value into forms having greater usability.
 - (5) "*Non-essential purpose*" means water uses that are not essential or not required for the protection of public health, safety and welfare.

(Ord. No. 24396, § 1, 3-20-2001; Ord. No. 029846, § 3, 5-28-2013; Ord. No. 029946, § 1, 9-10-2013; Ord. No. 030545, § 1, 7-14-2015; Ord. No. 031355, § 1, 1-30-2018; Ord. No. 031533, § 1, 9-11-2018)

Sec. 55-151. - Water conservation measures at all times.

- (a) The following measures are year-round water conservation best management practices that are in effect at all times, regardless of the reservoir levels or drought contingency levels:
- (1) *Prohibition on wasting water:* Actions leading to wasting of water are prohibited and will be enforced. No person shall:
 - a. Allow water to run off property into gutters or streets.
 - b. Permit or maintain defective plumbing in a home, business establishment or any location where water is used on the premises. Defective plumbing includes out-of-repair water closets, underground leaks, defective or leaking faucets and taps.
 - c. Allow water to flow constantly through a tap, hydrant, valve, or otherwise by any use of water connected to the city water system.
 - d. Use any non-recycling decorative water fountain.
 - e. Allow irrigation heads or sprinklers to spray directly on paved surfaces such as driveways, parking lots, and sidewalks in public rights-of-way.
 - f. Operate an irrigation system at water pressure higher than recommended, causing heads to mist, or to operate with broken heads.
 - (2) *Time of irrigation:* Irrigation by spray or sprinklers is prohibited between the hours of 10:00 a.m. and 6:00 p.m. It is still permissible to water by hand or by drip irrigation at any time of day, unless the city enters Reservoir System Stage 3. However, the use of water is permitted at any hour for short periods of time for testing related to the installation, maintenance, and repair of sprinkler systems.
 - (3) *Restaurant water saving:* Commercial dining facilities must only serve water upon request.

(Ord. No. 24396, § 1, 3-20-2001; Ord. No. 24726, § 1, 1-8-2002; Ord. No. 026235, § 1, 4-26-2005; Ord. No. 026542, § 1, 11-15-2005; Ord. No. 028141, § 1, 4-28-2009; Ord. No. 029846, § 3, 5-28-2013; Ord. No. 029946, § 1, 9-10-2013; Ord. No. 031355, § 1, 1-30-2018)

Sec. 55-152. - Drought management: Reservoir system stages.

- (a) The level of reservoir system severity determines the extent of potential water use restrictions that shall be implemented. Following are the levels of reservoir system in the form of stages:
- (1) Stage 1: Mild water shortage watch.
 - (2) Stage 2: Moderate water shortage condition.
 - (3) Stage 3: Critical water shortage condition.
 - (4) Stage 4: Emergency water shortage condition.
- (b) Criteria for initiation and termination of reservoir system response stages:
- (1) The city 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, that is, when the specified "triggers" are reached. However, the city manager, in the exercise of the city manager's discretion, may initiate or terminate any stage when the city manager deems necessary at any particular time.
 - (2) The triggering criterion to be monitored for determining reservoir system response stages is the combined reservoir storage levels of Choke Canyon Reservoir and Lake Corpus Christi.
 - (3) Whenever any of the stages listed below are triggered, the city manager shall publish a public notice of the particular stage, in the daily newspaper of general circulation in Nueces County.

- (4) To the extent of city's legal authority, the city manager shall require the city's raw water and wholesale treated water customers to issue public notice advising their water customers of conservation and drought management activities consistent with the stages listed below.
- (c) The triggering criteria are as follows:
- (1) *Stage 1 - Mild water shortage watch:*
Requirements for initiation - The combined storage level for Choke Canyon Reservoir and Lake Corpus Christi declines to below forty (40) per cent.

Requirement for termination - Stage 1 of the plan may be rescinded when the combined storage level increases above fifty (50) per cent.
- (2) *Stage 2 - Moderate water shortage condition:*
Requirements for initiation - The combined storage levels declines to below thirty (30) per cent.

Requirement for termination - Stage 2 of the plan may be rescinded when the combined storage level increases above forty (40) per cent. Upon termination of Stage 2, Stage 1 becomes operative.
- (3) *Stage 3 - Critical water shortage condition:*
Requirements for initiation - The combined storage levels of Choke Canyon Reservoir and Lake Corpus Christi declines to below twenty (20) per cent.

Requirement for termination - Stage 3 of the plan may be rescinded when the combined storage level increases above thirty (30) per cent. Upon termination of Stage 3, Stage 2 becomes operative.
- (4) *Stage 4 - Emergency water shortage condition:*
Requirements for initiation - When the city 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 distribution system limitations; or
 - Natural or manmade contamination of the water supply source occurs.
- Requirement for termination - The emergency water shortage condition may be rescinded when the city manager, or designee, deems appropriate.

(Ord. No. 24396, § 1, 3-20-2001; Ord. No. 24576, § 1, 9-11-2001; Ord. No. 029846, § 3, 5-28-2013; Ord. No. 029946, § 1, 9-10-2013; Ord. No. 030545, § 1, 7-14-2015; Ord. No. 031160, § 1, 5-30-2017; Ord. No. 031355, § 1, 1-30-2018)

Sec. 55-153. - Drought management: Reservoir system best management practices per stage.

- (a) In order to achieve water use reductions, a series of best management practices will be enacted and enforced at each reservoir system stage. These best management practices (BMP) are listed below by stage. During Stages 1, 2, and 3, requests for exceptions may be presented to the director of water operations or his designee.
- (b) *Stage 1 response - Mild water shortage watch.*
- (1) Target: During Stage 1, achieve a ten (10) per cent reduction in daily treated water demand relative to treated water demand with the water use restrictions below.

- (2) The best management practices for supply management: The city will also do the following during Stage 1:
 - a. Use more repair crews if necessary to allow for a quicker response time for water-line leak repair; and
 - b. City crews (water and other departments) begin monitoring customers' compliance with Stage 1 restrictions during the course of their daily rounds.

- (3) The following water use restrictions shall apply to all persons during Stage 1:

- 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 city manager or designee. Customers will be made aware of their designated watering day in accordance with drought contingency plan.

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 director of water operations or his designee for the following uses: new plantings (for up to sixty (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 must apply for a permit from the city water department to be prominently posted on the premises within two (2) feet of the street number located on the premises.

- b. Use of water from hydrants shall be limited to firefighting, 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 City of Corpus Christi Water Department.
- c. 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 water source other than that provided through City of Corpus Christi Water Department infrastructure, the facility shall not be subject to these regulations.
- d. The use of water to maintain integrity of building foundations is permitted on any day at any time only by use of hand-held hose or drip irrigation.
- e. Except for immediate fire protection or flushing of water lines, the use of water from a hydrant is only allowed with a permit granted by the director of water operation or his designee and a construction meter obtained from the utility business office.

- (c) *Stage 2 response - Moderate water shortage conditions .*

- (1) Target: During Stage 2, achieve a fifteen (15) per cent reduction in total daily treated water demand relative to treated water demand with the water use restrictions below.
- (2) Best management practices for supply management: In addition to the best management practices for supply management listed under Stage 1, the city will also do the following during Stage 2:
 - a. Eliminate the flushing of water mains unless required for decontamination and/or public safety; and
 - b. 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.
- (3) Water use restrictions for demand reduction: All requirements of Stage 1 shall remain in effect during Stage 2 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 city 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 director of water operations or his designee, for the following uses: new plantings (for up to sixty (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 shall still apply for a permit from the city water department to be 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 water source other than that provided through City of Corpus Christi Water Department infrastructure or done by means of hand-held hoses, hand-held buckets, or drip irrigation.
 - (4) During Stage 2, the following measures are optional water use restrictions that may be implemented by the city manager, or designee, with city council approval, as conditions warrant:
 - a. For residential and multi-unit customers, a drought surcharge of up to and including one hundred (100) per cent of the total monthly water bill over the monthly allocation may be added to the customers' bill to deter discretionary water use.
- (d) *Stage 3 response - Critical water shortage conditions.*
 - (1) Target: During Stage 3, achieve a thirty (30) per cent 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 3 water shortage conditions to discourage discretionary water use, as described in section 55-154 for retail customers and section 55-159 for wholesale customers.
 - (2) 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:
 - Upon written notice, disconnect the water meters of willful violators if absolutely necessary to prevent the deliberate wasting of water.
 - (3) Water use restrictions for demand reduction: All requirements of Stages 1 and 2 shall remain in effect during Stage 3 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 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 utilizing water from a 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 2 watering day and shall be done by hand or drip irrigation method.
 - e. All fountains shall only operate to circulate water in order to maintain equipment.
 - f. The use of water for construction purposes from designated fire hydrants with a special permit will continue with a ten (10) per cent surcharge added to the water rate.
 - (4) During Stage 3, the following measures are optional water use restrictions that may be implemented by the city manager, or designee, with city council approval, 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 one hundred (100) per cent of the total monthly water bill over the monthly allocation may be added to the customers' bill to deter discretionary water use.

(e) *Stage 4 response - Emergency water shortage conditions.*

- (1) Target: During Stage 4, achieve a fifty (50) per cent 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 4 water shortage conditions, as described in section 55-154.

During emergency conditions such as system outage, supply source contamination, or supply sources draining empty, alternative water sources and/or alternative delivery mechanisms may be necessary with prior approval of the city manager. For emergency water shortage conditions associated with contamination of Nueces Basin stored supplies, the city, under the city manager's direction, will cease pumping from the Nueces River and will contact the LNRA 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 contamination of Lake Texana supplies, the city, under the city manager's direction, will cease pumping from the Mary Rhodes Pipeline.

- (2) 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:
 - Call the ten (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.
- (3) Water use restrictions for demand reduction: During Stage 4, all requirements of Stages 1, 2, and 3 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.
- (4) During Stage 4, the following measures are optional water use restrictions that may be implemented by the city manager, or designee, with city council approval, as conditions warrant:

For residential and multi-unit customers, a drought surcharge of up to and including one hundred (100) per cent of the total monthly water bill over the monthly allocation may be added to the customers' bill to deter discretionary water use.

(Ord. No. 24396, § 1, 3-20-2001; Ord. No. 24576, § 2, 9-11-2001; Ord. No. 029846, § 3, 5-28-2013; Ord. No. 029946, § 1, 9-10-2013; Ord. No. 030545, § 1, 7-14-2015; Ord. No. 031160, § 1, 5-30-2017; Ord. No. 031355, § 1, 1-30-2018)

Sec. 55-154. - Surcharges for reservoir system stages 2, 3 and 4, 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 city council 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 city's regulatory and police power, and the surcharges and connection fees are conservation rates intended to meet fixed costs as a result of lost revenue.
 - (3) With city council approval, the city manager or designee is authorized to determine trigger points and surcharges during Stages 2, 3 and 4 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 director of water operations or his designee on grounds of unnecessary hardship through the process outlined in section 55-155.
 - (6) Reservoir system surcharge funds will first be applied towards annual debt service payments and operating and maintenance expenses of the water department as reflected in the city operating budget to offset revenue loss due to drought conditions. Additional funds will be reported to city council for city council direction.
- (b) *Residential water customers, who are not billed through a master water meter.*
- (1) A monthly base amount of three thousand (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 three thousand (3,000) gallon monthly consumption trigger point, with city council approval, a drought surcharge shall be added up to and including one hundred (100) per cent 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 1 condition has been declared, property managers of multi-tenant units shall notify the city director of water operations of number of residential units in their facility for determination of allocations. Until so notified, the city shall calculate the allocation based on two (2) residential units per master water meter. A monthly base amount of three thousand (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 three thousand (3,000) gallons times the number of residential units, there will be no surcharge.
 - (3) With city council approval, when consumption is above the three thousand (3,000) gallons times the number of units, a drought surcharge shall be added up to and including one hundred (100) per cent 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 city manager or designee for each commercial or institutional customer.
 - (2) Method of establishing allocation:
 - a. When the combined reservoir capacity is less than twenty (20) per cent of total capacity (Stage 3), the commercial or institutional customer's allocation shall be ninety (90) per cent of the customer's usage for the corresponding month's billing period during the previous twelve (12) months prior to the implementation of Stage 1 condition.

