

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

## TCEQ INDUSTRIAL WASTEWATER PERMIT APPLICATION

### INDUSTRIAL ADMINISTRATIVE REPORT

**Complete and submit this checklist with the application.**

APPLICANT NAME: City of Corpus Christi

PERMIT NUMBER: WQ000  

**Check Y for each of the following items included in this application. If an item was not included, check N.**

	Y	N		Y	N
Administrative Report 1.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Worksheet 8.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Administrative Report 1.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Worksheet 9.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SPIF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Worksheet 10.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Core Data Form	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Worksheet 11.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Technical Report 1.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Worksheet 11.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Worksheet 1.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Worksheet 11.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Worksheet 2.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Worksheet 11.3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Worksheet 3.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Original USGS Map	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 3.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Affected Landowners Map	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 3.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Landowner Disk or Labels	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 3.3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Flow Diagram	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 4.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Site Drawing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Worksheet 4.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Original Photographs	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 5.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Solids Management Program	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Worksheet 6.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Water Balance	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worksheet 7.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

**For Commission Use Only:**  
 Segment Number: \_\_\_\_\_ County: \_\_\_\_\_ Expiration Date: \_\_\_\_\_  
 Proposed/Current Permit Number: \_\_\_\_\_ Region: \_\_\_\_\_

# INDUSTRIAL ADMINISTRATIVE REPORT 1.0

The following information **is required** for **all** applications for TPDES permits and TLAPs.

## 1. TYPE OF APPLICATION AND FEES (Instructions, Page 21)

a. Permit No.: WQ000 \_\_\_\_\_ Expiration Date: \_\_\_\_\_  
 EPA ID No.: TX0 \_\_\_\_\_

b. Check the box next to the appropriate application type.

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> New TPDES permit<br><input type="checkbox"/> Major amendment with renewal<br><input type="checkbox"/> Renewal with changes<br><input type="checkbox"/> Minor amendment without renewal<br><input type="checkbox"/> Stormwater only discharge | <input type="checkbox"/> New TLAP permit<br><input type="checkbox"/> Major amendment without renewal<br><input type="checkbox"/> Renewal without changes<br><input type="checkbox"/> Minor modification without renewal |
|--|---|

c. If applying for an **amendment** or **modification** of a permit, describe the request in detail: \_\_\_\_\_

d. Application Fee

**Check the box next to the amount submitted for the application fee:**

EPA Classification	New	Major Amendment (With or Without Renewal)	Renewal (With or Without Changes)	Minor Amendment/ Minor Modification (Without Renewal)
Minor facility not subject to EPA categorical effluent guidelines ( <i>40 CFR Parts 400-471</i> )	<input checked="" type="checkbox"/> \$350	<input type="checkbox"/> \$350	<input type="checkbox"/> \$315	<input type="checkbox"/> \$150
Minor facility subject to EPA categorical effluent guidelines ( <i>40 CFR Parts 400-471</i> )	<input type="checkbox"/> \$1,250	<input type="checkbox"/> \$1,250	<input type="checkbox"/> \$1,215	<input type="checkbox"/> \$150
Major facility	N/A *	<input type="checkbox"/> \$2,050	<input type="checkbox"/> \$2,015	<input type="checkbox"/> \$450

\* All facilities are designated as minors until formally classified as a major by EPA.

**e. Payment Information:**

Mailed Check or money order number: 477804  
 Check or money order amount: \$ 350.00  
 Named printed on check or money order: City of Corpus Christi  
 ePAY Voucher number: \_\_\_\_\_  
 Copy of voucher attached?  Yes    **Attachment:** \_\_\_\_\_

## 2. APPLICANT INFORMATION (Instructions, Pages 21-22)

### a. Facility Owner (Owner of the facility must apply for the permit.)

- Provide the legal name of the entity (applicant) applying for this permit: City of Corpus Christi  
(The legal name must be spelled exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, County, or in the legal documents forming the entity.)
- If the applicant is currently a customer with the TCEQ, provide the Customer Number, which can be located using the [TCEQ's Central Registry Customer Search](#)<sup>1</sup>: CN600131858
- Provide the name and title of the person signing the application. The person must be an executive official meeting signatory requirements in 30 TAC § 305.44.

Mr.  Ms.  First/Last Name: Peter Zanoni

Title: City Manager

Credential:

### b. Co-applicant Information

- Provide the legal name of the co-applicant applying for this permit, if applicable: N/A  
(The legal name must be spelled exactly as filed with the TX SOS, Texas Comptroller of Public Accounts, County, or in the legal documents forming the entity.)
- If the co-applicant is currently a customer with the TCEQ, provide the Customer Number, which can be located using the [TCEQ's Central Registry Customer Search](#): CN
- Provide the name and title of the person signing the application. The person must be an executive official meeting signatory requirements in 30 TAC § 305.44.

Mr.  Ms.  First/Last Name:

Title:

Credential:

- Provide a brief description of the need for a co-permittee:

### c. Core Data Form

Complete the Core Data Form for each customer and include as an attachment. If the customer type selected on the Core Data Form is **Individual**, complete **Attachment 1** of the Administrative Report.

**Attachment:** A

## 3. APPLICATION CONTACT INFORMATION (Instructions, Page 22)

If the TCEQ needs additional information regarding this application, who should be contacted?

- a. Mr.  Ms.  First/Last Name: Esteban "Steve" Ramos Credential:
- Organization Name: City of Corpus Christi Title: Water Resource Manager
- Mailing Address: 2726 Holly Road City/State/ZIP Code: Corpus Christi, TX,  
78415
- Phone No.: (361) 826-3294 Fax No.: (361) 826-1889 E-mail: estebanr2@cctexas.com
- Check one or both:  Administrative Contact  Technical Contact

<sup>1</sup> <http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch>

b. Mr.  Ms.  First/Last Name: Katie Leatherwood Credential: P.G.  
Organization Name: Freese and Nichols, Inc. Title: Environmental Scientist  
Mailing Address: 4055 International Plaza, Suite 200 City/State/ZIP Code: Fort Worth, TX,  
76109  
Phone No.: (817) 735-7503 Fax No.: (817) 735-7492 E-mail: katie.leatherwood@freese.com  
Check one or both:  Administrative Contact  Technical Contact  
**Attachment:**

#### 4. PERMIT CONTACT INFORMATION (Instructions, Page 22)

Provide two names of individuals that can be contacted throughout the permit term.

a. Mr.  Ms.  First/Last Name: Esteban "Steve" Ramos Credential:   
Organization Name: City of Corpus Christi Title: Water Resource Manager  
Mailing Address: 2726 Holly Road City/State/ZIP Code: Corpus Christi, TX,  
78415  
Phone No.: (361) 826-3294 Fax No.: (361) 826-1889 E-mail: estebanr2@cctexas.com

b. Mr.  Ms.  First/Last Name:  Credential:   
Organization Name:  Title:   
Mailing Address:  City/State/ZIP Code:   
Phone No.:  Fax No.:  E-mail:   
**Attachment:**

#### 5. BILLING CONTACT INFORMATION (Instructions, Page 22)

*The permittee is responsible for paying the annual fee. The annual fee will be assessed to permits in effect on September 1 of each year. The TCEQ will send a bill to the address provided in this section. The permittee is responsible for terminating the permit when it is no longer needed (form TCEQ-20029).*

Provide the complete mailing address where the annual fee invoice should be mailed and the name and phone number of the permittee's representative responsible for payment of the invoice.

Mr.  Ms.  First/Last Name: Esteban "Steve" Ramos Credential:   
Organization Name: City of Corpus Christi Title: Water Resource Manager  
Mailing Address: 2726 Holly Road City/State/ZIP Code: Corpus Christi, TX  
78415  
Phone No.: (361) 826-3294 Fax No.: (361)826-1889 E-mail: estebanr2@cctexas.com

#### 6. DMR/MER CONTACT INFORMATION (Instructions, Page 22)

Provide the name and mailing address of the person delegated to receive and submit DMRs or MERs.

Mr.  Ms.  First/Last Name: Esteban "Steve" Ramos Credential:   
Organization Name: City of Corpus Christi Title: Water Resource Manager  
Mailing Address: 2726 Holly Road City/State/ZIP Code: Corpus Christi, TX,  
78415  
Phone No.: (361) 826-3294 Fax No.: (361) 826-1889 E-mail: estebanr2@cctexas.com



DMR data must be submitted through the [NetDMR](#)<sup>2</sup> system. An electronic reporting account can be established once the facility has obtained the permit number.

## 7. NOTICE INFORMATION (Instructions, Pages 23-24)

### a. Individual Publishing the Notices

Mr.  Ms.  First/Last Name: Rebecca Huerta Credential:   
Organization Name: City of Corpus Christi Title: City Secretary  
Mailing Address: P.O. Box 9277 City/State/ZIP Code: Corpus Christi, TX 78469  
Phone No.: (361) 826-3105 Fax No.: (361) 826-3113 E-mail: citysecretary@cctexas.com

### b. Method for Receiving Notice of Receipt and Intent to Obtain a Water Quality Permit Package (only for NORI, NAPD will be sent via regular mail)

- E-mail:   
 Fax:   
 Regular Mail (USPS)

Mailing Address: P.O. Box 9277 City/State/ZIP Code: Corpus Christi, TX 78469

### c. Contact in the Notice

Mr.  Ms.  First/Last Name: Esteban "Steve" Ramos Credential:   
Organization Name: City of Corpus Christi Title: Water Resource Manager  
Phone No.: (361) 826-3294 Fax No.: (361) 826-1889 E-mail: estebanr2@cctexas.com

### d. Public Place Information

*If the facility or outfall is located in more than one county, provide a public viewing place for each county.*

Public building name: Bell/Whittington Public Library Location within the building: Reference Shelf  
Physical Address of Building: 2400 Memorial Parkway  
City: Portland County: San Patricio

### e. Bilingual Notice Requirements:

This information **is required** for **new, major amendment, and renewal applications**. It is not required for minor amendment or minor modification applications.

This section of the application is only used to determine if alternative language notices will be needed. Complete instructions on publishing the alternative language notices will be in your public notice package.

Please call the bilingual/ESL coordinator at the nearest elementary and middle schools and obtain the following information to determine whether an alternative language notices are required.

1. Is a bilingual education program required by the Texas Education Code at the elementary or middle school nearest to the facility or proposed facility?

Yes  No

<sup>2</sup> <https://www.tceq.texas.gov/permitting/netdmr>

If **no**, publication of an alternative language notice is not required; **skip to** Item 8 (REGULATED ENTITY AND PERMITTED SITE INFORMATION.)

2. Are the students who attend either the elementary school or the middle school enrolled in a bilingual education program at that school?  
 Yes     No
3. Do the students at these schools attend a bilingual education program at another location?  
 Yes     No
4. Would the school be required to provide a bilingual education program but the school has waived out of this requirement under 19 TAC §89.1205(g)?  
 Yes     No
5. If the answer is yes to question 1, 2, 3, or 4, public notices in an alternative language are required. Which language is required by the bilingual program? Spanish

## 8. REGULATED ENTITY AND PERMITTED SITE INFORMATION (Instructions Pages 24-25)

If the site of your business is part of a larger business site, a Regulated Entity Number (RN) may already be assigned for the larger site. Use the RN assigned for the larger site. [Search the TCEQ's Central Registry](#)<sup>3</sup> to determine the RN or to see if the larger site may already be registered as a regulated site:

If the site is found, provide the assigned RN and the information for the site to be authorized through this application below. The site information for this authorization may vary from the larger site information.

- a. TCEQ issued Regulated Entity Number (RN): **RN** [REDACTED]
- b. Name of project or site (the name known by the community where located): La Quinta Channel Desalination Plant
- c. Is the location address of the facility in the existing permit the same?  
 Yes     No
- d. If the facility is located in Bexar, Comal, Hays, Kinney, Medina, Travis, Uvalde, or Williamson County, additional information concerning protection of the Edwards Aquifer may be required.
- e. Owner of treatment facility: City of Corpus Christi  
Ownership of Facility:     Public     Private     Both     Federal
- f. Owner of land where treatment facility is or will be:  
Mr.  Ms.  First/Last or Organization Name: Occidental Chemical Corporation  
Mailing Address: 4133 TX 361    City/State/ZIP Code: Gregory, TX 78359  
Phone No.: (361) 776-6310    Fax No.: [REDACTED]    E-mail: Rick R. Ritter@oxy.com  
If not the same as the facility owner, there must be a long-term lease agreement in effect for at least six years. In some cases, a lease may not suffice - see instructions. **Attachment: B**
- g. Owner of effluent TLAP disposal site (if applicable):  
Mr.  Ms.  First/Last or Organization Name: N/A

<sup>3</sup> <http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=regent.RNSearch>

Mailing Address: \_\_\_\_\_ City/State/ZIP Code: \_\_\_\_\_

Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_ E-mail: \_\_\_\_\_

If not the same as the facility owner, there must be a long-term lease agreement in effect for at least six years. **Attachment:** \_\_\_\_\_

h. Owner of sewage sludge disposal site (if applicable):

Mr.  Ms.  First/Last or Organization Name: City of Corpus Christi

Mailing Address: 2525 Hygeia Street City/State/ZIP Code: Corpus Christi, TX  
78415

Phone No.: (361) 826-2489 Fax No.: (361) 826-1971 E-mail: \_\_\_\_\_

If not the same as the facility owner, there must be a long-term lease agreement in effect for at least six years. **Attachment:** \_\_\_\_\_

(This information is required only if authorization is sought in the permit for sludge disposal on property owned or controlled by the applicant.)

## 9. **TD PES DISCHARGE/TLAP DISPOSAL INFORMATION** **(Instructions, Pages 25-28)**

a. Is the facility located on or does the treated effluent cross American Indian Land?

Yes  No

b. Attach an **original** full size USGS Topographic Map (or an 8.5"×11" **reproduced** portion for renewal or amendment applications) with all required information. Check the box next to each item below to confirm it has been included on the map.