- b. If the customer's billing history is shorter than twelve (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, ninety (90) per cent of whose monthly usage is less than six thousand (6,000) gallons, shall be allocated six thousand (6,000) gallons.
 - d. The city 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 city' utilities 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 city manager, the allocation may be reduced or increased by the city manager:
 - 1. If one (1) 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 less than one hundred thousand (100,000) gallons of water per day for processing.*
- (1) A monthly water usage allocation shall be established by the city manager or designee for each industrial customer, which uses less than one hundred thousand (100,000) gallons of water per day for processing (e.g., an industrial customer).
 - (2) Method of establishing allocation.
 - a. When the combined reservoir capacity of Choke Canyon Reservoir and Lake Corpus Christi is less than twenty (20) per cent of total capacity (Stage 3), the industrial customer allocation shall be ninety (90) per cent of the customer's usage for the corresponding month's billing period during the previous twelve (12) months prior to the implementation of Stage 1 condition.
 - b. If the customer's billing history is shorter than twelve (12) months, the monthly allocation shall be one-twelfth of ninety (90) per cent of the customer's maximum annual contracted amount until twelve (12) months of billing history are established. However, if the industrial customer does not have a water contract and does not have at least twelve (12) months of billing history, then the new industrial customer will provide data regarding expected water use and city will determine allocation based on ninety (90) per cent of expected use to determine initial allocation until twelve (12) months of billing history are established.
 - c. The city 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 industrial customer does not receive such notice, it shall be the customer's responsibility to contact the city utilities 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 industrial customer or at the initiative of the city manager, the allocation may be reduced or increased by the city manager, if:
 - 1. The designated period does not accurately reflect the customer's normal water usage because customer had to 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 customers, institutional customers, and industrial customers who use less than one hundred thousand (100,000) gallons of water per day for processing shall pay the following reservoir system surcharges:*
- (1) Customers whose allocation is six thousand (6,000) gallons through twenty thousand (20,000) gallons per month:
 - a. Five dollars (\$5.00) per one thousand (1,000) gallons for the first one thousand (1,000) gallons over allocation.
 - b. Eight dollars (\$8.00) per one thousand (1,000) gallons for the second one thousand (1,000) gallons over allocation.
 - c. Sixteen dollars (\$16.00) per one thousand (1,000) gallons for the third one thousand (1,000) gallons over allocation.
 - d. Forty dollars (\$40.00) for each additional one thousand (1,000) gallons over allocation.
 - (2) Customers whose allocation is twenty-one thousand (21,000) gallons per month or more:
 - a. One (1) times the block rate for each one thousand (1,000) gallons in excess of the allocation up through five (5) per cent above allocation.
 - b. Three (3) times the block rate for each one thousand (1,000) gallons from five (5) per cent through ten (10) per cent above allocation.
 - c. Five (5) times the block rate for each one thousand (1,000) gallons from ten (10) per cent through fifteen (15) per cent above allocation.
 - d. Ten (10) times the block rate for each one thousand (1,000) gallons more than fifteen (15) per cent above allocation.
 - e. The surcharges shall be cumulative.
 - f. As used herein, "block rate" means the charge to the customer per one thousand (1,000) gallons at the regular water rate schedule at the level of the customer's allocation.
- (g) *Industrial customers, who use one hundred thousand (100,000) gallons or more of water per day for processing.*
- (1) A monthly water usage allocation shall be established by the city manager or designee for each industrial customer, which uses water for processing (e.g., an industrial customer).
 - (2) Method of establishing allocation.
 - a. When the combined reservoir capacity of Choke Canyon Reservoir and Lake Corpus Christi is less than thirty (30) per cent of total capacity (Stage 2), the industrial customer allocation shall be eighty (80) per cent of the customer's usage for the corresponding month's billing period during the previous twelve (12) months prior to the implementation of Stage 1 condition.
 - b. If the customer's billing history is shorter than twelve (12) months, the monthly allocation shall be one-twelfth of eighty (80) per cent of the customer's maximum annual contracted amount until twelve (12) months of billing history are established. However, if the industrial customer does not have a water contract and does not have at least twelve (12) months of

billing history, then the new industrial customer will provide data regarding expected water use and city will determine allocation based on eighty (80) per cent of expected use to determine initial allocation until twelve (12) months of billing history are established.

- c. The city 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 industrial customer does not receive such notice, it shall be the customer's responsibility to contact the city utilities 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 industrial customer or at the initiative of the city manager, the allocation may be reduced or increased by the city manager, if:
 - 1. The designated period does not accurately reflect the customer's normal water usage because customer had to 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.
- (h) *Industrial customers using one hundred thousand (100,000) gallons or more of water per day for processing shall pay the following drought surcharges:*
- (1) Customers whose allocation is eighty thousand (80,000) gallons per month or more:
 - a. Three (3) times the block rate for each one thousand (1,000) gallons in excess of the allocation up through five (5) per cent above allocation.
 - b. Six (6) times the block rate for each one thousand (1,000) gallons from five (5) per cent through ten (10) per cent above allocation.
 - c. Nine (9) times the block rate for each one thousand (1,000) gallons from ten (10) per cent through fifteen (15) per cent above allocation.
 - d. Twelve (12) times the block rate for each one thousand (1,000) gallons more than fifteen (15) per cent above allocation.
 - e. The surcharges shall be cumulative.
 - f. As used herein, "block rate" means the charge to the customer per one thousand (1,000) gallons at the regular water rate schedule at the level of the customer's allocation.
- (i) *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 plan 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 city).
 - 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 city) to the extent reasonable and practical under the circumstances.
- (j) *For residential customers, the following measures come into effect after city council approves a drought rate surcharge; for nonresidential customers, these measures come into effect at Stage 3. Water service to the customer may be terminated under the following conditions:*
- (1) Monthly residential water usage exceeds trigger point by four thousand (4,000) gallons or more two (2) or more times (which need not be consecutive months).
 - (2) Monthly water usage on a master meter which jointly measures water usage to multiple residential dwelling units exceeds trigger point by four thousand (4,000) gallons times the number of dwelling units or more two (2) or more times (which need not be consecutive months).
 - (3) Monthly nonresidential water usage for a customer whose allocation is six thousand (6,000) gallons through twenty thousand (20,000) gallons exceeds its allocation by seven thousand (7,000) gallons or more two (2) or more times (which need not be consecutive months).
 - (4) Monthly nonresidential water usage for a customer whose allocation is twenty-one thousand (21,000) gallons or more exceeds its allocation by fifteen (15) per cent or more two (2) or more times (which need not be consecutive months).
 - (5) For residential customers and nonresidential customers, after the first disconnection, water service shall be restored upon request for a fee of fifty dollars (\$50.00).
 - (6) For such customers, after the second disconnection, water service shall be restored within twenty-four (24) hours of the request for a fee of five hundred dollars (\$500.00).
 - (7) If water service is disconnected a third time for such customer, water service shall not be restored until the city re-enters a level of water conservation less than Stage 2. For master meter customers, the service restoration fees shall be the same as above times the number of dwelling units.
 - (8) The city manager is directed to institute written guidelines for disconnection of water service under this provision, which will satisfy minimum due process requirements, if any.
- (k) 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.
- (l) 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 city's ordinary billing cycle which commences with the reading of a meter one (1) 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 thirty (30) days, but a variance of two (2) 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.

(Ord. No. 24396, § 1, 3-20-2001; Ord. No. 029846, § 3, 5-28-2013; Ord. No. 029946, § 1, 9-10-2013; Ord. No. 031355, § 1, 1-30-2018; Ord. No. 031533, § 2, 9-11-2018)

Sec. 55-155. - Requests for exemptions and variances.

- (a) The director of water operations or his designee, may, in writing, grant a temporary variance to any of the provisions for water users found in this article XII 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 article shall file request on city-provided application for exemption/variance with the city water department within five (5) days after a particular reservoir system response stage has been invoked. All request forms shall be reviewed by the director of water operations or his 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 ordinance from which the water user is requesting relief.
 - (4) Detailed statement as to how the specific provision of the ordinance adversely affects the water user or what damage or harm will occur to the water user or others if water user complies with this plan.
 - (5) Description of the exemption or variance requested.
 - (6) Period of time for which the exemption or variance 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 plan 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 article occurring prior to the issuance of the exemption/variance.
- (d) All requests for variances/exemptions shall be reviewed and determined within three (3) business days of receipt of complete application.
- (e) The director of water operations or his 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 plan 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 plan will result in unnecessary hardship, and so that the spirit of this plan shall be observed and substantial justice done.
- (f) 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 director of water operations for noncompliance; provided, that the permit is prominently posted on the premises within two (2) feet of the street number located on the premises.
- (g) A person denied request for permit or exception from these rules may appeal the decision to the assistant city manager for public works, utilities and transportation by submitting written request for appeal to the assistant city manager within five (5) business days from issuance of denial. The decision of the assistant city manager shall be final.

(h) Violations of any permit condition may be enforced under section 55-156.

(Ord. No. 24396, § 1, 3-20-2001; Ord. No. 24576, § 3, 9-11-2001; Ord. No. 029846, § 3, 5-28-2013; Ord. No. 029946, § 1, 9-10-2013; Ord. No. 031355, § 1, 1-30-2018)

Sec. 55-156. - Violations, penalties, and enforcement.

- (a) A violation under this article is a class C misdemeanor. Any person that violates any provision of this article shall be subject to a fine of not more than five hundred dollars (\$500.00) per violation per day. The culpable mental state required by V.T.C.A., Penal Code § 6.02 is specifically negated and dispensed with and a violation of this article is a strict liability offense.
- (b) The commission of a violation of each provision, and each separate violation thereof, shall be deemed a separate offense, in and upon conviction thereof, shall be fined as hereinabove provided.
- (c) If any person or a second person in the same household or premises, is found guilty of a second violation of this article, the water superintendent shall be authorized to discontinue water service to the premises where such violation occurs.
- (d) Cases filed under this section shall be expedited and given preferential setting in municipal court before all other cases.
- (e) Any person whose name is on file with the utilities billing office as the customer on the water account for the property where the violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on said premises shall constitute prima facie evidence that the customer committed the violation, but said customer shall have the right to show that he did not commit the violation.
- (f) If any person fails to respond to a citation or summons issued for a violation of this article within the time allowed, upon receipt of notice from the director or a judge of the municipal courts, the water superintendent is authorized to discontinue water service to the premises where such violation occurs.

(Ord. No. 24396, § 1, 3-20-2001; Ord. No. 24576, § 4, 9-11-2001; Ord. No. 029846, § 3, 5-28-2013; Ord. No. 029946, § 1, 9-10-2013)

Sec. 55-157. - Effluent distribution; permit and regulations.

- (a) Upon implementation of the City of Corpus Christi Water Conservation Plan as provided in this section, the city may make available effluent water discharged from its sewage treatment plants for the purpose of watering lawns, grass, and other plants, dust control and similar uses.
 - (1) Such effluent water shall be made available only under the terms and conditions herein provided and only to such persons as are duly permitted as distributors as provided in this section.
 - (2) The city shall be under no obligation to provide such effluent and reserves the right to discontinue such service at any time and to limit the volume and to establish or alter loading procedures and/or locations as necessary for the efficient administration of the wastewater division.
- (b) No effluent distribution permit shall be issued except upon application filed with the wastewater division of the city. Every such application shall contain the following information:
 - (1) Name of applicant.
 - (2) Name of authorized representative (e.g., president of corporation; partner, etc.) if applicant is other than an individual.

- (3) Business address and phone number.
 - (4) Residence address and phone number of authorized individual representative.
 - (5) Description of each vehicle and container unit to be used in the transportation or distribution of effluent water, including the make, year, model, type, weight and gross vehicle weight, container capacity in gallons, vehicle registration number, and the state safety inspection certificate number and expiration date.
 - (6) Names and driver's license number of every proposed driver of such vehicles.
 - (7) Statement of previous use of container units and any proposed use after or concurrently with such units use for effluent distribution.
 - (8) Statement of the proposed uses of any effluent water, including whether the use is proposed for residential, commercial, or industrial purpose.
- (c) Upon the filing of the required application, and payment of the permit fee specified herein for each container unit, the wastewater superintendent, or the superintendent's designee, shall upon his determination that the applicant and vehicles and container units are in compliance with all applicable provisions of this article, issue a permit for each such container unit.
- (1) The permit shall identify the particular unit for which it is issued and shall be displayed in a prominent place upon the unit.
 - (2) Each unit shall be separately permitted.
- (d) The permit fee shall be fifty dollars (\$50.00) per month for each unit plus five dollars (\$5.00) per month for each unit per one thousand (1,000) gallons of capacity (or portion thereof) over the first one thousand (1,000) gallons of capacity.
- (e) Permits shall be issued on a quarterly basis from the effective date of this plan; fee proration shall be on a monthly basis.
- (f) Notwithstanding subsection (g) of this section, a resident of the City of Corpus Christi may obtain effluent at no charge from a wastewater treatment plant, designated by the wastewater superintendent, for the irrigation of vegetation, dust control, or watering a foundation at the individual's personal residence.
- (1) Any effluent received under this subsection may not be sold or transferred to another individual or used for commercial purposes.
 - a. Before receiving effluent the resident must obtain a permit from the wastewater superintendent, or the superintendent's designee.
 - b. Prior to receiving a permit, the resident must complete a course of instruction on the handling of wastewater effluent that has been developed by the city's health department.
 - c. Any container used to receive and transport effluent must have a lid or cap, be watertight, and be properly secured to the vehicle.
 - d. All containers are subject to inspection and approval of the city health department or wastewater department.
 - e. Any effluent received under this subsection must be immediately transported to the personal residence of the individual receiving the effluent and used for the irrigation of vegetation, dust control, or watering a foundation.
 - f. The effluent may not be stored for future use.
 - g. A resident using effluent for the irrigation of vegetation or dust control must post a sign on the property legible from the street stating that effluent is being used on the property.
 - h. Every resident obtaining effluent under this subsection must either:

1. Provide proof of and maintain in force a property liability insurance policy (homeowner/renter) in the amount of three hundred thousand dollars (\$300,000.00) per occurrence; or
 2. Sign a form provided by the superintendent that releases the City of Corpus Christi from any liability resulting from the resident's improper use or transportation of the effluent and agree to hold the city harmless, including reimbursing the city for the costs of defending itself.
- (g) Every effluent distribution permit shall be subject to the following terms and conditions and no person shall receive or distribute effluent water except in compliance herewith:
- (1) Container units or tanks shall have a minimum capacity of five hundred (500) gallons; shall be capable of being closed water-tight and shall be so closed during transport of effluent water; and shall be maintained in a leak-proof condition; provided, however, that special permits may be issued for container units with a capacity of less than five hundred (500) gallons upon the determination by the wastewater division superintendent that all other container unit specifications herein required have been met and that the particular container unit does not create an increased risk to the public health and safety.
 - (2) No vehicle may be used in connection herewith which has not been reported on the application and approved for such use.
 - (3) Every driver or handler must be certified by the wastewater division prior to receiving any effluent water from the city.
 - a. The wastewater division may certify a driver or handler who has completed a course of instruction on the handling of wastewater effluent that has been developed by the city's health department.
 - (4) Effluent water shall be used as soon as possible to prevent regrowth of bacteria.
 - a. Permittees shall check effluent water in their units not less than every four (4) hours for chlorine residual, except for effluent stored in fixed-site containers which shall be checked not less than every eight (8) hours.
 - (5) Chlorine residuals shall be maintained at one (1) milligram per liter (parts per million) [one (1) mg/one (l) (ppm)], consistent throughout the effluent container.
 - (6) The minimum quality of the effluent must not exceed conditions on the use of effluent set out in any permits or authorizations issued to the city by a federal or state regulatory agency or the applicable regulations of a federal or state regulatory agency.
 - (7) Effluent containers, including those used for storage, shall be subject to inspection and approval of the city health department or wastewater division, whose inspectors are hereby authorized to prohibit the use of any container or effluent water which is determined to be outside the parameters established in this section or is otherwise determined to present a danger to public health.
 - (8) Every permittee shall provide proof of, and shall maintain in force, a policy of comprehensive general liability insurance in the amount specified by the city's risk manager under section 17-19; or shall maintain a policy of general business liability insurance in the same or greater amount with a contractual liability endorsement; and shall maintain a policy of automobile liability insurance in the minimum amounts set by state law. The city shall be named as an additional insured on the general liability insurance policies.
 - (9) By acceptance of a permit under this section and/or receipt of effluent water from the city system, the permittee and/or recipient of such effluent agree to fully indemnify, save and hold harmless, the City of Corpus Christi, Texas, its agents and employees, from and against all claims and actions, and all expenses incidental to the investigation and defense thereof, based upon or arising out of damages or injuries to person or property in any way related to or in connection with the use or distribution of effluent water under this section.

- (10) Permittees shall provide a written notice to every person to whom effluent is furnished which shall state in not less than 10-point type, substantially as follows:

"CAUTION"

"You are hereby advised that effluent water is the discharged water from a sewage treatment plant. The Director of Public Health has determined that improper use or handling could be harmful and recommends the following precautions:

1. Do not use effluent water for drinking, bathing, or personal hygiene purposes.
 2. Do not use effluent water for washing autos, clothes, or other personal contact items.
 3. Do not use effluent water in swimming pools or for similar recreational uses.
 4. Do not allow children to play on grass wet with effluent water, wait until it dries.
 5. Do not use effluent which has been stored for more than four (4) hours unless the chlorine residual level has been tested and is not less than one (1) part per million [one (1) mg/one (1)(p.m.)].
 6. Application of effluent shall be by coarse stream and shall not be by fine spray."
- (h) Violation of any of the cautions set forth in subsection (g)(10) of this section, by any person, is a violation of this section.
- (i) Violation of any of the provisions of this section, in addition to the general penalties provided in this particle, shall result in denial or revocation of any such violator's effluent distribution permit.

(Ord. No. 24396, § 1, 3-20-2001; Ord. No. 24576, § 4, 9-11-2001)

Editor's note— Formerly numbered § 55-158.

Sec. 55-158. - Operations plan for reservoir system.

To maximize the amount of water reliably available to the city and its water customers, the city manager shall operate the Lake Corpus Christi/Choke Canyon Reservoir System as follows:

- (1) A minimum of two thousand (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 (2) reservoirs, the water level in Lake Corpus Christi will be allowed to drop to elevation seventy-four (74) feet before water is released from Choke Canyon Reservoir in excess of the two thousand (2,000) acre-feet per month requirement.
- (3) Under the agreed order of the Texas Natural Resource Conservation Commission under Certificate of Adjudication No. 21-3214, city shall: (1) reduce targeted inflows of water to Nueces Bay to one thousand two hundred (1,200) acre-feet when reservoir system storage falls below forty (40) per cent of capacity; and (2) suspend targeted inflows when reservoir system storage falls below thirty (30) per cent of capacity.

(Ord. No. 24396, § 1, 3-20-2001; Ord. No. 24576, § 4, 9-11-2001; Ord. No. 029846, § 3, 5-28-2013; Ord. No. 029946, § 1, 9-10-2013)

Sec. 55-159. - Procedures for allocating water to raw water and wholesale treated water customers on a pro rata basis during a water shortage.

(a) In the event that the triggering criterion specified in section 55-152 for Stage 2 have been met, the city manager, or designee, is hereby authorized to initiate allocation preparations of water supplies on a pro rata basis to raw water and wholesale treated water customers in accordance with V.T.C.A., 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 city council based on the city 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 city council 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 city manager, or the city manager's 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 city 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 city 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 City Council of the City of Corpus Christi.

(b) *Pro rata surcharges and enforcement.*

- (1) 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:
 - a. Two (2.0) times the normal water charge per unit for water diversions and/or deliveries in excess of the monthly allocation up through five (5) per cent above the monthly allocation.
 - b. Two and one-half (2.5) times the normal water charge per unit for water diversions and/or deliveries in excess of the monthly allocation from five (5) per cent through ten (10) per cent above the monthly allocation.
 - c. Three (3.0) times the normal water charge per unit for water diversions and/or deliveries in excess of the monthly allocation from ten (10) per cent through fifteen (15) per cent above the monthly allocation.
 - d. Three and one-half (3.5) times the normal water charge per unit for water diversions and/or deliveries more than fifteen (15) per cent above the monthly allocation.

(c) *Variances.*

- (1) The city manager, or the city manager's designee, may, in writing, grant a temporary variance to the pro rata water allocation policies provided by this section 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 (1) or more of the following conditions are met:

- a. Compliance cannot be technically accomplished during the duration of the water supply shortage or other condition for which the plan is in effect.
 - b. Alternative methods can be implemented which will achieve the same level of reduction in water use.
- (2) Raw water or wholesale treated water customers requesting an exemption from the provisions of this section shall file a petition for variance with the city manager within five (5) days after pro rata allocation has been invoked.
- (3) All petitions for variances shall be reviewed by the city council, and shall include the following:
- a. Name and address of the petitioner(s).
 - b. Detailed statement with supporting data and information as to how the pro rata allocation of water under the policies and procedures established in this section adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this section.
 - c. Description of the relief requested.
 - d. Period of time for which the variance is sought.
 - e. Alternative measures the petitioner is taking or proposes to take to meet the intent of this section and the compliance date.
 - f. Other pertinent information.
- (4) Variances granted by the city council shall be subject to the following conditions, unless waived or modified by the city council:
- a. Variances granted shall include a timetable for compliance.
 - b. Variances granted shall expire when the pro-rata allocation of water to raw water or wholesale treated water customers is no longer in effect, unless the petitioner has failed to meet specified requirements.
 - c. No variance shall be retroactive or otherwise justify any violation of this section occurring prior to the issuance of the variance.
- (d) *Contractual remedies not affected.* Nothing in this section supersedes any remedies available to the city under any contract with a raw water or wholesale treated water customer due to the customer's failure to adopt or impose water conservation measures required by the contract.

(Ord. No. 24605, § 1, 10-9-2001; Ord. No. 029846, § 3, 5-28-2013; Ord. No. 029946, § 1, 9-10-2013; Ord. No. 031355, § 1, 1-30-2018)

Editor's note— Formerly numbered § 55-159.1.

Sec. 55-159.1. - Non-mandatory drought surcharge exemption fee.

- (a) *Establishment of non-mandatory "drought surcharge exemption fee" effective October 1, 2018.* Large-volume industrial customers may voluntarily pay a non-mandatory and non-refundable "drought surcharge exemption fee" or "fee" of twenty-five cents (\$0.25) per one thousand (1,000) gallons of water per month to be exempt from the applicable allocation surcharges of city Code section 55-154 during the month of billing. The city will begin to charge the fee as of October 1, 2018 to all large-volume industrial customers. The fee will be charged with the large-volume industrial customer's regular monthly water bill which is due as stated on the bill. By payment of the fee, the large-volume industrial customer has determined that the fee is fair, just, and reasonable.

Note— For purposes of this section 55-159.1 the term "large-volume industrial customer" shall mean a utility customer who uses water in minimum quantity of one hundred thousand (100,000) gallons a day in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, including the development of power by means other than hydroelectric, but does not include agricultural use.