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> One-mile radius and three-miles downstream information           | <input type="checkbox"/> Effluent disposal site boundaries      |
| <input checked="" type="checkbox"/> Applicant's property boundaries                                  | <input type="checkbox"/> All wastewater ponds                   |
| <input checked="" type="checkbox"/> Treatment facility boundaries                                    | <input checked="" type="checkbox"/> Sewage sludge disposal site |
| <input checked="" type="checkbox"/> Labeled point(s) of discharge and highlighted discharge route(s) | <input type="checkbox"/> New and future construction            |
|  | <input checked="" type="checkbox"/> Attachment: <u>C</u>        |

c. Is the location of the sewage sludge disposal site in the existing permit accurate?

Yes  No  N/A

If **no**, or a **new** application, please give an accurate description: Cefe Valenzuela Landfill, 2397 County Road 20, Robstown, TX, 78380

d. Are the point(s) of discharge and the discharge route(s) in the existing permit correct?

Yes  No  N/A

If **no**, or a **new or amendment** applications, provide an accurate description: To Corpus Christi Bay Segment No. 2481

e. City nearest the outfall(s): Ingleside

f. County in which the outfalls(s) is/are located: San Patricio

g. Is or will the treated wastewater discharge to a city, county, or state highway right-of-way, or a flood control district drainage ditch?

Yes  No

If **yes**, indicate by a check mark if:  Authorization granted  Authorization pending

For **new and amendment** applications, provide copies of letters that show proof of contact and the approval letter upon receipt.

**Attachment:** [REDACTED]

- h. For all applications involving an average daily discharge of 5 MGD or more, provide the names of all counties located within 100 statute miles downstream of the point(s) of discharge. San Patricio County and Nueces County
- i. For **TLAPs**, is the location of the effluent disposal site in the existing permit accurate?  
 Yes  No  N/A  
If **no**, or if this a **new or amendment** application, provide an accurate description: [REDACTED]
- j. City nearest the disposal site: [REDACTED]
- k. County in which the disposal site is located: [REDACTED]
- l. Disposal Site Latitude: [REDACTED] Longitude: [REDACTED]
- m. For **TLAPs**, describe how effluent is/will be routed from the treatment facility to the disposal site: N/A
- n. For **TLAPs**, identify the nearest watercourse to the disposal site to which rainfall runoff might flow if not contained: N/A

**10. MISCELLANEOUS INFORMATION (Instructions, Page 28)**

- a. Did any person formerly employed by the TCEQ represent your company and get paid for service regarding this application?  
 Yes  No  
If **yes**, list each person: The City's Administrative Contact, Esteban "Steve" Ramos, is currently employed by the City of Corpus Christi as the Water Resource Manager. Mr. Ramos previously worked for the TCEQ before joining the public-sector at the City of Corpus Christi. He reviewed the application as prepared by Freese and Nichols, Inc. on behalf of the City.
- b. Do you owe any fees to the TCEQ?  
 Yes  No  
If **yes**, provide the following:
  - Acct. No.: [REDACTED]
  - Amt. due: [REDACTED]
- c. Do you owe any penalties to the TCEQ?  
 Yes  No  
If **yes**, provide the following:
  - Enforcement Order No.: [REDACTED]
  - Amt. due: [REDACTED]

**11. SIGNATURE PAGE (Instructions, Page 29)**

Permit No: WQ000

Applicant Name: City of Corpus Christi

Certification:

I 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 30 Texas Administrative Code §305.44 to sign and submit this document, and can provide documentation in proof of such authorization upon request.

Signatory name (typed or printed): Peter Zanoni

Signatory title: City Manager

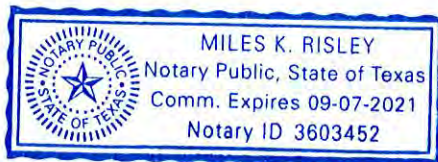
Signature: *Peter Zanoni* Date: January 17, 2020  
(Use blue ink)

Subscribed and Sworn to before me by the said Peter Zanoni

on this 17<sup>th</sup> day of January, 20 20.

My commission expires on the 7<sup>th</sup> day of September, 20 21.

*Miles K. Risley*  
Notary Public



[SEAL]

Nueces  
County, Texas

***If co-applicants are necessary, each entity must submit an original, separate signature page.***

# INDUSTRIAL ADMINISTRATIVE REPORT 1.1

The following information is required for **new** and **amendment** applications.

## 1. AFFECTED LANDOWNER INFORMATION (Instructions, Pages 30-32)

a. Attach a landowners map or drawing, with scale, as applicable. Check the box next to each item to confirm it has been provided.

- The applicant's property boundaries.
- The facility site boundaries within the applicant's property boundaries.
- The distance the buffer zone falls into adjacent properties and the property boundaries of the landowners located within the buffer zone.
- The property boundaries of all landowners surrounding the applicant's property. (**Note:** if the application is a major amendment for a lignite mine, the map must include the property boundaries of all landowners adjacent to the new facility (ponds).)
- The point(s) of discharge and highlighted discharge route(s) clearly shown for one mile downstream.
- The property boundaries of the landowners located on both sides of the discharge route for one full stream mile downstream of the point of discharge.
- The property boundaries of the landowners along the watercourse for a one-half mile radius from the point of discharge if the point of discharge is into a lake, bay, estuary, or affected by tides.
- The boundaries of the effluent disposal site (e.g., irrigation area or subsurface drainfield site) and all evaporation/holding ponds within the applicant's property.
- The property boundaries of all landowners surrounding the applicant's property boundaries where the effluent disposal site is located.
- The boundaries of the sludge land application site (for land application of sewage sludge for beneficial use) and the property boundaries of landowners within one-quarter mile of the applicant's property boundaries where the sewage sludge land application site is located.
- The property boundaries of landowners within one-half mile in all directions from the applicant's property boundaries where the sewage sludge disposal site (e.g., sludge surface disposal site or sludge monofill) is located.

**Attachment:** D

b. Check the box next to the format of the landowners list:

- Readable/Writeable CD
- Four sets of labels

c.  Check this box to confirm a separate list with the landowners' names and mailing addresses cross-referenced to the landowners map has been attached.

**Attachment:** D

d. Provide the source of the landowners' names and mailing addresses: San Patricio County Appraisal District

e. As required by *Texas Water Code § 5.115*, is any permanent school fund land affected by this application?

- Yes
- No

If **yes**, provide the location and foreseeable impacts and effects this application has on the land(s):

\_\_\_\_\_



## 2. ORIGINAL PHOTOGRAPHS (Instructions, Page 32)

Provide original ground level photographs. Indicate with checkmarks that the following information is provided.

- At least one original photograph of the new or expanded treatment unit location.
- At least two photographs of the existing/proposed point of discharge and as much area downstream (photo 1) and upstream (photo 2) as can be captured. If the discharge is to an open water body (e.g., lake, bay), the point of discharge should be in the right or left edge of each photograph showing the open water and with as much area on each respective side of the discharge as can be captured.
- At least one photograph of the existing/proposed effluent disposal site.
- A plot plan or map showing the location and direction of each photograph.

**Attachment:** D

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**  
**SUPPLEMENTAL PERMIT INFORMATION FORM**  
**(SPIF)**

**FOR AGENCIES REVIEWING INDUSTRIAL**  
**TPDES WASTEWATER PERMIT APPLICATIONS**

<b>TCEQ USE ONLY:</b>	
Application type: ___Renewal ___Major Amendment ___Minor Amendment ___New	
County: _____	Segment Number: _____
Admin Complete Date: _____	
Agency Receiving SPIF:	
___ Texas Historical Commission	___ U.S. Fish and Wildlife
___ Texas Parks and Wildlife Department	___ U.S. Army Corps of Engineers

**This form applies to TPDES permit applications only.** (Instructions, Page 33)

The SPIF must be completed as a separate document. The TCEQ will mail a copy of the SPIF to each agency as required by the TCEQ agreement with EPA. If any of the items are not completely addressed or further information is needed, you will be contacted to provide the information before the permit is issued. Each item must be completely addressed.

**Do not refer to a response of any item in the permit application form.** Each attachment must be provided with this form separately from the administrative report of the application. The application will not be declared administratively complete without this form being completed in its entirety including all attachments.

The following applies to all applications:

1. Permittee Name: City of Corpus Christi
2. Permit No.: WQ000 [redacted] EPA ID No.: TXO [redacted]
3. Address of the project (location description that includes street/highway, city/vicinity, and county): On Texas State Highway 361, 2.5 miles southeast of intersection of Texas State Highway 35 and Texas State Highway 361, in the City of Corpus Christi, San Patricio County, Texas.
4. Provide the name, address, phone and fax number, and email address of an individual that can be contacted to answer specific questions about the property.  
First/Last Name: Esteban "Steve" Ramos Title: Water Resource Manager  
Credential: [redacted]  
Organization Name: City of Corpus Christi  
Mailing Address: 2726 Holly Road City/State/ZIP Code: Corpus Christi, TX  
78415  
Phone No.: (361) 826-2489 Fax No.: (361) 826-1889 E-mail: estebanr2@cctexas.com

5. List the county in which the facility is located: San Patricio
6. If the property is publicly owned and the owner is different than the permittee/applicant, please list the owner of the property: N/A
7. Provide a description of the effluent discharge route. The discharge route must follow the flow of effluent from the point of discharge to the nearest major watercourse (from the point of discharge to a classified segment as defined in *30 TAC Chapter 307*). If known, please identify the classified segment number: To Corpus Christi Bay, Segment No. 2481
8. Please provide a separate 7.5-minute USGS quadrangle map with the project boundaries plotted and a general location map showing the project area. Please highlight the discharge route from the point of discharge for a distance of one mile downstream. (This map is required in addition to the map in the administrative report.)

**Attachment:** E

9. Provide original photographs of any structures 50 years or older on the property.

**Attachment:** N/A

10. Does your project involve any of the following? Check all that apply.

- Proposed access roads, utility lines, construction easements
- Visual effects that could damage or detract from a historic property's integrity
- Vibration effects during construction or as a result of project design
- Additional phases of development that are planned for the future
- Sealing caves, fractures, sinkholes, other karst features
- Disturbance of vegetation or wetlands

11. List proposed construction impact (surface acres to be impacted, depth of excavation, sealing of caves, or other karst features): Currently, approximately 10 acres will be disturbed at the plant site. One intake structure and diffusers will be constructed in the bay (Corpus Christi Bay Segment No. 2481).
12. Describe existing disturbances, vegetation, and land use: The property is undeveloped with maintained grasses, trees, and utility lines.

THE FOLLOWING ITEMS APPLY ONLY TO APPLICATIONS FOR NEW TPDES PERMITS AND MAJOR AMENDMENTS TO TPDES PERMITS

13. List construction dates of all buildings and structures on the property: Quarter 4, 2021
14. Provide a brief history of the property, and name of the architect/builder, if known: The property is undeveloped.

# WATER QUALITY PERMIT PAYMENT SUBMITTAL FORM

**Use this form to submit the Application Fee, if mailing the payment.**

- Complete items 1 through 5 below.
- Staple the check or money order in the space provided at the bottom of this document.
- Do not mail this form with the application form.
- Do not mail this form to the same address as the application.
- Do not submit a copy of the application with this form as it could cause duplicate permit entries.

**Mail this form and the check or money order to:**

*BY REGULAR U.S. MAIL*

Texas Commission on Environmental Quality  
Financial Administration Division  
Cashier's Office, MC-214  
P.O. Box 13088  
Austin, Texas 78711-3088

*BY OVERNIGHT/EXPRESS MAIL*

Texas Commission on Environmental Quality  
Financial Administration Division  
Cashier's Office, MC-214  
12100 Park 35 Circle  
Austin, Texas 78753

**Fee Code: WQP    Permit No: WQ000**

1. Check or Money Order Number: 477804
2. Check or Money Order Amount: \$ 350.00
3. Date of Check or Money Order: 1/16/2020
4. Name on Check or Money Order: City of Corpus Christi
5. APPLICATION INFORMATION

Name of Project or Site: La Quinta channel

Physical Address of Project or Site: \_\_\_\_\_

If the check is for more than one application, attach a list which includes the name of each Project or Site (RE) and Physical Address, exactly as provided on the application.

**Staple Check or Money Order in This Space**

# TECHNICAL REPORT 1.0

## INDUSTRIAL

The following information **is required** for all applications for a TLAP or an individual TPDES discharge permit.

For additional information or clarification on the requested information, refer to the [Instructions for Completing the Industrial Wastewater Permit Application](#)<sup>1</sup> available on the TCEQ website.

If more than one outfall is included in the application, provide applicable information for each individual outfall. **If an item does not apply to the facility, enter N/A** to indicate that the item has been considered. Include separate reports or additional sheets as **clearly cross-referenced attachments** and provide the attachment number in the space provided for the item the attachment addresses.

**NOTE:** This application is for an industrial wastewater permit only. Additional authorizations from the TCEQ Waste Permits Division or the TCEQ Air Permits Division may be needed.

### 1. FACILITY/SITE INFORMATION (Instructions, Pages 34-35)

- a. Describe the general nature of the business and type(s) of industrial and commercial activities. Include all applicable SIC codes (up to 4).

The La Quinta Channel Desalination Plant will provide an additional water source and produce fresh water which will be sold to an existing public water system for distribution through their existing distribution system in San Patricio County. The La Quinta Channel Plant is expected to be developed for three phases starting with an initial 34 MGD phase, an interim 51 MGD phase, and final 69 MGD phase.

- b. Describe all wastewater-generating processes at the facility.

The treatment process will take raw seawater and produce potable water. Four treatment processes will generate waste streams. The reverse osmosis process contributes 85% of the waste flow, dissolved air flotation contributes 1.5% of the waste flow, strainer backwash water will account for 4.5% of the waste flow, and microfiltration backwash water will contribute 9% of the waste flow.

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<sup>1</sup> [https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES\\_industrial\\_wastewater\\_steps.html](https://www.tceq.texas.gov/permitting/wastewater/industrial/TPDES_industrial_wastewater_steps.html)

c. Provide a list of raw materials, major intermediates, and final products handled at the facility.

**Materials List**

Raw Materials	Intermediate Products	Final Products
Sea Water	None	Drinking Water

**Attachment:** [Redacted]

d. Attach a facility map (drawn to scale) with the following information:

- Production areas, maintenance areas, materials-handling areas, waste-disposal areas, and water intake structures.
- The location of each unit of the WWTP including the location of wastewater collection sumps, impoundments, outfalls, and sampling points, if significantly different from outfall locations.