- (b) *Notice of opt-out.* A large-volume industrial customer may opt out of the drought surcharge exemption fee (or "fee") by providing written notice to the city manager. A large-volume industrial customer is deemed to have opted out of the fee as of the date payment of the fee remains delinquent after notice and opportunity to cure. A large-volume industrial customer who has opted out of said fee is subject to aforementioned allocation surcharges of city Code section 55-154 in addition to compliance with all applicable city ordinances.
- (c) *Request to opt back into the drought surcharge exemption fee or "fee".* There is no right nor entitlement to opt back into the fee. The city manager or designee retains sole discretion to determine whether granting large-volume industrial customer's request to opt back into the fee is in the best interest of the city. At a minimum, the large-volume industrial customer will be required to comply with the following mandatory conditions:
 - (1) The large-volume industrial customer must submit a written request to the city manager to request to opt back into the drought surcharge exemption fee subject to city manager review.
 - (2) Upon receipt of invoice, the large-volume industrial customer must timely pay the drought surcharge exemption fees calculated on said customer's actual water usage from date of city's receipt of written request back to said customer's date of opt out, up to a maximum of ten (10) years.
 - (3) The large-volume industrial customer remains subject to compliance with the aforementioned allocation surcharge provisions of the city Code as may be amended and all other applicable ordinances, rules and regulations of the city for the mandatory reinstatement period of twenty-four (24) months. The mandatory reinstatement period begins upon date of notice from the city to said customer and continues for twenty-four (24) consecutive calendar months. During the reinstatement period, the large-volume industrial customer will timely pay a non-refundable reinstatement fee of twenty-five cents (\$0.25) per one thousand (1,000) gallons of water upon receipt of invoice. By payment of said reinstatement fee, the large-volume industrial customer has determined that the fee is fair, just, and reasonable.
 - (4) Despite compliance with these conditions, the large-volume industrial customer will not be allowed to opt back into the fee when the combined storage level of the Choke Canyon Reservoir and Lake Corpus Christi declines below forty (40) per cent.
- (d) *Dedicated use of the drought surcharge exemption fees.*
 - (1) The fee shall be dedicated by the city for development of a drought-resistant water supply and shall not be used for operation and maintenance costs of any water supply, treatment facility or distribution system.
 - (2) The fee paid to the city will be reserved in a separate account ("account") and used only for capital costs to develop and/or acquire an additional drought-resistant water supply including, but not limited to, payment of debt for an allowable capital project.
 - (3) The city manager may execute documents necessary for the establishment of a dedicated fund.
- (e) *Review and adjustment of the drought surcharge exemption fee.* The fee shall be reviewed and adjusted by city council action no more frequently than every five (5) years. Any subsequent fee increase is limited to increases based upon changes to the following Consumer Price Index: CPI-All Urban Consumers (Current Series) for water and sewer and trash collection services in U.S. city average, all urban consumers.

- (f) *Participation by wholesale water suppliers.* A wholesale water supplier with a water supply contract with the city may choose to establish an identical voluntary drought surcharge exemption fee and standard agreement for its large-volume industrial customers with said fee and agreement to be equivalent to the ordinance and standard agreement adopted by the City of Corpus Christi. Upon adoption of said identical voluntary drought surcharge exemption fee and standard agreement for its large-volume industrial customers, the wholesale water supplier shall assess and collect the fees from its large-volume industrial customers and then remit said fees to the city. In addition, the wholesale water supplier shall notify the city manager or designee of the volume of water used by its large-volume industrial customers each month.
- (g) The city manager may execute letters of commitment and standard agreements regarding payment and use of drought surcharge exemption fee with terms consistent with this section 55-159.1 (i.e., an "agreement"). The agreement may be terminated by the city upon five (5) years' notice to terminate the agreement. A copy of the standard agreement is attached as an exhibit to the ordinance which enacted this section 55-159.1. The city manager is authorized to adjust the terms of the standard agreement as long as said adjustments are consistent with the terms of this section 55-159.1 and said adjustment is made available to all large-volume industrial customers participating in the drought surcharge exemption fee.
- (h) The drought surcharge exemption fee established by this section 55-159.1 continues to be billed and paid except during periods when the balance in the account exceeds one hundred fifty million dollars (\$150,000,000.00), to be adjusted annually for inflation by the following Consumer Price Index: CPI-All Urban Consumers (Current Series) for water and sewer and trash collection services in U.S. city average, all urban consumers. While balance exceeds one hundred fifty million dollars (\$150,000,000.00) the city will cease billing and collection of the fee and the large-volume industrial customer remains exempt from the allocation surcharges.
- (i) The city may repeal this section 55-159.1 upon at least five (5) years' notice to the then participating large-volume industrial customers and participating wholesale water suppliers.
- (j) Upon city's repeal of this section 55-159.1 or city's termination of the agreement, any unencumbered balance remaining in the account will be returned to the then-participating large-volume industrial customers and then-participating wholesale water suppliers on a pro-rata basis.
- (k) The large-volume industrial customer paying the drought surcharge exemption fee established by this section 159.1 is exempt from city curtailment of water during reservoir system Stages 1, 2, and 3, except when such curtailment is required by V.T.C.A., Water Code § 11.039 or required by other applicable state laws and state regulations.

(Ord. No. 031533, § 3, 9-11-2018)

ATTACHMENT 8
DROUGHT CONTINGENCY PLAN

REVISED 2018
2ND EDITION



**DROUGHT
CONTINGENCY**

PLAN

CITY OF CORPUS CHRISTI



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- Ordinance Adopting DCP and WCP**
- TCEQ 2001 Agreed Order on Freshwater Inflows to the Nueces Bay and Estuary**
- Reservoir Operating Plan**

Drought Contingency Plan

1. Introduction

This document is the Drought Contingency Plan (DCP) for the City of Corpus Christi (City). This DCP was created so that the City can cut back demand when supplies are low so the residents 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 City 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 City hereby adopts the following regulations and restrictions on the delivery and consumptions of water. The Water Resource Management Ordinance which gives the City the authority to regulate and enforce this DCP is included as a supporting document.

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 subjects the offender(s) to penalties as defined in Section 13 of this DCP.

Since the City first started supplying its residents with water in the 1890s, 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 City's water supply system is comprised of four reservoirs: Lake Corpus Christi, Choke Canyon Reservoir, Lake Texana and Colorado River. However, the criteria to trigger reservoir system 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 2-4% higher since Lake Texana supplies were added in October 1998.

Because of the frequency of drought in South Texas, the following DCP has been developed. This DCP 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 DCP was held at the City Council regular meeting on July 17, 2018 and was adopted by ordinance on October 1, 2018.

The City 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 Corpus Christi Caller-Times, and notice on the City's website (www.cctexas.com).

Notification to the public about when reservoir system 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 City of Corpus Christi is located within the Coastal Bend Regional Water Planning Area (Region N) and the City 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.

5. Authorization

The City 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 City Manager, or designee, shall have the authority to initiate or terminate drought or other water supply emergency responses as described in this DCP. However, the City Manager, in the exercise of the City Manager's discretion, may initiate

or terminate any stage when the City Manager deems necessary at any particular time. The City Manager shall notify the members of the City Council before implementing any measures.

6. Application

The provisions of this DCP shall apply to all persons, customers, and property utilizing water provided by the City of Corpus Christi. 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 City 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 City of Corpus Christi 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.

Reservoir Capacity: the combined reservoir storage levels of Choke Canyon Reservoir and Lake Corpus Christi, as measured in percentage of the full combined volume.

Wholesale customers: any public or private utility that has a contract with the City 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 Reservoir System Stages

The City 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 DCP, that is, when the specified “triggers” are reached. However, the City Manager, in the exercise of the City Manager’s discretion, may initiate or terminate any stage when the City Manager deems necessary at any time. This section explains the triggers of each stage. Best management practices and water use restrictions for each reservoir system stage are described in Section 10.

The triggering criterion to be monitored for determining reservoir system response stages is 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. The full Agreed Order is in the Appendix.

8.1. Stage 1 – Mild Water Shortage Watch

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 1 of the DCP may be rescinded when the combined storage level increases above 50 percent.

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 for Stage 2 of this DCP when the combined storage levels declines to below 30 percent.

Requirement for termination – Stage 2 of the DCP may be rescinded when the combined storage level increases above 40 percent for a period. Upon termination of Stage 2, Stage 1 becomes operative.

8.3. Stage 3 – 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 3 of the DCP when the combined storage levels declines to below 20 percent.

Requirement for termination – Stage 3 of the DCP may be rescinded when the combined storage level increases above 30 percent. Upon termination of Stage 3, Stage 2 becomes operative.

8.4. Stage 4 – Emergency Water Shortage Condition

Requirements for initiation – Customers shall be required to comply with requirements and restrictions for Stage 4 of this DCP when the City 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 distribution 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 City Manager, or designee, deems appropriate.

9. Reservoir System Stages Response Notification

The City Manager, or designee, shall monitor water supply and/or demand conditions on a weekly basis and, in accordance with the triggering criteria set forth in Section 8 of this Chapter, 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 City Manager, or designee, shall notify the public for every change in drought stage status by any or all of the following:

- City's website (www.cctexas.com)
- Publication in the Corpus Christi Caller-Times
- Notice on the monthly billing
- Public Service Announcements
- Signs posted in public places

Additional Notification:

The City 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:

- Mayor and members of the City Council
- Fire Chief
- City and/or County Emergency Management Coordinator
- County Judge and Commissioner(s)
- Major water users (such as industries)
- Critical water users (such as hospitals)
- Parks/street superintendents and public facilities managers
- 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. Reservoir System, Best Management Practices per Stage

A summary of water use reduction targets for each reservoir system 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 Executive Director of Utilities or designee.

Reservoir System Stage Response	CCR/LCC Combined Reservoir Storage Level	Target Demand Reduction Levels
Stage 1- Mild	<40%	10%
Stage 2- Moderate	<30%	20%
Stage 3- Critical	<20%	30%
Stage 4- Emergency	Not Applicable	50%

10.1. Stage 1 Response – Mild Water Shortage Watch

Target: During Stage 1, 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:

Under Stage 1, the City will:

- Use more repair crews if necessary to allow for a quicker response time for water-line leak repair; and
- City crews (Water and other departments) begin monitoring customers' compliance with Stage 1 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 1:

- 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 City 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 Executive Director of Utilities 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 must apply for a permit from the City Utilities Department to be prominently posted on the premises within two (2) feet of the street number located on the premises.
- b) 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 City of Corpus Christi Utilities Department.

- c) 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 water source other than that provided through City of Corpus Christi Utilities Department infrastructure, the facility shall not be subject to these regulations.
- d) 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.

10.2. Stage 2 Response – Moderate Water Shortage Conditions

Target: During Stage 2, achieve a 20% 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 1, the City will also do the following during Stage 2:

- Eliminate the flushing of water mains unless required for decontamination 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 1 shall remain in effect during Stage 2 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 City 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 Executive Director of Utilities 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 shall still apply for a permit from the City Utilities Department to be 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 water source other than that provided through City of Corpus Christi

Utilities Department infrastructure or done by means of hand-held hoses, hand-held buckets, or drip irrigation.

Optional Measures:

During Stage 2, the following measures are optional water use restrictions that may be implemented by the City Manager, or designee, with City Council approval, 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.

10.3. Stage 3 Response – CRITICAL Water Shortage Conditions

Target: During Stage 3, 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 3 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 2, the City will also do the following during Stage 3:

- 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 1 and 2 shall remain in effect during Stage 3 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 2 watering day and shall be done by hand or drip irrigation method.
- e) All fountains shall only operate to circulate water in order to maintain equipment.

Optional Measures:

During Stage 3, the following measures are optional water use restrictions that may be implemented by the City Manager, or designee, with City Council approval, 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 reservoir system response stage shall be in effect.
- b) For residential and multi-unit customers, a Reservoir System 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 – EMERGENCY Water Shortage Conditions

Target: During Stage 4, 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 4 water shortage conditions, as described in Section 13.

During emergency conditions such as system outage or supply source contamination, or supply sources draining empty, alternative water sources and/or alternative delivery mechanisms may be necessary with prior approval of the City Manager or designee. For emergency water shortage conditions associated with contamination of Nueces Basin stored supplies, the City, under the City Manager or designee's direction, will cease pumping from the Nueces River and will contact the LNRA 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 contamination of Lake Texana supplies, the City, under the City Manager's direction, will cease pumping from the Mary Rhodes Pipeline.

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:

- 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 4, all requirements of Stage 1, 2, and 3 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 4, the following measure is an optional water use restriction that may be implemented by the City Manager, or designee, with City Council approval, 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 Reservoir System Stages 2 – 4 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 City Council 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 City's regulatory and police power, and the surcharges and connection fees are conservation rates intended to meet fixed costs as a result of lost revenue.
3. With City Council approval, the City Manager is authorized to determine trigger points or allocations and surcharges during Stages 2, 3, and 4 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 reservoir system surcharge triggering point established under this Section to the Executive Director of Utilities or designee on grounds of unnecessary hardship, through the process outlined in Section 12.

6. Reservoir system surcharge funds will first be applied towards annual debt service as reflected in the City operating budget to offset revenue loss due to drought conditions. Additional funds will be reported to City Council for City Council direction.

(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, with City Council Approval, a reservoir system 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 1 condition has been declared, property managers of multi-tenant units shall notify the City Executive Director of Utilities of the number of residential units in their facility for determination of allocations. Until so notified, the City 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. With City Council approval, 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.
4. The customer is responsible for passing the demand charge onto the tenant.

(d) Commercial or institutional customer

1. A monthly water usage allocation shall be established by the City 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 3), 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 City 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 City Utilities 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 City 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 less than 100,000 gallons of water per day for processing.

- 1. A monthly water usage allocation shall be established by the City Manager or designee for each an industrial customer, which uses less than 100,000 gallons of 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 3), 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 1
 - 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 City 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 City Utilities 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 City 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 customers, institutional customers, and industrial customers who use less than 100,000 gallons of water per day for processing 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) Industrial customers, who use 100,000 gallons or more of water per day for processing.
- 1. A monthly water usage allocation shall be established by the city manager or designee for each industrial customer, which uses water for processing (e.g., an industrial customer).
 - 2. Method of establishing allocation.
 - a. When the combined reservoir capacity of Choke Canyon Reservoir and Lake Corpus Christi is less than thirty (30) percent of total capacity (Stage 2), the industrial customer allocation shall be eighty (80) percent of the customer's usage for the corresponding month's billing period during the previous twelve (12) months prior to the implementation of Stage 1 condition.
 - b. If the customer's billing history is shorter than twelve (12) months, the monthly allocation shall be one-twelfth of eighty (80) percent of the customer's maximum annual contracted amount until twelve (12) months of billing history are established. However, if the industrial customer does not have a water contract and does not have at least twelve (12) months of billing history, then the new industrial customer will provide data regarding expected water use and city will determine allocation based on eighty (80) percent of expected use to determine initial allocation until twelve (12) months of billing history are established.
 - c. The city 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 industrial customer does not receive such notice, it shall be the customer's responsibility to contact the city utilities 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 industrial customer or at the initiative of the city manager, the allocation may be reduced or increased by the city manager, if:

1. The designated period does not accurately reflect the customer's normal water usage because customer had to 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.

(g) Industrial customers using 100,000 gallons or more of water per day for processing shall pay the following drought surcharges:

- (1) Customers whose allocation is Eighty thousand (80,000) gallons per month or more:
 - a. Three (3) times the block rate for each one thousand (1,000) gallons in excess of the allocation up through five (5) percent above allocation.
 - b. Six (6) times the block rate for each one thousand (1,000) gallons from five (5) per cent through ten (10) percent above allocation.
 - c. Nine (9) times the block rate for each one thousand (1,000) gallons from ten (10) per cent through fifteen (15) percent above allocation.
 - d. Twelve (12) times the block rate for each one thousand (1,000) gallons more than fifteen (15) percent above allocation.
 - e. The surcharges shall be cumulative.
 - f. As used herein, "block rate" means the charge to the customer per one thousand (1,000) gallons at the regular water rate schedule at the level of the customer's allocation.

(i) *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 City).
 - 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 City) to the extent reasonable and practical under the circumstances.
- (j) 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 43. 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 City re-enters a level of water conservation less than Stage 2.

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:
$$X = \$ 50 \times \text{Customer's Allocation in gallons} / 20,000 \text{ gallons}$$
 - 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 City re-enters a level of water conservation less than Stage 2.
 - d. The City Manager is directed to institute written guidelines for disconnection of water service under this provision, which will satisfy minimum due process requirements, if any.

(k) 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.

(l) 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 City'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 Executive Director of Utilities 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 Ordinance shall file request on City-provided application for exemption/variance with the City Utilities Department within 5 days after a particular drought response stage has been invoked. All request forms shall be reviewed by the Executive Director of Utilities 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 Ordinance from which the water user is requesting relief.
 4. Detailed statement as to how the specific provision of the Ordinance 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 Executive Director of Utilities 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 Executive Director of Utilities 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 Assistant City Manager for Public Works, Utilities and Transportation by submitting written request for appeal to the Assistant City Manager within five business days from issuance of denial. The decision of the Assistant City Manager shall be final.
- (g) Violations of any permit conditions may be enforced under Section 13.

Non-mandatory Drought Surcharge Exemption Fee.

Article XII of Chapter 55 of the Corpus Christi Code of Ordinances is amended to add new Section 55-159.1, to read as follows:

- (a) Establishment of non-mandatory “Drought Surcharge Exemption Fee” effective October 1, 2018.

Large-volume industrial customers¹ may voluntarily pay a non-mandatory and non-refundable “Drought Surcharge Exemption fee” or “Fee” of \$0.25 per 1,000 gallons of water per month to be exempt from the applicable allocation surcharges of City Code Section 55-154 during the month of billing. The City will begin to charge the Fee as of October 1, 2018 to all large-volume industrial customers. The Fee will be charged with the large-volume industrial customer’s regular monthly water bill which is due as stated on the bill. By payment of the Fee, the large-volume industrial customer has determined that the Fee is fair, just, and reasonable.

- (b) Notice of Opt-out.

A large-volume industrial customer may opt out of the Drought Surcharge Exemption fee (or “Fee”) by providing written notice to the City Manager. A large-volume industrial customer is deemed to have opted out of the Fee as of the date payment of the Fee remains delinquent after notice and opportunity to cure. A large-volume industrial customer who has opted out of said Fee is subject to aforementioned allocation surcharges of City Code Section 55-154 in addition to compliance with all applicable City ordinances.

¹ For purposes of this Section 55-159.1 the term “large-volume industrial customer” shall mean a utility customer who uses water in minimum quantity of 100,000 gallons a day in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, including the development of power by means other than hydroelectric, but does not include agricultural use.

(c) Request to opt back into the Drought Surcharge Exemption fee or “Fee”.

There is no right nor entitlement to opt back into the Fee. The City Manager or designee retains sole discretion to determine whether granting large-volume industrial customer’s request to opt back into the Fee is in the best interest of the city. At a minimum, the large-volume industrial customer will be required to comply with the following mandatory conditions.

1. The large-volume industrial customer must submit a written request to the City Manager to request to opt back into the Drought Surcharge Exemption fee subject to City Manager review.
2. Upon receipt of invoice, the large-volume industrial customer must timely pay the Drought Surcharge Exemption fees calculated on said customer’s actual water usage from date of City’s receipt of written request back to said customer’s date of opt out, up to a maximum of 10 years.
3. The large-volume industrial customer remains subject to compliance with the aforementioned allocation surcharge provisions of the City Code as may be amended and all other applicable ordinances, rules and regulations of the City for the mandatory reinstatement period of 24 months. The mandatory reinstatement period begins upon date of notice from the City to said customer and continues for 24 consecutive calendar months. During the reinstatement period, the large-volume industrial customer will timely pay a non-refundable reinstatement fee of \$0.25 per 1,000 gallons of water upon receipt of invoice. By payment of said reinstatement fee, the large-volume industrial customer has determined that the fee is fair, just, and reasonable.
4. Despite compliance with these conditions, the large-volume industrial customer will not be allowed to opt back into the Fee when the combined storage level of the Choke Canyon Reservoir and Lake Corpus Christi declines below 40%.

(d) Dedicated use of the Drought Surcharge Exemption fees.

1. The Fee shall be dedicated by the City for development of a drought-resistant water supply and shall not be used for operation and maintenance costs of any water supply, treatment facility or distribution system.
2. The Fee paid to the City will be reserved in a separate account (“Account”) and used only for capital costs to develop and/or acquire an additional drought-resistant water supply including but not limited to, payment of debt for an allowable capital project.
3. The City Manager may execute documents necessary for the establishment of a dedicated fund.

(e) Review and adjustment of the Drought surcharge exemption fee.

The Fee shall be reviewed and adjusted by City Council action no more frequently than every 5 years. Any subsequent Fee increase is limited to increases based upon changes to the following Consumer Price Index: CPI-All Urban Consumers (Current

Series) for Water and sewer and trash collection services in U.S. City average, all urban consumers.

(f) Participation by wholesale water suppliers.

A wholesale water supplier with a water supply contract with the City may choose to establish an identical voluntary Drought Surcharge Exemption Fee and standard agreement for its large-volume industrial customers with said Fee and agreement to be equivalent to the ordinance and standard agreement adopted by the City of Corpus Christi. Upon adoption of said identical voluntary Drought Surcharge Exemption Fee and standard agreement for its large-volume industrial customers, the wholesale water supplier shall assess and collect the Fees from its large-volume industrial customers and then remit said Fees to the City. In addition, the wholesale water supplier shall notify the City Manager or designee of the volume of water used by its large-volume industrial customers each month.

(g) The City Manager may execute letters of commitment and standard agreements regarding payment and use of Drought Surcharge Exemption Fee with terms consistent with this Section 55-159.1 (each, an "Agreement"). The Agreement may be terminated by the City upon five years' notice to terminate the Agreement. A copy of the standard agreement is attached as an Exhibit to the Ordinance which enacted this Section 55-159.1. The City Manager is authorized to adjust the terms of the standard agreement as long as said adjustments are consistent with the terms of this Section 55-159.1 and said adjustment is made available to all large-volume industrial customers participating in the Drought Surcharge Exemption Fee.

(h) The Drought Surcharge Exemption Fee established by this Section 55-159.1 continues to be billed and paid except during periods when the balance in the Account exceeds \$150,000,000, to be adjusted annually for inflation by the following Consumer Price Index: CPI-All Urban Consumers (Current Series) for Water and sewer and trash collection services in U.S. City average, all urban consumers. While balance exceeds \$150,000,000 the City will cease billing and collection of the Fee and the large-volume industrial customer remains exempt from the allocation surcharges.

(i). The City may repeal this Section 55-159.1 upon at least five years' notice to the then participating large-volume industrial customers and participating wholesale water suppliers.

(j) Upon City's repeal of this Section 55-159.1 or City's termination of the Agreement, any unencumbered balance remaining in the Account will be returned to the then-participating large-volume industrial customers and then-participating wholesale water suppliers on a pro-rata basis.

(k) The large-volume industrial customer paying the Drought Surcharge Exemption Fee established by this Section 159.1 is exempt from City curtailment of water during Reservoir System Stages 1, 2, and 3, except when such curtailment is required by Texas Water Code Section 11.039 or required by other applicable state laws and state regulations."

13. Enforcement

- (a) A violation under this article is a Class C misdemeanor. Any person that violates any provision of this article shall be subject to a fine of not more than five hundred dollars (\$500.00) per violation per day. The culpable mental state required by Section 6.02 of the Texas Penal Code is specifically negated and dispensed with and a violation of this article is a strict liability offense.
- (b) The commission of a violation of each provision, and each separate violation thereof, shall be deemed a separate offense, in and upon conviction thereof, shall be fined as hereinabove provided.
- (c) If any person or a second person in the same household or premises is found guilty of a second violation of this article, the water superintendent shall be authorized to discontinue water service to the premises where such violation occurs.
- (d) Cases filed under this section shall be expedited and given preferential setting in municipal court before all other cases.
- (e) Any person whose name is on file with the utilities billing office as the customer on the water account for the property where the violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on said premises shall constitute prima facie evidence that the customer committed the violation, but said customer shall have the right to show that he did not commit the violation.
- (f) If any person fails to respond to a citation or summons issued for a violation of this article within the time allowed, upon receipt of notice from the director or a judge of the municipal courts, the water superintendent is authorized to discontinue water service to the premises where such violation occurs.

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 City 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 City 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 City of Corpus Christi (City) adopts the following Wholesale Drought Contingency Plan (the Plan).