**Attachment:** F

e. Is this a new permit application for an existing facility?

- Yes     No

If **yes**, provide background discussion: [Redacted]

f. Is/will the treatment facility/disposal site be located above the 100-year frequency flood level.

- Yes     No

List source(s) used to determine 100-year frequency flood plain: FEMA Flood Map- 48409C0465E

If **no**, provide the elevation of the 100-year frequency flood plain and describe what protective measures are used/proposed to prevent flooding (including tail water and rainfall run-on controls) of the treatment facility and disposal area: [Redacted]

**Attachment:** F

g. For **new** or **major amendment** permit applications, will any construction operations result in a discharge of fill material into a water in the state?

- Yes     No     N/A (renewal only)

h. If **yes** to Item 1.g, has the applicant applied for a USACE CWA Chapter 404 Dredge and Fill permit?

- Yes     No

If **yes**, provide the permit number: [Redacted]

If **no**, provide an approximate date of application submittal to the USACE: January 2021



## 2. TREATMENT SYSTEM (Instructions, Page 35)

- a. List any physical, chemical, or biological treatment process(es) used/proposed to treat wastewater at this facility. Include a description of each treatment process, starting with initial treatment and finishing with the outfall/point of disposal.

Produced wastewater will not be treated prior to discharge. The waste streams will be generated by pretreatment, membrane filtration, and desalination processes. The waste streams from these processes will be blended for discharge through Outfall 001.

- b. Attach a flow schematic **with a water balance** showing all sources of water and wastewater flow into the facility, wastewater flow into and from each treatment unit, and wastewater flow to each outfall/point of disposal.

**Attachment:** G

## 3. IMPOUNDMENTS (Instructions, Pages 35-37)

Does the facility use or plan to use any wastewater impoundments (e.g., lagoons or ponds?)

Yes       No

If **no**, proceed to Item 4. If **yes**, complete **Item 3.a** for **existing** impoundments and **Items 3.a - 3.e** for **new or proposed** impoundments. **NOTE:** See instructions, Pages 35-37, for additional information on the attachments required by Items 3.a – 3.e.

- a. Complete the table with the following information for each existing, new, or proposed impoundment:

**Use Designation:** Indicate the use designation for each impoundment as Treatment (**T**), Disposal (**D**), Containment (**C**), or Evaporation (**E**).

**Associated Outfall Number:** Provide an outfall number if a discharge occurs or will occur.

**Liner Type:** Indicate the liner type as Compacted clay liner (**C**), In-situ clay liner (**I**), Synthetic/plastic/rubber liner (**S**), or Alternate liner (**A**). **NOTE:** See instructions for further detail on liner specifications. If an alternate liner (**A**) is selected, include an attachment that provides a description of the alternate liner and any additional technical information necessary for an evaluation.

**Leak Detection System:** If any leak detection systems are in place/planned, enter **Y** for yes. Otherwise, enter **N** for no.

**Groundwater Monitoring Wells and Data:** If groundwater monitoring wells are in place/planned, enter **Y** for yes. Otherwise, enter **N** for no. Attach any existing groundwater monitoring data.

**Dimensions:** Provide the dimensions, freeboard, surface area, storage capacity of the impoundments, and the maximum depth (not including freeboard). For impoundments with irregular shapes, submit surface area instead of length and width.

**Compliance with 40 CFR Part 257, Subpart D:** If the impoundment is required to be in compliance with 40 CFR Part 257, Subpart D, enter **Y** for yes. Otherwise, enter **N** for no.

**Date of Construction:** Enter the date construction of the impoundment commenced (mm/dd/yy).

**Impoundment Information**

Parameter	Pond #	Pond #	Pond #	Pond #
Use Designation: (T) (D) (C) or (E)				
Associated Outfall Number				
Liner Type (C) (I) (S) or (A)				
Alt. Liner Attachment Reference				
Leak Detection System, Y/N				
Groundwater Monitoring Wells, Y/N				
Groundwater Monitoring Data Attachment				
Pond Bottom Located Above The Seasonal High-Water Table, Y/N				
Length (ft)				
Width (ft)				
Max Depth From Water Surface (ft), Not Including Freeboard				
Freeboard (ft)				
Surface Area (acres)				
Storage Capacity (gallons)				
40 CFR Part 257, Subpart D, Y/N				
Date of Construction				

**Impoundment Information**

Parameter	Pond #	Pond #	Pond #	Pond #
Use Designation: (T) (D) (C) or (E)				
Associated Outfall Number				
Liner Type (C) (I) (S) or (A)				
Alt. Liner Attachment Reference				
Leak Detection System, Y/N				
Groundwater Monitoring Wells, Y/N				
Groundwater Monitoring Data Attachment				
Pond Bottom Located Above The Seasonal High-Water Table, Y/N				
Length (ft)				
Width (ft)				
Max Depth From Water Surface (ft), not including freeboard				
Freeboard (ft)				
Surface Area (acres)				
Storage Capacity (gallons)				
40 CFR Part 257, Subpart D, Y/N				
Date of Construction				

**Attachment:**

The following information (**Items 3.b – 3.e**) is required only for **new or proposed** impoundments.

b. For new or proposed impoundments, attach any available information on the following items. If attached, check **yes** in the appropriate box. Otherwise, check **no** or **not yet designed**.

i. Liner data

Yes     No     Not yet designed

ii. Leak detection system or groundwater monitoring data

Yes     No     Not yet designed

iii. Groundwater impacts

Yes     No     Not yet designed

**NOTE:** Item b.iii is required if the bottom of the pond is not above the seasonal high-water table in the shallowest water-bearing zone.

**Attachment:**

**For TLAP applications: Items 3.c – 3.e are not required**, continue to Item 4.

c. Attach a USGS map or a color copy of original quality and scale which accurately locates and identifies all known water supply wells and monitor wells within 1/2-mile of the impoundments.

**Attachment:** N/A

d. Attach copies of State Water Well Reports (e.g., driller's logs, completion data, etc.), and data on depths to groundwater for all known water supply wells including a description of how the depths to groundwater were obtained.

**Attachment:**

e. Attach information pertaining to the groundwater, soils, geology, pond liner, etc. used to assess the potential for migration of wastes from the impoundments or the potential for contamination of groundwater or surface water.

**Attachment:**

#### **4. OUTFALL/DISPOSAL METHOD INFORMATION (Instructions, Pages 38-39)**

Complete the following tables to describe the location and wastewater discharge or disposal operations for each outfall for discharge operations and for each point of disposal for TLAP operations.

If there are more outfalls/points of disposal at the facility than the spaces provided, copies of pages 6 and/or numbered accordingly (i.e., page 6a, 6b, etc.) may be used to provide information on the additional outfalls.

**For TLAP applications:** Indicate the disposal method and each individual irrigation area **I**, evaporation pond **E**, or subsurface drainage system **S** by providing the appropriate letter designation for the disposal method followed by a numerical designation for each disposal area in the space provided for **Outfall** number (e.g. **E1** for evaporation pond 1, **I2** for irrigation area No. 2, etc.).

**Outfall Latitude and Longitude**

Outfall Number	Latitude-decimal degrees	Longitude-decimal degrees
001	Between 27.872 and 27.868	Between -97.247 and -97.245

**Outfall Location Description**

Outfall Number	Location Description
001	Diffuser(s) 300-500 feet from channel edge

**Description of Sampling Points (if different from Outfall location)**

Outfall Number	Description of Sampling Point
001	At start-of-pipe to diffuser(s)

**Outfall Flow Information – Permitted and Proposed**

Outfall Number	Permitted Daily Avg Flow (MGD)	Permitted Daily Max Flow (MGD)	Proposed Daily Avg Flow (MGD)	Proposed Daily Max Flow (MGD)	Anticipated Discharge Date (mm/dd/yy)
001 – Initial	N/A	N/A	34	41	2021
001 - Expand	N/A	N/A	51	62	unknown
001 - Ultimate	N/A	N/A	69	82	unknown

**Outfall Discharge – Method and Measurement**

Outfall Number	Pumped Discharge? Y/N	Gravity Discharge? Y/N	Type of Flow Measurement Device Used
001	Y	N	TBD

**Outfall Discharge – Flow Characteristics**

Outfall Number	Intermittent Discharge? Y/N	Continuous Discharge? Y/N	Seasonal Discharge? Y/N	Discharge Duration (hrs/day)	Discharge Duration (days/mo)	Discharge Duration (mo/yr)
001	N	Y	N	24	30	12

**Wastestream Contributions**

**Outfall No.: 001**

<b>Contributing Wastestreams</b>	<b>Volume (MGD)</b>	<b>% of Total Flow</b>
Reverse Osmosis Brine Discharge	60.00	85
Clarifier – Dissolved Air Flotation Treatment	1.11	1.5
Strainer Backwash	3.29	4.5
Microfiltration Media Filter Backwash	6.38	9

**Outfall No.:** [REDACTED]

<b>Contributing Wastestreams</b>	<b>Volume (MGD)</b>	<b>% of Total Flow</b>

**Outfall No.:** [REDACTED]

<b>Contributing Wastestreams</b>	<b>Volume (MGD)</b>	<b>% of Total Flow</b>

**Attachment:** [REDACTED]

## 5. BLOWDOWN AND ONCE-THROUGH COOLING WATER DISCHARGES (Instructions, Page 39)

a. Does the facility use/propose to use any cooling towers which discharge blowdown or other wastestreams to the outfall(s)?

- Yes       No

**NOTE:** If the facility uses or plans to use cooling towers, Item 12 **is required**.

b. Does the facility use or plan to use any boilers that discharge blowdown or other wastestreams to the outfall(s)?

- Yes       No

c. Does or will the facility discharge once-through cooling water to the outfall(s)?

- Yes       No

**NOTE:** If the facility uses or plans to use once-through cooling water, Item 12 **is required**.

d. If **yes** to Items 5.a, 5.b, **or** 5.c, attach the SDS with the following information for each chemical additive.

- Manufacturers Product Identification Number
- Product use (e.g., biocide, fungicide, corrosion inhibitor, etc.)
- Chemical composition including CASRN for each ingredient
- Classify product as non-persistent, persistent, or bioaccumulative
- Product or active ingredient half-life
- Frequency of product use (e.g., 2 hours/day once every two weeks)
- Product toxicity data specific to fish and aquatic invertebrate organisms
- Concentration of whole product or active ingredient, as appropriate, in wastestream.

Attach a summary of this information in addition to the submittal of the SDS for each specific wastestream and the associated chemical additives and specify which outfalls are affected.

**Attachment:**

e. Cooling Towers and Boilers

If **yes** to either Item 5.a **or** 5.b, complete the following table.

**Cooling Towers and Boilers**

Type of Unit	Number of Units	Dly Avg Blowdown (gallons/day)	Dly Max Blowdown (gallons/day)
Cooling Towers			
Boilers			

## 6. STORMWATER MANAGEMENT (Instructions, Pages 39-40)

Are there any existing/proposed outfalls which discharge stormwater associated with industrial activities, as defined at 40 CFR § 122.26(b)(14), commingled with any other wastestream?

- Yes       No

If **yes**, briefly describe the industrial processes and activities that occur outdoors or in some manner which may result in exposure of the activities or materials to stormwater:



## 7. DOMESTIC SEWAGE, SEWAGE SLUDGE, AND SEPTAGE MANAGEMENT AND DISPOSAL (Instructions, Page 40)

- a. Check the box next to the appropriate method of domestic sewage and domestic sewage sludge treatment or disposal. Complete Worksheet 5.0 or Item 7.b if directed to do so.
- Domestic sewage is routed (i.e., connected to or transported to) to a WWTP permitted to receive domestic sewage for treatment, disposal, or both. **Complete Item 7.b.**
  - Domestic sewage is disposed of by an on-site septic tank and drainfield system. **Complete Item 7.b.**
  - Domestic and industrial treatment sludge **ARE commingled** prior to use or disposal.
  - Industrial wastewater and domestic sewage are treated separately, and the respective sludge **IS NOT commingled** prior to sludge use or disposal. **Complete Worksheet 5.0.**
  - Facility is a POTW. **Complete Worksheet 5.0.**
  - Domestic sewage is not generated on-site.
  - Other (e.g., portable toilets), specify and **Complete Item 7.b:** \_\_\_\_\_
- b. Provide the name and TCEQ, NPDES, or TPDES Permit No. of the waste-disposal facility which receives the domestic sewage/septage. If hauled by motorized vehicle, provide the name and TCEQ Registration No. of the hauler.

### Domestic Sewage Plant/Hauler Name

Plant/Hauler Name	Permit/Registration No.
City of Corpus Christi	21970
Broadway WWTP – City of Corpus Christi	WQ0010401-005

## 8. IMPROVEMENTS OR COMPLIANCE/ENFORCEMENT REQUIREMENTS (Instructions, Page 40)

- a. Is the permittee currently required to meet any implementation schedule for compliance or enforcement?
- Yes       No
- b. Has the permittee completed or planned for any improvements or construction projects?
- Yes       No
- c. If **yes** to either 8.a or 8.b, provide a brief summary of the requirements and a status update: \_\_\_\_\_

## 9. TOXICITY TESTING (Instructions, Page 41)

Have any biological tests for acute or chronic toxicity been made on any of the discharges or on a receiving water in relation to the discharge within the last three years?

- Yes       No

If **yes**, identify the tests and describe their purposes: \_\_\_\_\_

Additionally, attach a copy of all tests performed which **have not** been submitted to the TCEQ or EPA.

**Attachment:** \_\_\_\_\_

**10. OFF-SITE/THIRD PARTY WASTES (Instructions, Page 41)**

a. Does or will the facility receive wastes from off-site sources for treatment at the facility, disposal on-site via land application, or discharge via a permitted outfall?

- Yes       No

If **no**, proceed to Item 11. If **yes**, provide responses to Items 10.b through 10.d below.

b. Attach the following information to the application:

- List of wastes received (including volumes, characterization, and capability with on-site wastes).
- Identify the sources of wastes received (including the legal name and addresses of the generators).
- Description of the relationship of waste source(s) with the facility’s activities.