16.2 Public and Wholesale Customer Involvement

The public was invited to view and make comments on the Plan during the regular meeting of City Council on July 17, 2018 at City Hall. The Plan was adopted under the open meetings requirement of the TCEQ during the October 1, 2018 City Council meeting.

16.3 Wholesale Water Customer Education

The City 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 City of Corpus Christi and its wholesale water customers is located within the Coastal Bend Planning Region (Region N) and the City 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.

16.5 Authorization

The City of Corpus Christi City 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 City. The City 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 City 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 City 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 City 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 City of Corpus Christi Water Conservation Plan and Drought Contingency Plan, adopted under Ordinance Number 55-151 to impose similar restrictions, surcharges or rationing measures on their customers. To the extent of its legal authority, the City of Corpus Christi shall require its wholesale customers to implement outdoor watering restrictions similar to those of the City for each drought response stage. The City 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 Reservoir System Response Stages

The City of Corpus Christi City 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 reservoir system response stages will be made by email, mail, or telephone. The news media will also be informed by the City.

The triggering criterion to be monitored for determining reservoir system 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. The triggering criteria in this section are minimum standards for initiation and maximum standards for termination, and the City Manager, or designee, can initiate or terminate each stage when conditions warrant.

(a) Stage 1 – MILD Water Shortage Watch

Requirements for initiation – The City will recognize that a mild water shortage watch exists when the combined storage level declines below 40 percent.

Requirement for termination – Stage 1 of the Plan may be rescinded when the combined storage level increases above 50 percent. The City will notify its wholesale customers and the media of the termination of Stage 1 in the same manner as the notification of initiation of Stage 1 of the Plan.

(c) Stage 2 – MODERATE Water Shortage Condition

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

Requirement for termination – Stage 2 of the Plan may be rescinded when the combined storage level increases above 40 percent. Upon termination of Stage 2,

Stage 1 becomes operative. The City will notify its wholesale customers and the media of the termination of Stage 2.

(d)Stage 3 – CRITICAL Water Shortage Condition

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

Requirement for termination – Stage 3 of the Plan may be rescinded when the combined storage level increases above 30 percent. Upon termination of Stage 3, Stage 2 becomes operative. The City will notify its wholesale customers and the media of the termination of Stage 3.

(e)Stage 4 – EMERGENCY Water Shortage Condition

Requirements for initiation – The City 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 unprecedented loss of capability to provide water service; or
- ii. Water production or distribution 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 City of Corpus Christi City Manager, or designee, deems appropriate. The City 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 Reservoir System Response Stages

The City of Corpus Christi City 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 critical water shortage conditions exist or that an emergency condition exists and shall implement best management practices accordingly.

For water contracts between the City 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 reservoir system 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.

Reservoir System Stage Response	CCR/LCC Combined Reservoir Storage Level	Target Demand Reduction Levels
Stage 1- Mild	<40%	10%
Stage 2- Moderate	<30%	20%
Stage 3- Critical	<20%	30%
Stage 4- Emergency	Not Applicable	50%

Stage 1 – MILD Water Shortage Watch

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

Best Management Practices for Supply Management:

- The City will coordinate with the necessary agencies to ensure that unnecessary releases of water from the Reservoir System are minimized.

The City 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 City’s system, use of reclaimed water for non-potable purposes, etc.

Water Use Measures for Reducing Demand:

- The City of Corpus Christi City 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 City of Corpus Christi City Manager, or designee, will request wholesale water customers to initiate mandatory measures to reduce non-essential water use (e.g. implement Stage 1 of the customer’s drought contingency plan).
- The City 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.

Other Actions to be Taken:

- The City 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 1 Reservoir System Response level has been declared. The City will recommend that operators post information to the public regarding Stage 1 of the Drought Contingency Plan and possible boating safety hazards due to decreasing Reservoir levels.

Stage 2– MODERATE Water Shortage Conditions

Target: Achieve a 20 percent reduction in daily water demand for each wholesale customer utilizing City’s water supply system.

Best Management Practices for Supply Management:

- The City will coordinate with the necessary agencies to ensure that unnecessary releases of water from the Reservoir System are minimized.
- The City 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 City’s system, use of reclaimed water for non-potable purposes, etc.

Water Use Measures for Reducing Demand:

- The City of Corpus Christi City 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 2 of the customer’s drought contingency plan).
- The City of Corpus Christi City 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 City 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.

Other Actions to be Taken:

- The City 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 2 Reservoir System 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 – CRITICAL Water Shortage Conditions

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

Best Management Practices for Supply Management:

- The City 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 City 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 City’s system, use of reclaimed water for non-potable purposes, etc.

Water Use Restrictions for Reducing Demand:

- The City of Corpus Christi City 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 City of Corpus Christi City 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 City 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.

Other Actions to be Taken:

- The City 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 3 Reservoir System 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 – EMERGENCY Water Shortage Conditions

Whenever emergency water shortage conditions exist as defined in Section 16.7 of the Plan, the City of Corpus Christi City 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 director or other responsible official of each wholesale water customer by telephone, email, or in person and suggest actions, as appropriate to alleviate problems (e.g., notification of the public to reduce water use until service is restored).
- If appropriate, notify city, county, and/or state emergency response officials for assistance.
- Undertake necessary actions, including repairs and/or clean-up as needed.
- Prepare a post-event assessment report on the incident and critique of emergency response procedures and actions.

16.9 Pro Rata Water Allocation

In the event that the triggering criteria specified in Section 16.7 of the Plan , the City of Corpus Christi City 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 2. 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 city council based on the city 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 city council 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 City Manager, or the City Manager's 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 City 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 City 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 City Council of the City of Corpus Christi.

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 Requests for Exemptions and Variances

The City 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 City Manager within 5 days after pro rata allocation has been invoked. All petitions for variances shall be reviewed by the City 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 Ordinance.

- (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 City shall be subject to the following conditions, unless waived or modified by the City.

- (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.

Wholesale Water Supply customers that have industrial customer(s) that use in excess of 100,000 gallons per day may offer a non-mandatory Drought Surcharge Exemption Fee in accordance with Article XII of Chapter 55 of the Corpus Christi Code of Ordinances Section 55-159.1. Such Wholesale Water Supply customers will be required to collect and transmit the Exemption Fee to the City of Corpus Christi. Participating Wholesale Water Supply customers' industries will be afforded the same drought exemptions as those afforded by the city of Corpus Christi large volume industrial users.

16.12 Severability

It is hereby declared to be the intention of the City 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 City without the incorporation into this Plan of any such unconstitutional phrase, clause, sentence, paragraph, or section.

16.13 Reservoir System Operating Plan

Because all 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 C.

Ordinance amending the Corpus Christi Code of Ordinances to modify Sections 55-150 and 55-154 and add Section 55-159.1, which will provide an exemption from drought surcharges for large-volume industrial customers who pay a drought surcharge exemption fee, provide a mechanism to opt-out of said fee, dedicate the use of the exemption fee to development of a drought-resistant water supply, and authorize the City Manager to execute a standard form agreement with customers who request a City commitment regarding use of the fee; effective October 1, 2018; and providing for penalties.

Whereas, a committee of large volume industrial customers determined that the value of their industrial processes creates a need to provide a water supply that will be resistant to drought despite future increases in industrial demand;

Whereas, said committee desires to simultaneously incentivize the City to obtain said drought resistant water supply while avoiding the vagaries of a drought surcharge that will occasionally and unpredictably increase their cost of water by paying a flat-rate fee that will pay for part of the cost of future drought-resistant water supplies;

Whereas, said fee will be placed in a dedicated fund with mechanisms to protect it from diversion into unintended uses; and

Whereas, curtailment due to shortage shall result in distribution of water pro rata in a manner directed by Texas Water Code § 11.039.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CORPUS CHRISTI, TEXAS:

Section 1. The Corpus Christi Code of Ordinances is amended to modify Subsection (a) of Section 55-150 to read as follows:

Sec. 55-150. - Scope, purpose, authorization, and definitions.

- (a) *Scope.* There is hereby established a City of Corpus Christi Water Conservation Plan and Drought Contingency Plan. The City of Corpus Christi Water Conservation Plan approved on May 28, 2013 and the Drought Contingency Plan ~~2017~~Revised 2018 edition, dated approved January 30, 2018, as amended by ordinance, a true copy of which is on file in the office of the city secretary, is adopted, and shall be followed in matters concerning water conservation, drought management, and water supply enhancement programs.

Section 2. The Corpus Christi Code of Ordinances is amended to modify Section 55-154 to read as follows:

Sec. 55-154. - Surcharges for reservoir system stages 2, 3 and 4, 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 city council 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 city's regulatory and police power, and the surcharges and connection fees are conservation rates intended to meet fixed costs as a result of lost revenue.
 - (3) With city council approval, the city manager or designee is authorized to determine trigger points and surcharges during Stages 2, 3 and 4 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 director of water operations or his designee on grounds of unnecessary hardship through the process outlined in section 55-155.
 - (6) Reservoir system surcharge funds will first be applied towards annual debt service payments and operating and maintenance expenses of the water department as reflected in the city operating budget to offset revenue loss due to drought conditions. Additional funds will be reported to city council for city council direction.
- (b) *Residential water customers, who are not billed through a master water meter.*
- (1) A monthly base amount of three thousand (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 three thousand (3,000) gallon monthly consumption trigger point, with city council approval, a drought surcharge shall be added up to and including one hundred (100) per cent 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 1 condition has been declared, property managers of multi-tenant units shall notify the city director of water operations of number of residential units in their facility for determination of allocations. Until so notified, the city shall calculate the allocation based on two (2) residential units per master water meter. A monthly base amount of three thousand (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 three thousand (3,000) gallons times the number of residential units, there will be no surcharge.
 - (3) With city council approval, when consumption is above the three thousand (3,000) gallons times the number of units, a drought surcharge shall be added up to and including one hundred (100) per cent 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 city manager or designee for each commercial or institutional customer.
 - (2) Method of establishing allocation:
 - a. When the combined reservoir capacity is less than twenty (20) per cent of total capacity (Stage 3), the commercial or institutional customer's allocation shall be ninety (90) per cent of the customer's usage for the corresponding month's billing period during the previous twelve (12) months prior to the implementation of Stage 1 condition.
 - b. If the customer's billing history is shorter than twelve (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, ninety (90) per cent of whose monthly usage is less than six thousand (6,000) gallons, shall be allocated six thousand (6,000) gallons.

- d. The city 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 city' utilities 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 city manager, the allocation may be reduced or increased by the city manager:
 - 1. If one (1) 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 less than 100,000 gallons of water per day for processing.*
- (1) A monthly water usage allocation shall be established by the city manager or designee for each ~~an~~ industrial customer, which uses less than 100,000 gallons of water per day for processing (e.g., an industrial customer).
 - (2) Method of establishing allocation.
 - a. When the combined reservoir capacity of Choke Canyon Reservoir and Lake Corpus Christi is less than twenty (20) percent of total capacity (Stage 3), the industrial customer allocation shall be ninety (90) percent of the customer's usage for the corresponding month's billing period during the previous twelve (12) months prior to the implementation of Stage 1 condition.
 - b. If the customer's billing history is shorter than twelve (12) months, the monthly allocation shall be one-twelfth of ninety (90) percent of the customer's maximum annual contracted amount until twelve (12) months of billing history are established. ~~However~~However, if the industrial customer does not have a water contract and does not have at least twelve (12) months of billing history, then the new industrial customer will provide data regarding expected water use and city will determine allocation based on ninety (90) percent of expected use to determine initial allocation until twelve (12) months of billing history are established.
 - c. The city 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 industrial customer does not receive such notice, it shall be the customer's responsibility to contact the city utilities 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 industrial customer or at the initiative of the city manager, the allocation may be reduced or increased by the city manager, if:
 - 1. The designated period does not accurately reflect the customer's normal water usage because customer had to 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 customers, institutional customers, and industrial customers who use less than 100,000 gallons of water per day for processing shall pay the following reservoir system surcharges:

- (1) Customers whose allocation is six thousand (6,000) gallons through twenty thousand (20,000) gallons per month:
 - a. Five dollars (\$5.00) per one thousand (1,000) gallons for the first one thousand (1,000) gallons over allocation.
 - b. Eight dollars (\$8.00) per one thousand (1,000) gallons for the second one thousand (1,000) gallons over allocation.
 - c. Sixteen dollars (\$16.00) per one thousand (1,000) gallons for the third one thousand (1,000) gallons over allocation.
 - d. Forty dollars (\$40.00) for each additional one thousand (1,000) gallons over allocation.
- (2) Customers whose allocation is twenty-one thousand (21,000) gallons per month or more:
 - a. One (1) times the block rate for each one thousand (1,000) gallons in excess of the allocation up through five (5) percent above allocation.
 - b. Three (3) times the block rate for each one thousand (1,000) gallons from five (5) per cent through ten (10) percent above allocation.
 - c. Five (5) times the block rate for each one thousand (1,000) gallons from ten (10) per cent through fifteen (15) percent above allocation.
 - d. Ten (10) times the block rate for each one thousand (1,000) gallons more than fifteen (15) percent above allocation.
 - e. The surcharges shall be cumulative.
 - f. As used herein, "block rate" means the charge to the customer per one thousand (1,000) gallons at the regular water rate schedule at the level of the customer's allocation.