**Attachment:** [Redacted]

c. Is or will wastewater from another TCEQ, NPDES, or TPDES permitted facility commingled with this facility’s wastewater after final treatment and prior to discharge via the final outfall/point of disposal?

- Yes       No

If **yes**, provide the name, address, and TCEQ, NPDES, or TPDES permit number of the contributing facility and a copy of any agreements or contracts relating to this activity.

**Attachment:** [Redacted]

d. Is this facility a POTW that accepts/will accept process wastewater from any SIU and has/is required to have an approved pretreatment program under the NPDES/TPDES program?

- Yes       No

If **yes**, **Worksheet 6.0** of this application **is required**.

**11. RADIOACTIVE MATERIALS (Instructions, Pages 41-42)**

a. Are/will radioactive materials be mined, used, stored, or processed at this facility?

- Yes       No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L.

**Radioactive Materials Mined, Used, Stored, or Processed**

Radioactive Material	Concentration (pCi/L)

- b. Does the applicant or anyone at the facility have any knowledge or reason to believe that radioactive materials may be present in the discharge, including naturally occurring radioactive materials in the source waters or on the facility property?

Yes       No

If **yes**, use the following table to provide the results of one analysis of the effluent for all radioactive materials that may be present. Provide results in pCi/L. Do not include information provided in response to Item 11.a.

**Radioactive Materials Present in the Discharge**

Radioactive Material	Concentration (pCi/L)

**12. COOLING WATER (Instructions, Pages 42-43)**

- a. Does the facility use or propose to use water for cooling purposes?

Yes       No

If **no**, stop here. If **yes**, complete Items 12.b thru 12.f.

- b. Cooling water is/will be obtained from a groundwater source (e.g., on-site well).

Yes       No

If **yes**, stop here. If **no**, continue.

- c. Cooling Water Supplier

- i. Provide the name of the owner(s) and operator(s) for the CWIS that supplies or will supply water for cooling purposes to the facility.

**Cooling Water Intake Structure(s) Owner(s) and Operator(s)**

CWIS ID				
Owner				
Operator				

- ii. Cooling water is/will be obtained from a Public Water Supplier (PWS)

Yes       No

If **no**, continue. If **yes**, provide the PWS Registration No. and stop here:

- iii. Cooling water is/will be obtained from an Independent Supplier

Yes       No

If **no**, proceed to Item 12.d. If **yes**, contact the Industrial Permits Team to determine what application materials are required. Attach copies of the correspondence with the TCEQ and any required application materials, as stipulated in the correspondence with the TCEQ.

**Attachment:**

d. 316(b) General Criteria

i. The CWIS(s) have or will have a cumulative design intake flow of 2 MGD or greater

Yes  No

ii. At least 25% of the total water withdrawn by the CWIS is/will be used exclusively for cooling purposes on an annual average basis

Yes  No

iii. The facility withdraws/proposes to withdraw water for cooling purposes from surface waters that meet the definition of Waters of the United States in *40 CFR § 122.2*.

Yes  No

If **no**, provide an explanation of how the waterbody does not meet the definition of Waters of the United States in *40 CFR § 122.2*:

If **yes** to all three questions in Item 12.d, the facility is subject to 316(b). Proceed to Item 12.f.

If **no** to any of the questions in Item 12.d, the facility does not meet the minimum criteria to be subject to the full requirements of 316(b). Proceed to Item 12.e.

e. The facility is **not subject** to 316(b) **and uses/proposes to use cooling towers**.

Yes  No

If **yes**, stop here. If **no**, complete Worksheet 11.0, Items 1(a), 1(b)(i-iii) and (vi), 2(b)(i), and 3(a) to allow for a determination based upon BPJ.

f. Phase I vs Phase II Facilities

i. Existing facility (Phase II)

Yes  No

If **yes**, complete Worksheets 11.0 through 11.3, as applicable. Otherwise, continue.

ii. New Facility – (Phase I)

Yes  No

If **yes**, check the box next to the facility's compliance track selection, attach the requested information, and complete Worksheet 11.0, Items 2 and 3, and Worksheet 11.2:

- Track I - AIF greater than 2 MGD, but less than 10 MGD
  - Attach information required by *40 CFR §§ 125.86(b)(2)-(4)*.
- Track I - AIF greater than 10 MGD
  - Attach information required by *40 CFR § 125.86(b)*.
- Track II
  - Attach information required by *40 CFR § 125.86(c)*.

**Attachment:**

**NOTE:** Item 13 is required only for existing permitted facilities.

**13. PERMIT CHANGE REQUESTS (Instructions, Pages 43-44)**

a. Is the facility requesting a **major amendment** of an existing permit?

- Yes     No

If **yes**, list each request individually and provide the following information: 1) detailed information regarding the scope of each request and 2) a justification for each request. Attach any supplemental information or additional data to support each request.

b. Is the facility requesting any **minor amendments** to the permit?

- Yes     No

If **yes**, list and discuss the requested changes.

c. Is the facility requesting any **minor modifications** to the permit?

- Yes     No

If **yes**, list and discuss the requested changes.

## WORKSHEET 4.0 RECEIVING WATERS

This worksheet is **required** for all TPDES permit applications.

### 1. DOMESTIC DRINKING WATER SUPPLY (Instructions, Page 74)

- a. There is a surface water intake for domestic drinking water supply located within 5 (five) miles downstream from the point/proposed point of discharge.

Yes       No

If **no**, stop here and proceed to Item 2. If **yes**, provide the following information:

- i. The legal name of the owner of the drinking water supply intake: \_\_\_\_\_

- v. The distance and direction from the outfall to the drinking water supply intake: \_\_\_\_\_

- b. Locate and identify the intake on the USGS 7.5-minute topographic map provided for Administrative Report 1.0.

Check this box to confirm the above requested information is provided.

### 2. DISCHARGE INTO TIDALLY INFLUENCED WATERS (Instructions, Page 74)

If the discharge is to tidally influenced waters, complete this section. Otherwise, proceed to Item 3.

- a. Width of the receiving water at the outfall: 2,050 feet

- b. Are there oyster reefs in the vicinity of the discharge?

Yes       No

If **yes**, provide the distance and direction from the outfall(s) to the oyster reefs: \_\_\_\_\_

- c. Are there sea grasses within the vicinity of the point of discharge?

Yes       No

If **yes**, provide the distance and direction from the outfall(s) to the grasses: Approximately 10 feet

### 3. CLASSIFIED SEGMENT (Instructions, Page 74)

The discharge is/will be directly into (or within 300 feet of) a classified segment.

Yes       No

If **yes**, stop here. It is not necessary to complete Items 4 and 5 of this worksheet or Worksheet 4.1.

If **no**, complete Items 4 and 5 and Worksheet 4.1 may be required.



#### 4. DESCRIPTION OF IMMEDIATE RECEIVING WATERS (Instructions, Page 75)

a. Name of the immediate receiving waters: \_\_\_\_\_

b. Check the appropriate description of the immediate receiving waters:

- |   |  |
|---|--|
| <input type="checkbox"/> Lake or Pond   | <input type="checkbox"/> Man-Made Channel or Ditch     |
| • Surface area (acres): _____   | <input type="checkbox"/> Stream or Creek               |
| • Average depth of the entire water body (feet): _____                                      | <input type="checkbox"/> Freshwater Swamp or Marsh     |
| • Average depth of water body within a 500-foot radius of the discharge point (feet): _____ | <input type="checkbox"/> Tidal Stream, Bayou, or Marsh |
|   | <input type="checkbox"/> Open Bay                      |
|   | <input type="checkbox"/> Other, specify: _____         |

If **Man-Made Channel or Ditch** or **Stream or Creek** were selected above, provide responses to Items 4.c – 4.g below:

c. For **existing discharges**, check the description below that best characterizes the area **upstream** of the discharge.

For **new discharges**, check the description below that best characterizes the area **downstream** of the discharge.

- Intermittent (dry for at least one week during most years)
- Intermittent with Perennial Pools (enduring pools containing habitat to maintain aquatic life uses)
- Perennial (normally flowing)

Check the source(s) of the information used to characterize the area upstream (existing discharge) or downstream (new discharge):

- USGS flow records
- personal observation
- historical observation by adjacent landowner(s)
- other, specify: \_\_\_\_\_

d. List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point: \_\_\_\_\_

e. The receiving water characteristics change within three miles downstream of the discharge (e.g., natural or man-made dams, ponds, reservoirs, etc.).

- Yes       No

If **yes**, describe how: \_\_\_\_\_

f. General observations of the water body during normal dry weather conditions: \_\_\_\_\_

Date and time of observation: \_\_\_\_\_

g. The water body was influenced by stormwater runoff during observations.

- Yes       No

If **yes**, describe how: \_\_\_\_\_

**5. GENERAL CHARACTERISTICS OF WATER BODY (Instructions, Page 75)**

a. Is the receiving water upstream of the existing discharge or proposed discharge site influenced by any of the following (check all that apply):

- |   |   |
|---|---|
| <input type="checkbox"/> oil field activities | <input type="checkbox"/> urban runoff                         |
| <input type="checkbox"/> agricultural runoff  | <input type="checkbox"/> septic tanks                         |
| <input type="checkbox"/> upstream discharges  | <input type="checkbox"/> other, specify: <input type="text"/> |

b. Uses of water body observed or evidence of such uses (check all that apply):

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> livestock watering     | <input type="checkbox"/> fishing                 | <input type="checkbox"/> picnic/park activities               |
| <input type="checkbox"/> non-contact recreation | <input type="checkbox"/> industrial water supply | <input type="checkbox"/> other, specify: <input type="text"/> |
| <input type="checkbox"/> domestic water supply  | <input type="checkbox"/> irrigation withdrawal   | <input type="text"/>  |
| <input type="checkbox"/> contact recreation     | <input type="checkbox"/> navigation              |   |

c. Description which best describes the aesthetics of the receiving water and the surrounding area (check only one):

- Wilderness:** outstanding natural beauty; usually wooded or un-pastured area: water clarity exceptional
- Natural Area:** trees 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

## WORKSHEET 6.0 INDUSTRIAL WASTE CONTRIBUTION

This worksheet **is required** for all applications for publicly-owned treatment works (POTWs).

For an explanation of the terms used in this worksheet, refer to the General Definitions on pages 4-12 and the Definitions Relating to Pretreatment on pages 13-14 of the Instructions.

### 1. ALL POTWS (Instructions, Page 80)

- a. Complete the following table with the number of each type of industrial users (IUs) that discharge to the POTW and the daily average flows from each.

#### Industrial User Information

Type of Industrial User	Number of Industrial Users	Daily Average Flow (gallons per day)
CIU	0	
SIU - Non-categorical	0	
Other IU	0	

- b. In the past three years, has the POTW experienced treatment plant interference?

Yes     No

If **yes**, identify the date(s), duration, nature of interference, and probable cause(s) and possible source(s) of each interference event. Include the names of the IU(s) that may have caused the interference: \_\_\_\_\_

- c. In the past three years, has the POTW experienced pass-through?

Yes     No

If **yes**, identify the date(s), duration, pollutants passing through the treatment plant, and probable cause(s) and possible source(s) of each pass-through event. Include the names of the IU(s) that may have caused the pass-through: \_\_\_\_\_

- d. Does the POTW have, or is it required to develop, an approved pretreatment program?

Yes     No

If **yes**, answer all questions in Item 2 and skip Item 3.

If **no**, skip Item 2 and answer all questions in Item 3 for each significant industrial user and categorical industrial user.

### 2. POTWS WITH APPROVED PRETREATMENT PROGRAMS OR THOSE REQUIRED TO DEVELOP A PRETREATMENT PROGRAM (Instructions, Pages 80-81)

- a. Have there been any substantial modifications to the POTW's approved pretreatment program that have not been submitted to the Approval Authority (TCEQ) for approval according to *40 CFR § 403.18*?

Yes     No

If **yes**, include an attachment which identifies all substantial modifications that have not been submitted to the TCEQ and the purpose of the modifications.

**Attachment:** \_\_\_\_\_

b. Have there been any non-substantial modifications to the POTW's approved pretreatment program that have not been submitted to the Approval Authority (TCEQ)?

Yes       No

If **yes**, include an attachment which identifies all non-substantial modifications that have not been submitted to the TCEQ and the purpose of the modification.

**Attachment:** [Redacted]

c. List all parameters measured above the MAL in the POTW's effluent monitoring during the last three years:

**Effluent Parameters Measured Above the MAL**

Pollutant	Concentration	MAL	Units	Date

**Attachment:** [Redacted]

d. Has any SIU, CIU, or other IU caused or contributed to any other problems (excluding interference or pass-through) at the POTW in the past three years?

Yes       No

If **yes**, provide a description of each episode, including date(s), duration, description of problems, and probable pollutants. Include the name(s) of the SIU(s)/CIU(s)/other IU(s) that may have caused or contributed to any of the problems: [Redacted]

**3. SIGNIFICANT INDUSTRIAL USER AND CATEGORICAL INDUSTRIAL USER INFORMATION (Instructions, Pages 81-82)**

POTWs that **do not** have an approved pretreatment program **are required** to provide the following information for each SIU and CIU:

a. Mr. or Ms.: Zero SIU and CIUs      First/Last Name: [Redacted]  
 Organization Name: [Redacted]      SIC Code: [Redacted]  
 Phone number: [Redacted]      Email address: [Redacted]  
 Physical Address: [Redacted]      City/State/ZIP Code: [Redacted]

**Attachment:** [Redacted]

b. Describe the industrial processes or other activities that affect or contribute to the SIU(s) or CIU(s) discharge (e.g., process and non-process wastewater): [Redacted]

**Attachment:** [Redacted]

c. Provide a description of the principal products(s) or service(s) performed: [Redacted]

d. Flow rate information

**Flow rate information**

<b>Effluent Type</b>	<b>Discharge (gallons per day)</b>	<b>Discharge Frequency (continuous, batch, or intermittent)</b>
Process wastewater		
Non-process wastewater		

e. Pretreatment Standards

i. Is the SIU or CIU subject to technology-based local limits as defined in the application instructions?

Yes       No

ii. Is the SIU subject to categorical pretreatment standards?

Yes       No

If **yes**, provide the category and subcategory or subcategories in the SIUs Subject To Categorical Pretreatment Standards table.

**SIUs Subject To Categorical Pretreatment Standards**

<b>Category in 40 CFR</b>	<b>Subcategory in 40 CFR</b>	<b>Subcategory in 40 CFR</b>	<b>Subcategory in 40 CFR</b>	<b>Subcategory in 40 CFR</b>

f. Has the SIU or CIU caused or contributed to any problem(s) (e.g., interferences, pass through, odors, corrosion, blockages) at the POTW in the past three years?

Yes       No

If **yes**, provide a description of each episode, including dates, duration, description of problems, and probable pollutants, and include the name(s) of the SIU(s)/CIU(s) that may have caused or contributed to the problem(s):

# WORKSHEET 7.0

## STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES

This worksheet **is required** for all TPDES permit applications requesting individual permit coverage for discharges consisting of **either**: 1) solely of stormwater discharges associated with industrial activities, as defined in *40 CFR § 122.26(b)(14)(i-xi)*, **or** 2) stormwater discharges associated with industrial activities and any of the listed allowable non-stormwater discharges, as defined in the MSGP (TXR05000), Part II, Section A, Item 6.

Discharges of stormwater as defined in *40 CFR § 122.26 (b)(13)* are not required to obtain authorization under a TPDES permit (see exceptions at *40 CFR §§ 122.26(a)(1)* and *(9)*). Authorization for discharge may be required from a local municipal separate storm sewer system.

### 1. APPLICABILITY (Instructions, Page 83)

Do discharges from any of the existing/proposed outfalls consist either 1) solely of stormwater discharges associated with industrial activities **or** 2) stormwater discharges associated with industrial activities and any of the allowable non-stormwater discharges?

Yes       No

If **no**, stop here. If **yes**, proceed as directed.

### 2. STORMWATER OUTFALL COVERAGE (Instructions, Page 84)

List each existing/proposed stormwater outfall at the facility and indicate which type of authorization covers or is proposed to cover discharges.

**Authorization coverage**

Outfall	Authorized Under MSGP	Authorized Under Individual Permit
<b>001</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

If **all** existing/proposed outfalls which discharge stormwater associated with industrial activities (and any of the allowable non-stormwater discharges) are **authorized under the MSGP**, stop here.

If **seeking authorization** for any outfalls which discharge stormwater associated with industrial activities (and any of the allowable non-stormwater discharges) **under an individual permit**, proceed.

**NOTE: The following information is required for each existing/proposed stormwater outfall for which the facility is seeking individual permit authorization under this application.**

### 3. SITE MAP (Instructions, Page 84)

Attach a site map or maps (drawn to scale) of the entire facility with the following information.

- the location of each stormwater outfall to be covered by the permit
- an outline of the drainage area that is within the facility’s boundary and that contributes stormwater to each outfall to be covered by the permit
- connections or discharge points to municipal separate storm sewer systems
- locations of all structures (e.g. buildings, garages, storage tanks)
- structural control devices that are designed to reduce pollution in discharges of stormwater associated with industrial activities
- process wastewater treatment units (including ponds)
- bag house and other air treatment units exposed to stormwater (stormwater runoff, snow melt runoff, and surface runoff and drainage)
- landfills; scrapyards; surface water bodies (including wetlands)
- vehicle and equipment maintenance areas
- physical features of the site that may influence discharges of stormwater associated with industrial activities or contribute a dry weather flow
- locations where spills or leaks of reportable quality (as defined in 30 TAC § 327.4) have occurred during the three years before this application was submitted to obtain coverage under an individual permit
- processing areas, storage areas, material loading/unloading areas, and other locations where significant materials are exposed to stormwater (stormwater runoff, snow melt runoff, and surface runoff and drainage)

Check the box to confirm all the above information was provided on the facility site map(s).

**Attachment:** \_\_\_\_\_

### 4. FACILITY/SITE INFORMATION (Instructions, Pages 84-85)

a. Provide the area of impervious surface and the total area drained by each stormwater outfall requested for authorization by this permit application.

**Impervious Surfaces**

Outfall	Area of Impervious Surface (include units)	Total Area Drained (include units)

b. Provide the following local area rainfall information and the source of the information.

Wettest month: \_\_\_\_\_

Average rainfall for wettest month (total inches): [REDACTED]

25-year, 24-hour rainfall (inches): [REDACTED]

Source: [REDACTED]

- e. Attach an inventory, or list, of materials currently handled at the facility that may be exposed to precipitation. **Attachment:** [REDACTED]
- d. Attach narrative descriptions of the industrial processes and activities involving the materials in the above-listed inventory that occur outdoors or in some manner that may result in exposure of the materials to precipitation or runoff (see instructions for guidance). **Attachment:** [REDACTED]
- e. Describe any BMPs and controls the facility uses/proposes to prevent or effectively reduce pollution in stormwater discharges from the facility: [REDACTED]

## 5. LABORATORY ACCREDITATION CERTIFICATION (Instructions, Page 85)

Effective July 1, 2008, all laboratory tests performed must meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification* with the following general exemptions:

- a. The laboratory is an in-house laboratory and is:
  - i. periodically inspected by the TCEQ; or
  - ii. located in another state and is accredited or inspected by that state; or
  - iii. performing work for another company with a unit located in the same site; or
  - vi. performing pro bono work for a governmental agency or charitable organization.
- b. The laboratory is accredited under federal law.
- c. The data are needed for emergency-response activities, and a laboratory accredited under the Texas Laboratory Accreditation Program is not available.
- d. The laboratory supplies data for which the TCEQ does not offer accreditation.

Review *30 TAC Chapter 25* for specific requirements. The following certification statement shall be signed and submitted with every application. See Instructions, Page 32, for a list of approved signatories.

I, [REDACTED], certify that all laboratory tests submitted with this application meet the requirements of *30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification*.

\_\_\_\_\_  
(Signature)

## 6. POLLUTANT ANALYSIS (Instructions, Pages 85-88)

- a. Provide the date range of all sampling events conducted to obtain the analytical data submitted with this application (e.g., 05/01/2018-05/30/2018): [REDACTED]
- b.  Check the box to confirm all samples were collected no more than 12 months prior to the date of application submittal.
- c. Complete Table 17 as directed on page 90 of the Instructions.



**Table 17 Pollutant Analysis for Outfall No.:**  

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled	MAL (mg/L)
pH (standard units)	(max)	—	(min)	—		—
Total suspended solids						—
Chemical oxygen demand						—
Total organic carbon						—
Oil and grease						—
Arsenic, total						0.0005
Barium, total						0.003
Cadmium, total						0.001
Chromium, total						0.003
Chromium, trivalent						—
Chromium, hexavalent						0.003
Copper, total						0.002
Lead, total						0.0005
Mercury, total						0.000005
Nickel, total						0.002
Selenium, total						0.005
Silver, total						0.0005
Zinc, total						0.005

\* Taken during first 30 minutes of storm event

\*\* Flow-weighted composite sample

d. Complete Table 18 as directed on pages 90-92 of the Instructions.

**Table 18 Pollutant Analysis for Outfall No.:**  

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled

\* Taken during first 30 minutes of storm event

\*\* Flow-weighted composite sample

**Attachment:** [REDACTED]

**7. STORM EVENT DATA (Instructions, Page 88)**

Provide the following data for the storm event(s) which resulted in the maximum values for the analytical data submitted:

Date of storm event: [REDACTED]

Duration of storm event (minutes): [REDACTED]

Total rainfall during storm event (inches): [REDACTED]

Number of hours the between beginning of the storm measured and the end of the previous measurable storm event (hours): [REDACTED]

Maximum flow rate during rain event (gallons/minute): [REDACTED]

Total stormwater flow from rain event (gallons): [REDACTED]

Provide a description of the method of flow measurement or estimate: [REDACTED]

# **Attachment A**

## **Core Data Form**



# TCEQ Core Data Form

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

## **SECTION I: General Information**

1. Reason for Submission <i>(If other is checked please describe in space provided.)</i>		
<input checked="" type="checkbox"/> New Permit, Registration or Authorization <i>(Core Data Form should be submitted with the program application.)</i>		
<input type="checkbox"/> Renewal <i>(Core Data Form should be submitted with the renewal form)</i>	<input type="checkbox"/> Other	
2. Customer Reference Number <i>(if issued)</i>	<a href="#">Follow this link to search for CN or RN numbers in Central Registry**</a>	3. Regulated Entity Reference Number <i>(if issued)</i>
CN <b>600131858</b>		RN

## **SECTION II: Customer Information**

4. General Customer Information		5. Effective Date for Customer Information Updates (mm/dd/yyyy)		12/1/2019	
<input type="checkbox"/> New Customer		<input checked="" type="checkbox"/> Update to Customer Information		<input type="checkbox"/> Change in Regulated Entity Ownership	
<input type="checkbox"/> Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)					
<i>The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).</i>					
6. Customer Legal Name <i>(If an individual, print last name first: eg: Doe, John)</i>				<i>If new Customer, enter previous Customer below:</i>	
<b>City of Corpus Christi</b>					
7. TX SOS/CPA Filing Number		8. TX State Tax ID (11 digits)		9. Federal Tax ID (9 digits)	
				10. DUNS Number <i>(if applicable)</i>	
11. Type of Customer:		<input type="checkbox"/> Corporation		<input type="checkbox"/> Individual	
Government: <input checked="" type="checkbox"/> City <input type="checkbox"/> County <input type="checkbox"/> Federal <input type="checkbox"/> State <input type="checkbox"/> Other		<input type="checkbox"/> Sole Proprietorship		Partnership: <input type="checkbox"/> General <input type="checkbox"/> Limited	
12. Number of Employees			13. Independently Owned and Operated?		
<input type="checkbox"/> 0-20 <input type="checkbox"/> 21-100 <input type="checkbox"/> 101-250 <input checked="" type="checkbox"/> 251-500 <input type="checkbox"/> 501 and higher			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
14. Customer Role (Proposed or Actual) – as it relates to the Regulated Entity listed on this form. Please check one of the following:					
<input type="checkbox"/> Owner		<input type="checkbox"/> Operator		<input checked="" type="checkbox"/> Owner & Operator	
<input type="checkbox"/> Occupational Licensee		<input type="checkbox"/> Responsible Party		<input type="checkbox"/> Voluntary Cleanup Applicant <input type="checkbox"/> Other:	
15. Mailing Address:					
<b>P.O. Box 9277</b>					
City	<b>Corpus Christi</b>	State	<b>TX</b>	ZIP	<b>78469</b>
16. Country Mailing Information <i>(if outside USA)</i>				17. E-Mail Address <i>(if applicable)</i>	
				<b>estebanr2@cctexas.com</b>	
18. Telephone Number		19. Extension or Code		20. Fax Number <i>(if applicable)</i>	
<b>( 361 ) 826-2489</b>				<b>( ) -</b>	

## **SECTION III: Regulated Entity Information**

21. General Regulated Entity Information <i>(If 'New Regulated Entity' is selected below this form should be accompanied by a permit application)</i>	
<input checked="" type="checkbox"/> New Regulated Entity <input type="checkbox"/> Update to Regulated Entity Name <input type="checkbox"/> Update to Regulated Entity Information	
<i>The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC.)</i>	
22. Regulated Entity Name <i>(Enter name of the site where the regulated action is taking place.)</i>	
<b>La Quinta Desalination Plant</b>	

23. Street Address of the Regulated Entity: (No PO Boxes)							
	City		State		ZIP		ZIP + 4
24. County	San Patricio						

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	On Texas State Highway 361, 2.5 miles southeast of intersection of Texas State Highway 35 and Texas State Highway 361						
26. Nearest City	Ingleside				State	Nearest ZIP Code	
					TX	78362	
27. Latitude (N) In Decimal:	27.896			28. Longitude (W) In Decimal:	97.243		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		
29. Primary SIC Code (4 digits)	30. Secondary SIC Code (4 digits)		31. Primary NAICS Code (5 or 6 digits)		32. Secondary NAICS Code (5 or 6 digits)		
4941			221310				
33. What is the Primary Business of this entity? (Do not repeat the SIC or NAICS description.)							
Seawater Desalination							
34. Mailing Address:	P.O. Box 9277						
	City	Corpus Christi	State	TX	ZIP	78469	ZIP + 4
35. E-Mail Address:		estebanr2@cctexas.com					
36. Telephone Number		37. Extension or Code			38. Fax Number (if applicable)		
( 361 ) 826-2489					( ) -		

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

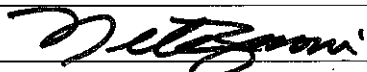
<input type="checkbox"/> Dam Safety	<input type="checkbox"/> Districts	<input type="checkbox"/> Edwards Aquifer	<input type="checkbox"/> Emissions Inventory Air	<input type="checkbox"/> Industrial Hazardous Waste
<input type="checkbox"/> Municipal Solid Waste	<input type="checkbox"/> New Source Review Air	<input type="checkbox"/> OSSF	<input type="checkbox"/> Petroleum Storage Tank	<input type="checkbox"/> PWS
<input type="checkbox"/> Sludge	<input type="checkbox"/> Storm Water	<input type="checkbox"/> Title V Air	<input type="checkbox"/> Tires	<input type="checkbox"/> Used Oil
<input type="checkbox"/> Voluntary Cleanup	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Wastewater Agriculture	<input type="checkbox"/> Water Rights	<input type="checkbox"/> Other:

#### SECTION IV: Preparer Information

40. Name:	Katie Leatherwood			41. Title:	Environmental Scientist		
42. Telephone Number	43. Ext./Code	44. Fax Number	45. E-Mail Address				
( 817 ) 735-7503		( 817 ) 735-7492	katie.leatherwood@freese.com				

#### SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	City of Corpus Christi		Job Title:	City Manager			
Name (In Print) :	Peter Zanoni			Phone:	( 361 ) 826-3220		
Signature:				Date:	January 17, 2020		

# **Attachment B**

## **Property Ownership Information**

## **Placeholder for Long-Term Lease Agreement**

Real estate negotiations are ongoing with Occidental Chemical Corporation for the proposed plant site. The City will provide a copy of the final executed long-term lease agreement and deed-recorded easement to the TCEQ upon their execution.