(g) Industrial customers, who use 100,000 gallons or more of water per day for processing.

(1) A monthly water usage allocation shall be established by the city manager or designee for each industrial customer, which uses water for processing (e.g., an industrial customer).

(2) Method of establishing allocation.

- a. When the combined reservoir capacity of Choke Canyon Reservoir and Lake Corpus Christi is less than thirty (30) percent of total capacity (Stage 2), the industrial customer allocation shall be eighty (80) percent of the customer's usage for the corresponding month's billing period during the previous twelve (12) months prior to the implementation of Stage 1 condition.
- b. If the customer's billing history is shorter than twelve (12) months, the monthly allocation shall be one-twelfth of eighty (80) percent of the customer's maximum annual contracted amount until twelve (12) months of billing history are established. However, if the industrial customer does not have a water contract and does not have at least twelve (12) months of billing history, then the new industrial customer will provide data regarding expected water use and city will determine allocation based on eighty (80) percent of expected use to determine initial allocation until twelve (12) months of billing history are established.
- c. The city 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 industrial customer does not receive such notice, it shall be the customer's responsibility to contact the city utilities 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 industrial customer or at the initiative of the city manager, the allocation may be reduced or increased by the city manager, if:

1. The designated period does not accurately reflect the customer's normal water usage because customer had to 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.

(h) Industrial customers using 100,000 gallons or more of water per day for processing shall pay the following drought surcharges:

- (1) Customers whose allocation is Eighty thousand (80,000) gallons per month or more:
 - a. Three (3) times the block rate for each one thousand (1,000) gallons in excess of the allocation up through five (5) percent above allocation.
 - b. Six (6) times the block rate for each one thousand (1,000) gallons from five (5) per cent through ten (10) percent above allocation.
 - c. Nine (9) times the block rate for each one thousand (1,000) gallons from ten (10) per cent through fifteen (15) percent above allocation.
 - d. Twelve (12) times the block rate for each one thousand (1,000) gallons more than fifteen (15) percent above allocation.
 - e. The surcharges shall be cumulative.
 - f. As used herein, "block rate" means the charge to the customer per one thousand (1,000) gallons at the regular water rate schedule at the level of the customer's allocation.

(ig) 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 plan 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 city).
 - 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 city) to the extent reasonable and practical under the circumstances.

(jh) For residential customers, the following measures come into effect after city council approves a drought rate surcharge; for nonresidential customers, these measures come into effect at Stage 3. Water service to the customer may be terminated under the following conditions:

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

- (3) Monthly nonresidential water usage for a customer whose allocation is six thousand (6,000) gallons through twenty thousand (20,000) gallons exceeds its allocation by seven thousand (7,000) gallons or more two (2) or more times (which need not be consecutive months).
- (4) Monthly nonresidential water usage for a customer whose allocation is twenty-one thousand (21,000) gallons or more exceeds its allocation by fifteen (15) percent or more two (2) or more times (which need not be consecutive months).
- (5) For residential customers and nonresidential customers, after the first disconnection, water service shall be restored upon request for a fee of fifty dollars (\$50.00).
- (6) For such customers, after the second disconnection, water service shall be restored within twenty-four (24) hours of the request for a fee of five hundred dollars (\$500.00).
- (7) If water service is disconnected a third time for such customer, water service shall not be restored until the city re-enters a level of water conservation less than Stage 2. For master meter customers, the service restoration fees shall be the same as above times the number of dwelling units.
- (8) The city manager is directed to institute written guidelines for disconnection of water service under this provision, which will satisfy minimum due process requirements, if any.

(k) 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.

(l) 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 city'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 thirty (30) days, but a variance of two (2) 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.

Section 3. Article XII of Chapter 55 of the Corpus Christi Code of Ordinances is amended to add new Section 55-159.1, to read as follows:

"Sec. 55-159.1 – Non-mandatory Drought Surcharge Exemption Fee.

(a) Establishment of non-mandatory "Drought Surcharge Exemption Fee" effective October 1, 2018.

Large-volume industrial customers¹ may voluntarily pay a non-mandatory and non-refundable "Drought Surcharge Exemption fee" or "Fee" of \$0.25 per 1,000 gallons of water per month to be exempt from the applicable allocation surcharges of City Code Section 55-154 during the month of billing. The City will begin to charge the Fee as of October 1, 2018 to all large-volume industrial customers. The Fee will be charged with the large-volume industrial customer's regular monthly water bill which is due as stated on the bill. By payment of the Fee, the large-volume industrial customer has determined that the Fee is fair, just, and reasonable.

(b) Notice of Opt-out-

A large-volume industrial customer may opt out of the Drought Surcharge Exemption fee (or "Fee") by providing written notice to the City Manager. A large-volume industrial customer is deemed to have opted out of the Fee as of the date payment of the Fee remains delinquent after notice and opportunity to cure. A large-volume industrial customer who has opted out of said Fee is subject to aforementioned allocation surcharges of City Code Section 55-154 in addition to compliance with all applicable City ordinances.

(c) Request to opt back into the Drought Surcharge Exemption fee or "Fee".

There is no right nor entitlement to opt back into the Fee. The City Manager or designee retains sole discretion to determine whether granting large-volume industrial customer's request to opt back into the Fee is in the best interest of the city. At a minimum, the large-volume industrial customer will be required to comply with the following mandatory conditions.

1. The large-volume industrial customer must submit a written request to the City Manager to request to opt back into the Drought Surcharge Exemption fee subject to City Manager review.
2. Upon receipt of invoice, the large-volume industrial customer must timely pay the Drought Surcharge Exemption fees calculated on said customer's actual water usage from date of City's receipt of written request back to said customer's date of opt out, up to a maximum of 10 years.
3. The large-volume industrial customer remains subject to compliance with the aforementioned allocation surcharge provisions of the City Code as may be amended and all other applicable ordinances, rules and regulations of the City for the mandatory reinstatement period of 24 months. The mandatory reinstatement period begins upon date of notice from the City to said customer and continues for 24 consecutive calendar months. During the reinstatement period, the large-volume industrial customer will timely pay a non-refundable reinstatement fee of \$0.25 per 1,000 gallons of water upon receipt of invoice. By payment of said reinstatement fee, the large-volume industrial customer has determined that the fee is fair, just, and reasonable.

¹ For purposes of this Section 55-159.1 the term "large-volume industrial customer" shall mean a utility customer who uses water in minimum quantity of 100,000 gallons a day in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, including the development of power by means other than hydroelectric, but does not include agricultural use.

4. Despite compliance with these conditions, the large-volume industrial customer will not be allowed to opt back into the Fee when the combined storage level of the Choke Canyon Reservoir and Lake Corpus Christi declines below 40%.

(d) Dedicated use of the Drought Surcharge Exemption fees.

1. The Fee shall be dedicated by the City for development of a drought-resistant water supply and shall not be used for operation and maintenance costs of any water supply, treatment facility or distribution system.

2. The Fee paid to the City will be reserved in a separate account ("Account") and used only for capital costs to develop and/or acquire an additional drought-resistant water supply including but not limited to, payment of debt for an allowable capital project.

3. The City Manager may execute documents necessary for the establishment of a dedicated fund.

(e) Review and adjustment of the Drought surcharge exemption fee.

The Fee shall be reviewed and adjusted by City Council action no more frequently than every 5 years. Any subsequent Fee increase is limited to increases based upon changes to the following Consumer Price Index: CPI-All Urban Consumers (Current Series) for Water and sewer and trash collection services in U.S. City average, all urban consumers.

(f) Participation by wholesale water suppliers.

A wholesale water supplier with a water supply contract with the City may choose to establish an identical voluntary Drought Surcharge Exemption Fee and standard agreement for its large-volume industrial customers with said Fee and agreement to be equivalent to the ordinance and standard agreement adopted by the City of Corpus Christi. Upon adoption of said identical voluntary Drought Surcharge Exemption Fee and standard agreement for its large-volume industrial customers, the wholesale water supplier shall assess and collect the Fees from its large-volume industrial customers and then remit said Fees to the City. In addition, the wholesale water supplier shall notify the City Manager or designee of the volume of water used by its large-volume industrial customers each month.

(g) The City Manager may execute letters of commitment and standard agreements regarding payment and use of Drought Surcharge Exemption Fee with terms consistent with this Section 55-159.1 (each, an "Agreement"). The Agreement may be terminated by the City upon five years' notice to terminate the Agreement. A copy of the standard agreement is attached as an Exhibit to the Ordinance which enacted this Section 55-159.1. The City Manager is authorized to adjust the terms of the standard agreement as long as said adjustments are consistent with the terms of this Section 55-159.1 and said adjustment is made available to all large-volume industrial customers participating in the Drought Surcharge Exemption Fee.

(h) The Drought Surcharge Exemption Fee established by this Section 55-159.1 continues to be billed and paid except during periods when the balance in the Account exceeds \$150,000,000, to be adjusted annually for inflation by the following Consumer Price Index: CPI-All Urban Consumers (Current Series) for Water and sewer and trash collection services in U.S. City average, all urban consumers. While balance exceeds \$150,000,000 the City will cease billing and collection of the Fee and the large-volume industrial customer remains exempt from the allocation surcharges.

(i). The City may repeal this Section 55-159.1 upon at least five years' notice to the then participating large-volume industrial customers and participating wholesale water suppliers.

(j) Upon City's repeal of this Section 55-159.1 or City's termination of the Agreement, any unencumbered balance remaining in the Account will be returned to the then-participating large-volume industrial customers and then-participating wholesale water suppliers on a pro-rata basis.

(k) The large-volume industrial customer paying the Drought Surcharge Exemption Fee established by this Section 159.1 is exempt from City curtailment of water during Reservoir System Stages 1, 2, and 3, except when such curtailment is required by Texas Water Code Section 11.039 or required by other applicable state laws and state regulations."

Section 4. The Drought Contingency Plan adopted by Ordinance No. 029846, as amended by Ordinance 030545, 031160, and Ordinance 031355 is hereby amended to reflect these changes, and the amended Drought Plan be filed of record with the City Secretary's Office. City staff is directed to submit the amended Drought Contingency Plan to the Texas Commission on Environmental Quality and the Texas Water Development Board and as required by law.

Section 5. Staff is directed to submit a copy of the approved ordinance to the wholesale water customers.

Section 6. Publication and Effective Date. This ordinance shall be published in a newspaper of general circulation. The changes enacted by this ordinance take effect on October 1, 2018.

Section 7. Severability. It is hereby declared to be the intention of the City that the sections, paragraphs, sentences, clauses, and phrases of this Ordinance are severable and, if any phrase, clause, sentence, paragraph, or section of this Ordinance 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 Ordinance.

Section 8. Penalties. Violations of this Ordinance shall be enforced pursuant to City Code of Ordinances Section 55-156.