# **Attachment C**

## **USGS Topographic Map**

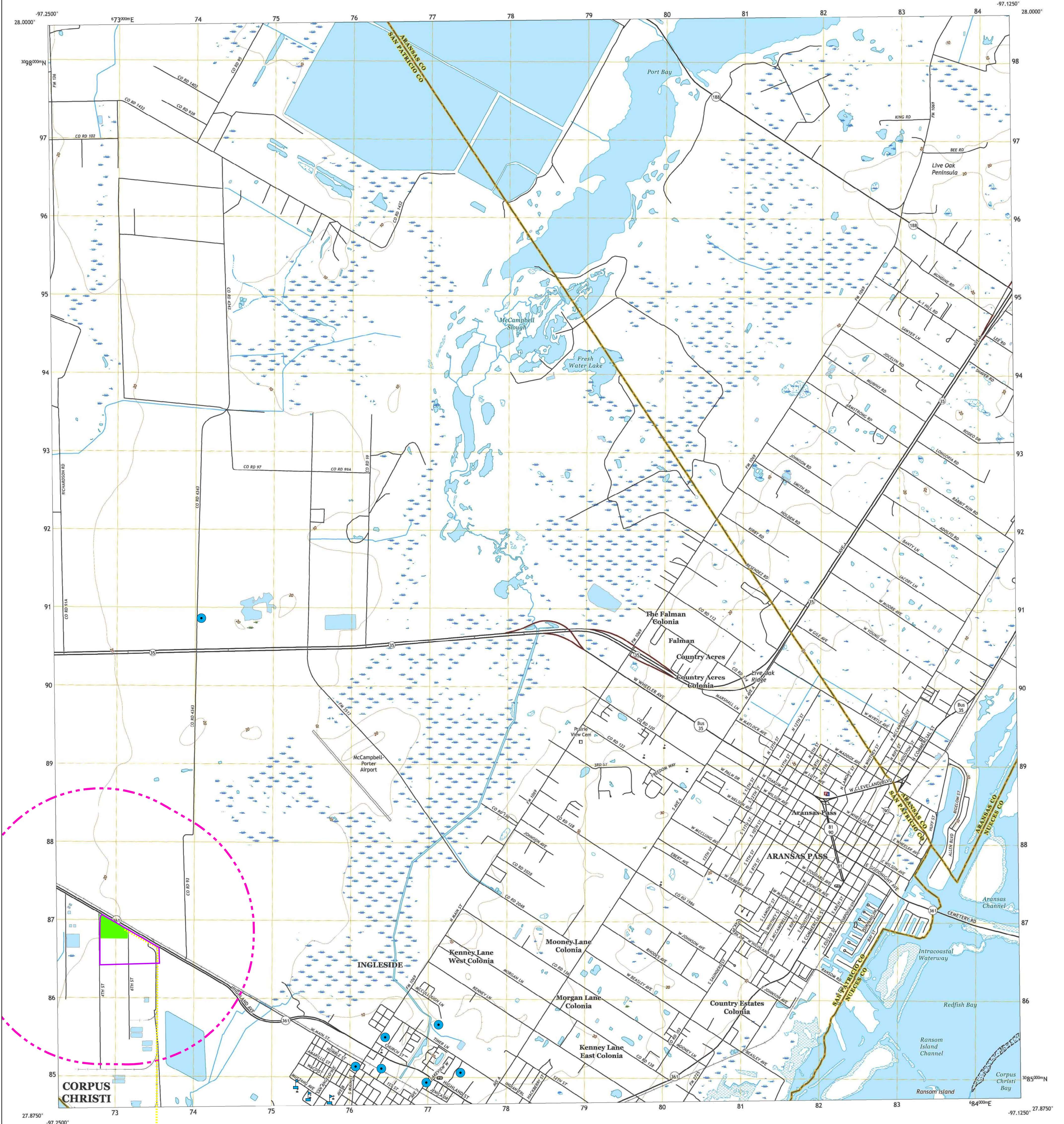




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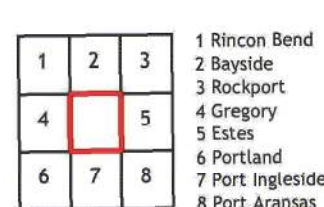
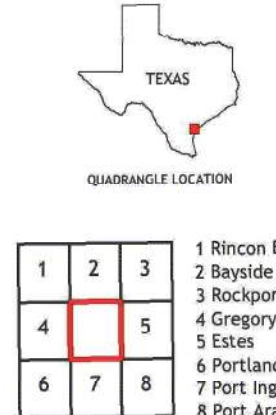
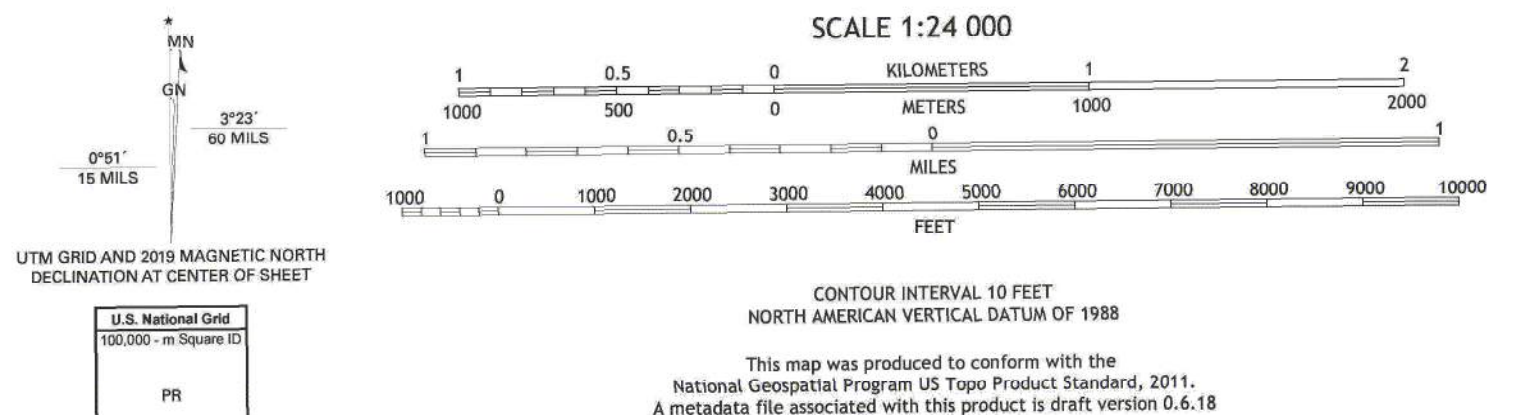


ARANSAS PASS QUADRANGLE  
TEXAS  
7.5-MINUTE SERIES

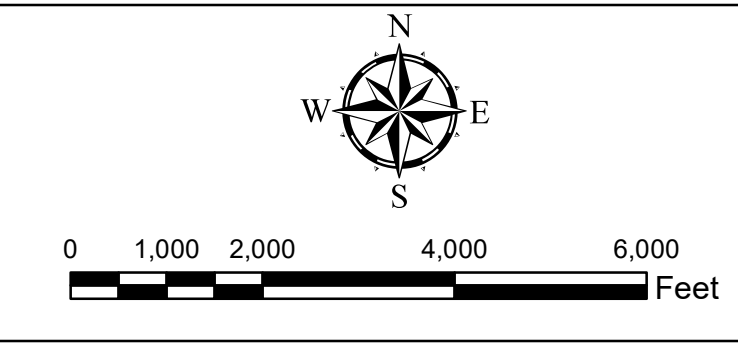


Produced by the United States Geological Survey  
North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid: Universal Transverse Mercator, Zone 14E  
This map is not a legal document. Boundaries may be  
generalized for this map scale. Private lands within government  
reservations may not be shown. Obtain permission before  
entering private lands.

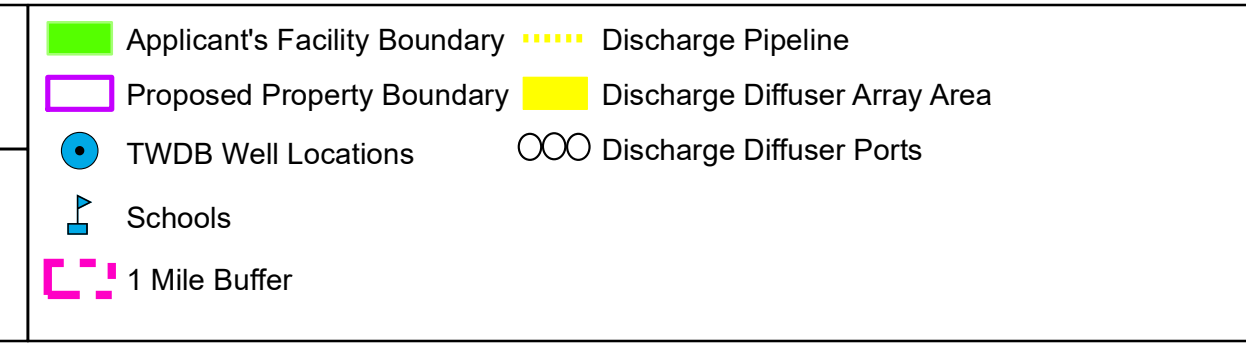
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Roads:.....U.S. Census Bureau, 2015 - 2018  
Names:.....GNIS, 1979 - 2018  
Hydrography:.....National Hydrography Dataset, 2004 - 2018  
Contours:.....National Elevation Dataset, 2005 - 2008  
Boundaries:.....Multiple sources; see metadata file 2016 - 2017  
Wetlands:.....FWS National Wetlands Inventory 2004 - 2006



ARANSAS PASS, TX  
2019



CITY OF CORPUS CHRISTI  
Seawater Desalination  
Project Location on  
2019 USGS Topographic Base  
Aransas Pass Quad



1A  
Figure





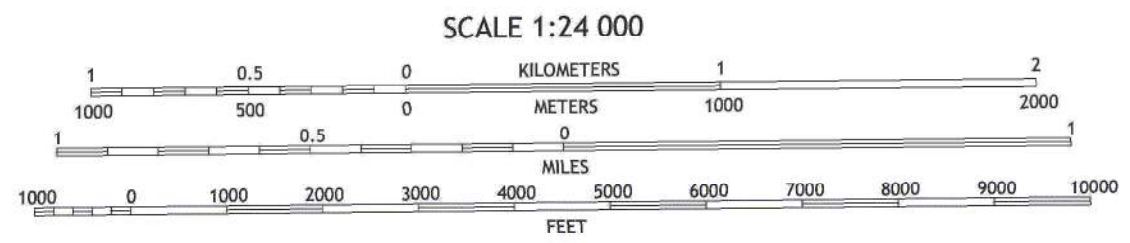
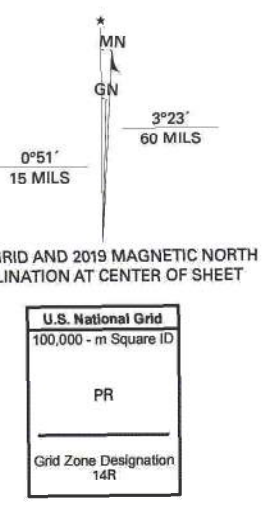
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U.S. GEOLOGICAL SURVEY



PORT INGLESIDE QUADRANGLE  
TEXAS  
7.5-MINUTE SERIES



Produced by the United States Geological Survey  
North American Datum of 1983 (NAD83)  
World Geodetic System of 1984 (WGS84). Projection and  
1 000-meter grid/Universal Transverse Mercator, Zone 14E  
This map is not a legal document. Boundaries may be  
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Imagery.....NAIP, September 2016 - December 2016  
Roads.....U.S. Census Bureau, 2015 - 2018  
Names.....GNIS, 1979 - 2018  
Hydrography.....National Hydrography Dataset, 2004 - 2018  
Contours.....National Elevation Dataset, 2005 - 2012  
Boundaries.....Multiple sources; see metadata file 2016 - 2017  
Wetlands.....FWS National Wetlands Inventory 2004 - 2006



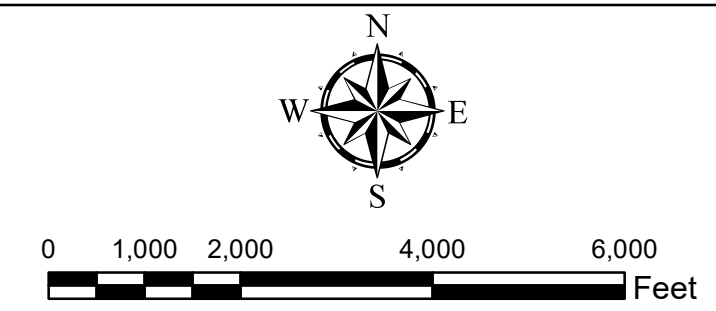
ADJOINING QUADRANGLES

1	2	3
4	5	6
7	8	

1 Gregory  
2 Aransas Pass  
3 Estes  
4 Portland  
5 Port Aransas  
6 Guo Creek NE  
7 Crane Islands NW DE E  
8 Crane Islands NW DE E

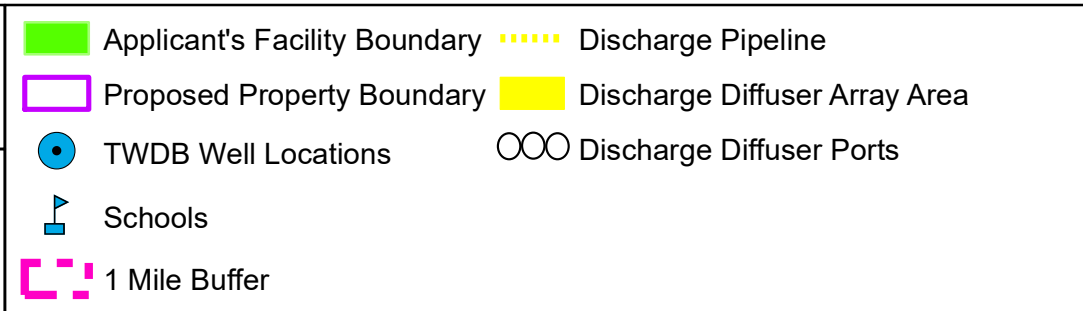


PORT INGLESIDE, TX  
2019



CITY OF CORPUS CHRISTI  
Seawater Desalination

Project Location on  
2019 USGS Topographic Base  
Port Ingleside Quad



1B  
Figure

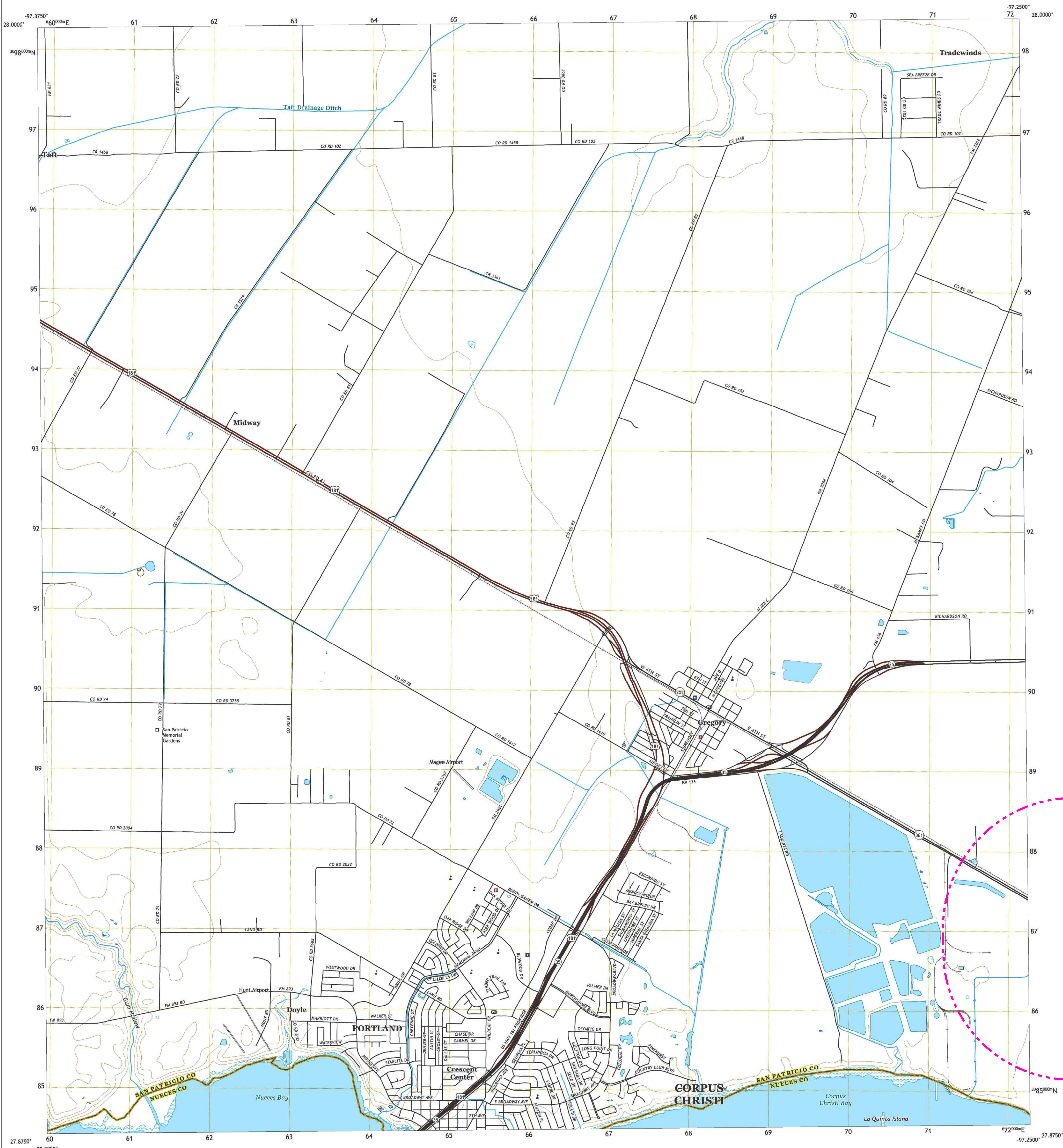




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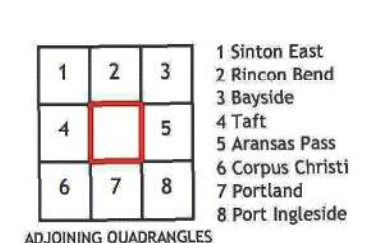
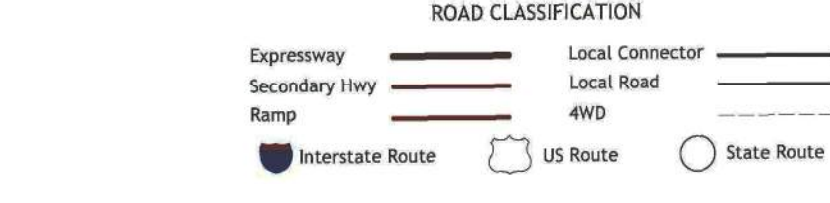
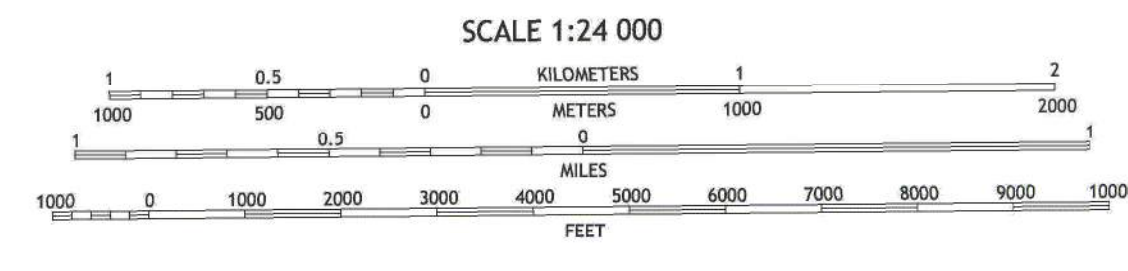
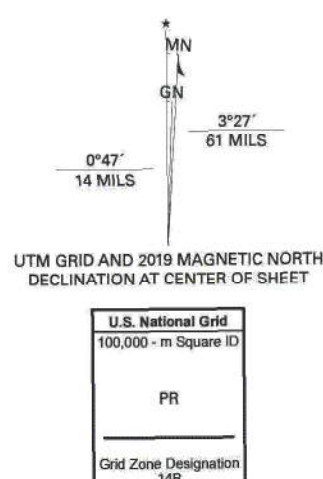


GREGORY QUADRANGLE  
TEXAS  
7.5-MINUTE SERIES

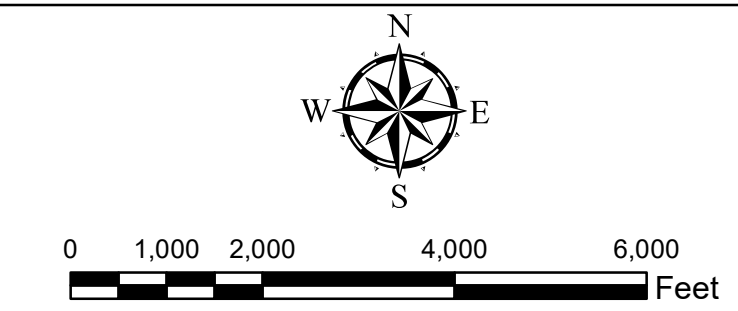


Produced by the United States Geological Survey  
North American Datum of 1983 (NAD83)  
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reservations may not be shown. Obtain permission before  
entering private lands.

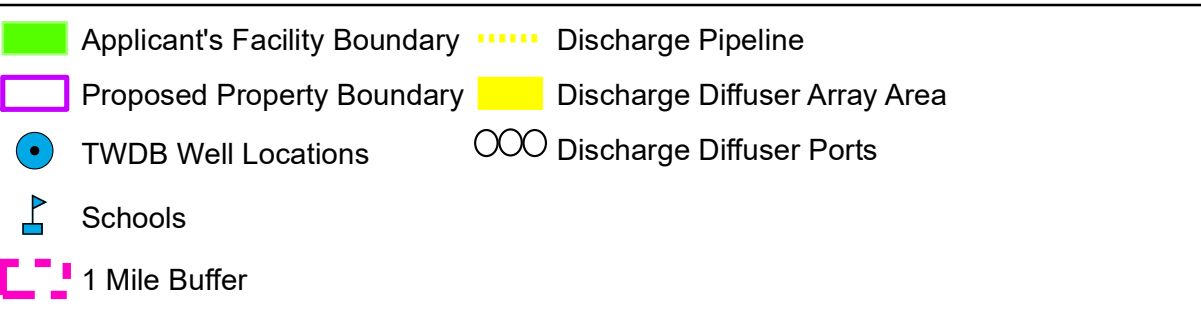
Imagery.....NAIP, September 2016 - December 2016  
Roads.....U.S. Census Bureau, 2015 - 2018  
Names.....GNS, 1979 - 2018  
Hydrography.....National Hydrography Dataset, 2004 - 2018  
Contours.....National Elevation Dataset, 2005  
Boundaries.....Multiple sources; see metadata file 2016 - 2017  
Wetlands.....FWS National Wetlands Inventory 2004 - 2006



GREGORY, TX  
2019



CITY OF CORPUS CHRISTI  
Seawater Desalination  
Project Location on  
2019 USGS Topographic Base  
Gregory Quad



1C  
Figure

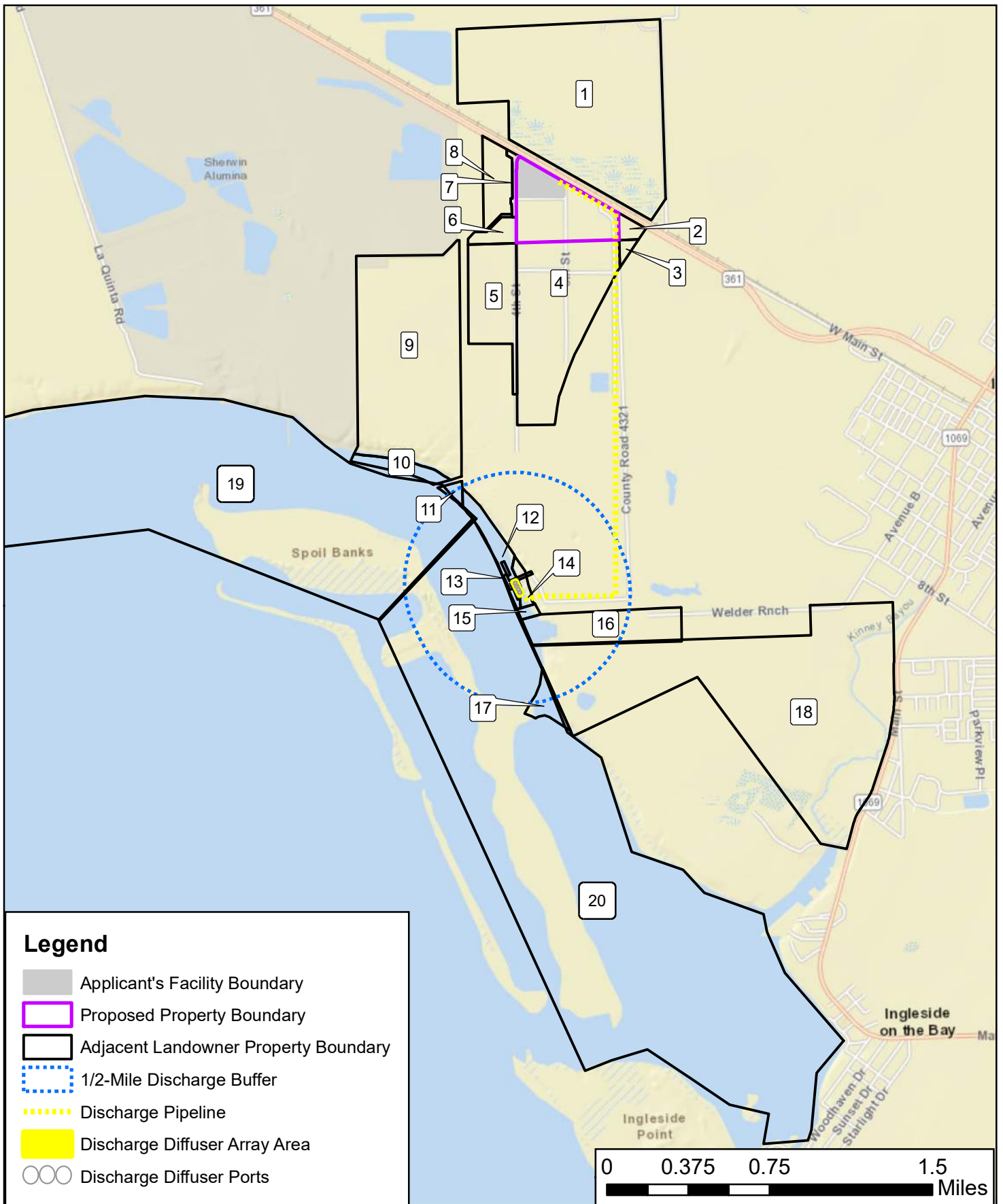


# **Attachment D**

**Affected Landowner Map**

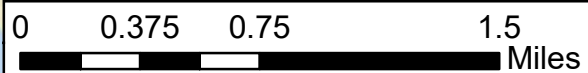
**Landowner List and Labels**

**Original Photographs**



**Legend**

- Applicant's Facility Boundary
- Proposed Property Boundary
- Adjacent Landowner Property Boundary
- 1/2-Mile Discharge Buffer
- Discharge Pipeline
- Discharge Diffuser Array Area
- Discharge Diffuser Ports



**FRESE AND NICHOLS**  
 FRESE AND NICHOLS, INC  
 4055 International Plaza, Suite 200  
 Fort Worth, TX 76109 - 4895  
 Phone - (817) 735 - 7300



City of Corpus Christi  
**TPDES Permit Application**  
**Affected Landowners Map**

FN JOB NO	COR18468
FILE NAME	Affected Landowners_Oxy.mxd
DATE	2/24/2020
SCALE	1:38,156
DESIGNED	ANM
DRAFTED	02905

2

FIGURE



Search Here:



**Abstract:**

Abstract Number	2686
Abstract Owner	NUECES CO NAV DIST NO 1
Survey	
Survey Name	

[Zoom to](#) ...