Section 9. The change in law made by this Ordinance applies only to an offense committed on or after the effective date of this Ordinance. An offense committed before the effective date of this Ordinance is governed by the Ordinance in effect when the offense was committed, and the former ordinance is continued in effect for that purpose. For purposes of this section, an offense was committed before the effective date of this Ordinance if any element of the offense occurred before that date.

That the foregoing ordinance was read for the first time and passed to its second reading on this the 28th day of August, 2018, by the following vote:

Joe McComb	<u>Aye</u>	Ben Molina	<u>Aye</u>
Rudy Garza	<u>Aye</u>	Everett Roy	<u>Aye</u>
Paulette Guajardo	<u>Aye</u>	Lucy Rubio	<u>Aye</u>
Michael Hunter	<u>Aye</u>	Greg Smith	<u>Aye</u>
Debbie Lindsey-Opel	<u>Aye</u>		

That the foregoing ordinance was read for the second time and passed finally on this the 11th day of September, 2018, by the following vote:

Joe McComb	<u>Aye</u>	Ben Molina	<u>Aye</u>
Rudy Garza	<u>Aye</u>	Everett Roy	<u>Aye</u>
Paulette Guajardo	<u>Aye</u>	Lucy Rubio	<u>Aye</u>
Michael Hunter	<u>Aye</u>	Greg Smith	<u>Aye</u>
Debbie Lindsey-Opel	<u>Aye</u>		

PASSED AND APPROVED on this the 11th day of September, 2018.
ATTEST:

Rebecca Huerta
Rebecca Huerta
City Secretary

Joe McComb
Joe McComb
Mayor

EFFECTIVE DATE
<u>10 / 1 / 18</u>

031533

EXHIBIT A - STANDARD FORM AGREEMENT REGARDING PAYMENT AND USE OF NON-MANDATORY DROUGHT ALLOCATION SURCHARGE EXEMPTION FEE

STATE OF TEXAS §
COUNTY OF NUECES §

Whereas, the City of Corpus Christi adopted Ordinance No. ___ which amended Article XII Water Resource Management of Chapter 55 of the City Code of Ordinances (the "Code") by adding new Section 55-159.1, "Non-mandatory Drought Surcharge Exemption Fee", a copy of which is attached as Exhibit A, and referred to herein as "the Ordinance";

Whereas, the Ordinance established the initial Drought Surcharge Exemption Fee of \$0.25 per 1,000 gallons for industrial customers effective October 1, 2018, herein the "Drought Surcharge Exemption Fee" or "the Fee";

Whereas, the Ordinance further provides that large-volume industrial customers who pay the non-mandatory Fee are exempt from the applicable water allocation surcharges of City Code Section 55-154;

Whereas, the Ordinance further provides that large-volume industrial customers may opt-out of the Drought Surcharge Exemption Fee by providing written notice to the City Manager;

Whereas, large-volume industrial customers who opt out of the Fee will be subject to the allocation surcharge of City Code of Ordinances Section 55-154 as amended;

Whereas, the Ordinance further provides that the Fees shall be dedicated for development of a drought-resistant water supply;

Whereas, the Ordinance further provides that the City Manager may execute documents necessary to establish the dedicated fund; and

Whereas, the Ordinance further provides that the Drought Surcharge Exemption Fee may be adjusted no more frequently than every 5 years by City Council;

NOW, THEREFORE, THIS AGREEMENT is made and entered into by and between, _____ ("Company"), whose address is _____, and the City of Corpus Christi, Texas ("City"), a home rule city and municipal corporation and body politic under the laws of the State of Texas, of 1201 Leopard Street, Corpus Christi, Texas 78401, County of Nueces, State of Texas, for good and valuable consideration in hand received by the parties respectively and upon the covenants and conditions hereafter stated:

1. The parties find and agree that the foregoing statements included in the preamble of this Agreement are true and correct and adopt such findings for all intents and purposes related to this Agreement.
2. Company is a large-volume industrial customer of the City. For purposes of this agreement, the term "large-volume industrial customer" or "industrial customer" means: a City utility account customer that uses water in quantity of at least 100,000 gallons a day in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, including the development of power by means other than hydroelectric, but does not include agricultural use.

3. During the term of this Agreement and subject to the opt-out provisions detailed below, the City agrees to bill Company the Drought Surcharge Exemption Fee ("Fee") of \$0.25 per 1,000 gallons per month as adjusted for consumer price index described in Ordinance No. _____ in addition to the regular City rates for Company's water use. The City acknowledges that by Company's timely payment of said Fee, the Company is exempt from the City's water allocation surcharge of City Code Section 55-154 for the month of billing. However, this Agreement does not prevent the City from allocating water supply in the event of an emergency water shortage condition as defined by TCEQ regulations or by City Ordinance 031355, or as may be required by Texas Water Code Section 11.039 or required by any other State laws and regulations.

4. During the term of this Agreement and subject to the opt-out provisions detailed below, the Company agrees to timely pay the Fee established by City Ordinance. Company agrees that the Fee is a non-mandatory and nonrefundable fee. Company agrees that said fee is fair, just and reasonable. Company agrees that Company shall not subject the City to any legal challenge of said Fee or of Ordinance No. _____, but this sentence will not affect any legal challenge by Company based on the City's failure to comply with the terms of this Agreement.

5. During the term of this Agreement and subject to the opt-out provisions detailed below, the City agrees that the Fee shall continue be billed and paid each month except during periods when the balance exceeds \$150,000,000 to be adjusted annually for inflation by the following Consumer Price Index: CPI-All Urban Consumers (Current Series) for Water and sewer and trash collection services in U.S. City average, all urban consumers, or until the Ordinance is repealed, whichever occurs first.

6. The City agrees that the Fee paid by Company shall be deposited by City into a dedicated account (or "the Fund") to be used by City solely to develop capital projects for a drought-resistant water supply or supplies. The City agrees that the Fee will not be used for non-capital projects such as studies that compare alternate water sources. For purposes of this Agreement, the term "capital project" is a capital project as determined by general accepted accounting principles. The Fee paid to the City may be used by the City to pay debt for an allowable capital project.

7. Company acknowledges that Company may opt out of the Fee by providing written opt-out notice to the City Manager. Company acknowledges that once Company opts out of said Fee, then Company again becomes subject to the City's water allocation surcharge of City Code Section 55-154.

8. If the Company fails to timely pay the Fee when due, then the City shall provide Company notice and 30 days' opportunity to cure the payment default. Upon expiration of the 30 day notice period without Company curing the default, the Company will be deemed to have opted out of the Fee and immediately again becomes subject to the water allocation surcharges of the City Code.

9. Company further acknowledges that once Company has opted out of said Fee, then Company may request to opt back into the Fee subject to compliance with City ordinance and the following minimum conditions:

- There is no right nor entitlement to opt back into the Fee. The City Manager or designee retains sole discretion to determine whether granting request to opt back into the Fee is in the best interest of the city.
- The customer must submit a written request to the City Manager to request to opt back into the Drought Surcharge Exemption Fee subject to City Manager review.
- Upon receipt of invoice, (which may be sent in the event the City Manager or designee grants the request to opt back into the Fee) the customer must timely pay the Drought Surcharge Exemption fees calculated on customer's actual water usage from date of

City's receipt of written request back to customer's date of opt out, up to a maximum of 10 years.

- The customer remains subject to compliance with the aforementioned allocation surcharge provisions of the City Code as may be amended and all other applicable ordinances, rules and regulations of the City for the mandatory reinstatement period of 24 months. The mandatory reinstatement period begins upon date of notice from the City to the customer of the approval of the request to opt in and continues for 24 consecutive calendar months. During the 24-month reinstatement period, the customer must timely pay a non-refundable reinstatement fee of \$0.25 per 1,000 gallons of water consumed during the reinstatement period, upon receipt of invoice. By payment of said reinstatement fee, the Company has determined that the fee is fair, just and reasonable.
- Despite compliance with these conditions, the customer will not be allowed to opt back into the Fee when the combined storage level of the Choke Canyon Reservoir and Lake Corpus Christi declines below 40%.

10. The Fee shall not be increased for initial five years from effective date of the Ordinance. Thereafter, the Fee shall not be increased by more than the percentage increase in the U.S. Consumer Price Index-All Urban Consumers (Current Series) for Water and sewer and trash collection services U.S. City average, all urban consumers since the effective date of the Ordinance.

11. The parties acknowledge that all customers within the same rate class must receive the same rates. Therefore, if the City enters into an agreement with another similarly classified industrial customer regarding the payment and use of the Drought Surcharge Exemption Fee and the agreement contains terms more favorable than those in this Agreement, then Company and its assigns shall have the right to amend this Agreement to contain the more favorable terms and provisions.

12. The parties agree that if any court or administrative body with final jurisdiction declares the Fee or Ordinance invalid, then the parties agree that this Agreement shall be terminated and any unencumbered balance remaining in the Fund shall be returned to the then-participating industrial customers and then-participating wholesale water suppliers on a pro-rata basis based on amounts of Fees paid by each such customer.

13. This Agreement is subject to the laws of the State of Texas. Any dispute regarding the City's performance under this Agreement shall be brought in the courts of Nueces County Texas after notice and reasonable opportunity to cure. Company may assign this Agreement upon written consent of the City which consent shall not be unreasonably withheld.

14. Notices regarding this Agreement shall be sent to the parties at the addresses reflected herein, as may be modified by written notice. Notices to the City shall be addressed to attention of the City Manager with copy to the City Attorney. Notices are deemed received three business days' following mail via regular U.S. mail, certified U.S. mail, or via overnight mail courier service.

15. This Agreement takes effect upon date of last signature.

16. The City will cease billing and collection of the Drought Surcharge Exemption Fee during periods when the balance of the Fund exceeds \$150,000,000. The Company continues to be exempt from the allocation surcharges of the City Code 55-154 as long as the balance of the Fund exceeds \$150,000,000 until this Agreement is terminated.

17. This Agreement continues in effect unless terminated by mutual agreement of the parties, or until Company issues notices to opt out of the Fee, or until terminated as otherwise provided herein.

18. This Agreement may also be terminated upon City Council adoption of an ordinance to terminate this Agreement effective upon five years' notice to Company, or by adoption of an ordinance to terminate collection of the Drought Surcharge Exemption Fee upon five years' notice to the then participating large volume industrial customers. Upon effective date of termination of this Agreement as described in the preceding sentence, any unencumbered balance remaining in the Fund shall be returned to the then-participating wholesale water suppliers and then-participating large-volume industrial customers on pro-rata basis and the Company is subject to the allocation surcharges of City Code 55-154 as amended.

**AGREED TO BY:
COMPANY:**

By: _____
Name:
Title:

**STATE OF TEXAS §
 §
COUNTY OF NUECES §**

This instrument was acknowledged before me on this the ____ day of _____, 2018, by _____ as the _____ for _____ Company on behalf of said Company.

Notary Public, State of Texas

CITY OF CORPUS CHRISTI:

By: _____
Name:
Title:

**STATE OF TEXAS §
COUNTY OF NUECES §**

This instrument was acknowledged before me on this ____ day of _____, 2018, by _____, _____, _____, of the City of Corpus Christi, a Texas home-rule municipal corporation, on behalf of said corporation.

Notary Public, State of Texas

APPROVED AS TO FORM: ____ day of _____, 2018.

Assistant City Attorney
for the City Attorney

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

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

- 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.(1) 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

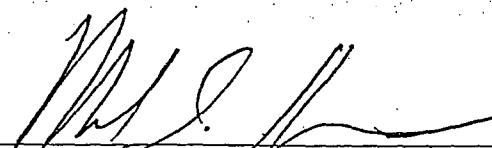
environment and health of related living marine resources and the provision of maximum reasonable credits towards monthly inflow requirements; and,

(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

OPERATIONS PLAN FOR THE
LAKE CORPUS CHRISTI-CHOKO 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 Christi 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

	<u>Capacity, Acre-Feet*</u>	<u>Water Elevation When Full, Feet</u>	<u>Minimum Functional Elevation, Feet</u>
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:

	<u>Elevation, Feet</u>
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:

<u>Fiscal Year</u>	<u>Total Withdrawn From Lake, Acre-Feet</u>
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