**Abstract:**

Abstract Number	2686
Abstract Owner	NUECES CO NAV DIST NO 1
Survey	
Survey Name	

[Zoom to](#) ...

**Legend**

- Property Parcels
- Abstracts
- Abstract Area Over Spoil Banks

27°52'42"N 97°14'04"W

0 0.3 0.6mi



OCCIDENTAL CHEMICAL CORP  
PO BOX 27570  
HOUSTON, TX 77227

CHEMOURS COMPANY FC LLC  
1007 MARKET ST  
WILMINGTON, DE 19898

SAN PATRICIO MUNICIPAL  
PO DRAWER S  
INGLESIDE, TX 78362

PORT OF CORPUS CHRISTI  
PO BOX 1541  
CORPUS CHRISTI, TX 78403

SUBSEA 7 (US) LLC  
17220 KATY STE 100  
HOUSTON, TX 77094-1485

CORPUS CHRISTI  
NAVIGATION DISTRICT  
PO BOX 1541  
CORPUS CHRISTI, TX 78403

CHENIERE INGLESIDE MARINE  
TERMINAL LLC  
700 MILAM ST STE 1900  
HOUSTON, TX 77002

PORT OF CORPUS CHRISTI AUTHORITY  
OF NUECES COUNTY  
222 POWER STREET  
CORPUS CHRISTI, TX 78401

NUECES COUNTY NAVIGATION  
DISTRICT  
PO BOX 1541  
CORPUS CHRISTI, TX 78403

Cross-Referenced Landowner List

- |    |   |    |  |
|----|---|----|--|
| 1  | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                 | 2  | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                        |
| 3  | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                 | 4  | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                        |
| 5  | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                 | 6  | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                        |
| 7  | Chemours Company Fc LLC<br>1007 Market St<br>Wilmington, DE 19898-1100        | 8  | San Patricio Municipal<br>PO Drawer S<br>Ingleside, TX 78362                         |
| 9  | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                 | 10 | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                        |
| 11 | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                 | 12 | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                        |
| 13 | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                 | 14 | Occidental Chemical Corp<br>PO Box 27570<br>Houston, TX 77227                        |
| 15 | Port of Corpus Christi<br>PO Box 1541<br>Corpus Christi, TX 78403             | 16 | Subsea 7 (Us) LLC<br>17220 Katy Ste 100<br>Houston, TX 77094-1485                    |
| 17 | Corpus Christi Navigation District<br>PO Box 1541<br>Corpus Christi, TX 78403 | 18 | Cheniere Ingleside Marine Terminal LLC<br>700 Milam St Ste 1900<br>Houston, TX 77002 |
| 19 | Nueces County Navigation District<br>PO Box 1541<br>Corpus Christi, TX 78403  | 20 | Nueces County Navigation District<br>PO Box 1541<br>Corpus Christi, TX 78403         |



Original Photographs  
July 10, 2019

Photo Group 1- Photos pointing north of proposed discharge location.

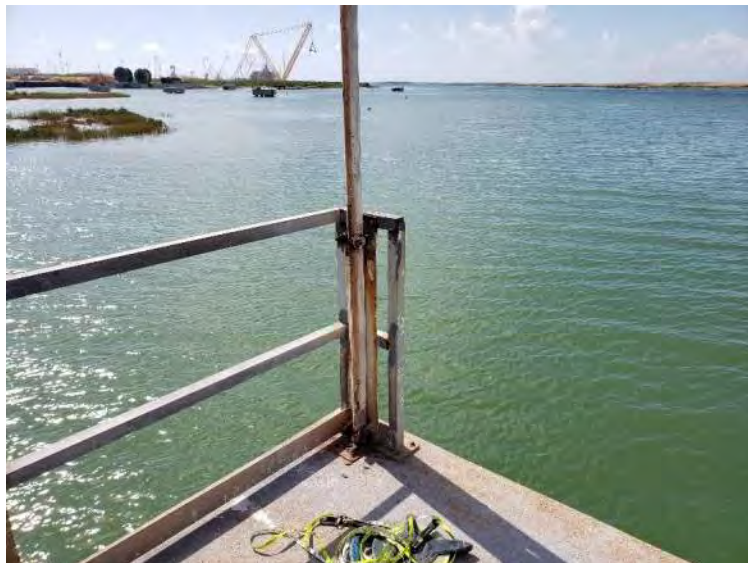


Original Photographs  
July 10, 2019

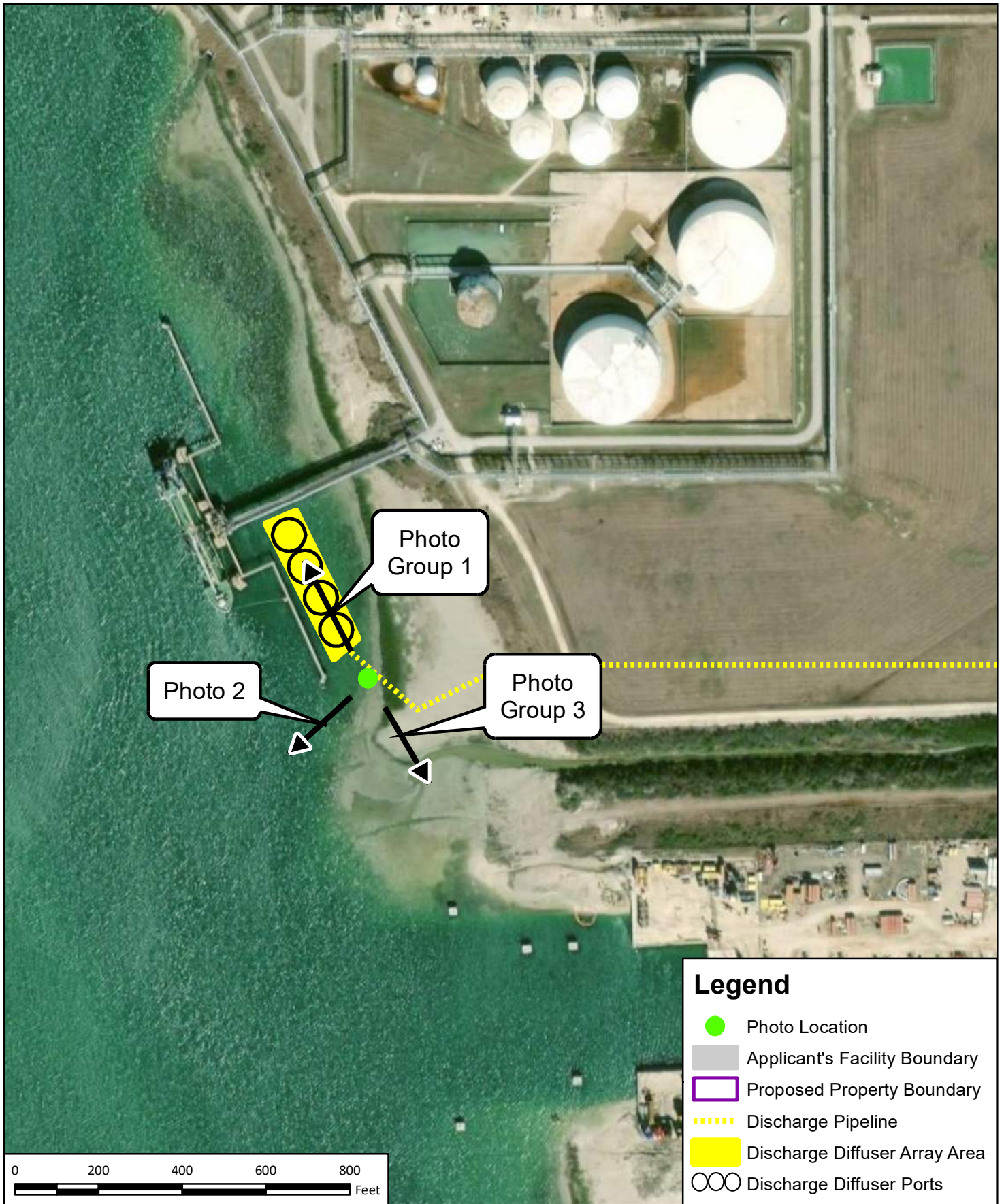
Photo 2- Photo pointing west of proposed discharge location.



Photo group 3- Photos pointing south of proposed discharge location.

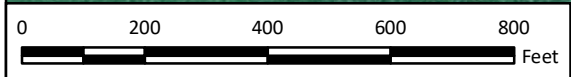




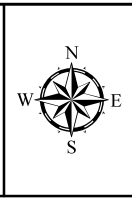


**Legend**

- Photo Location
- Applicant's Facility Boundary
- Proposed Property Boundary
- Discharge Pipeline
- Discharge Diffuser Array Area
- Discharge Diffuser Ports



**FREES AND NICHOLS**  
 FREES AND NICHOLS, INC  
 4055 International Plaza, Suite 200  
 Fort Worth, TX 76109 - 4895  
 Phone - (817) 735 - 7300



City of Corpus Christi  
**Seawater Desalination Plant**  
**Photograph Plot Map**

FN JOB NO	COR18468
FILE NAME	PhotoPlotMap_OxySite_1.mxd
DATE	2/24/2020
SCALE	1:3,748
DESIGNED	ANM
DRAFTED	02905

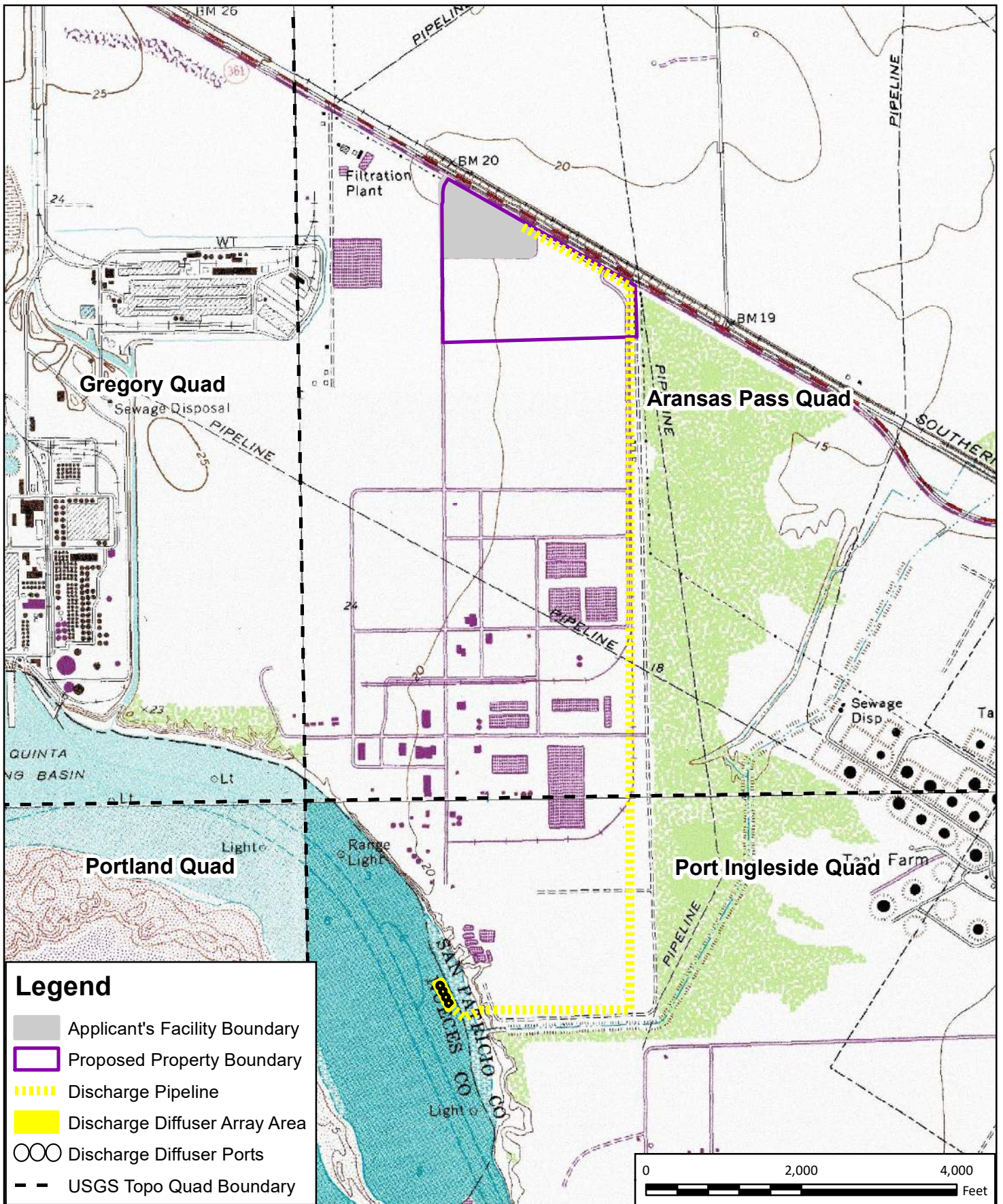
3

FIGURE

# **Attachment E**

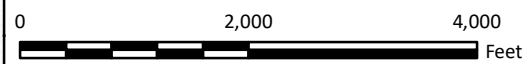
## **SPIF Map**





**Legend**

- Applicant's Facility Boundary
- Proposed Property Boundary
- Discharge Pipeline
- Discharge Diffuser Array Area
- Discharge Diffuser Ports
- USGS Topo Quad Boundary



**FRESE AND NICHOLS**  
 FRESE AND NICHOLS, INC  
 4055 International Plaza, Suite 200  
 Fort Worth, TX 76109 - 4895  
 Phone - (817) 735 - 7300



City of Corpus Christi  
**Seawater Desalination Plant**  
**SPIF Topographic Map**

FN JOB NO	COR18468
FILE NAME	SPIF_OxySite.mxd
DATE	2/26/2020
SCALE	1:20,169
DESIGNED	ANM
DRAFTED	02905

4

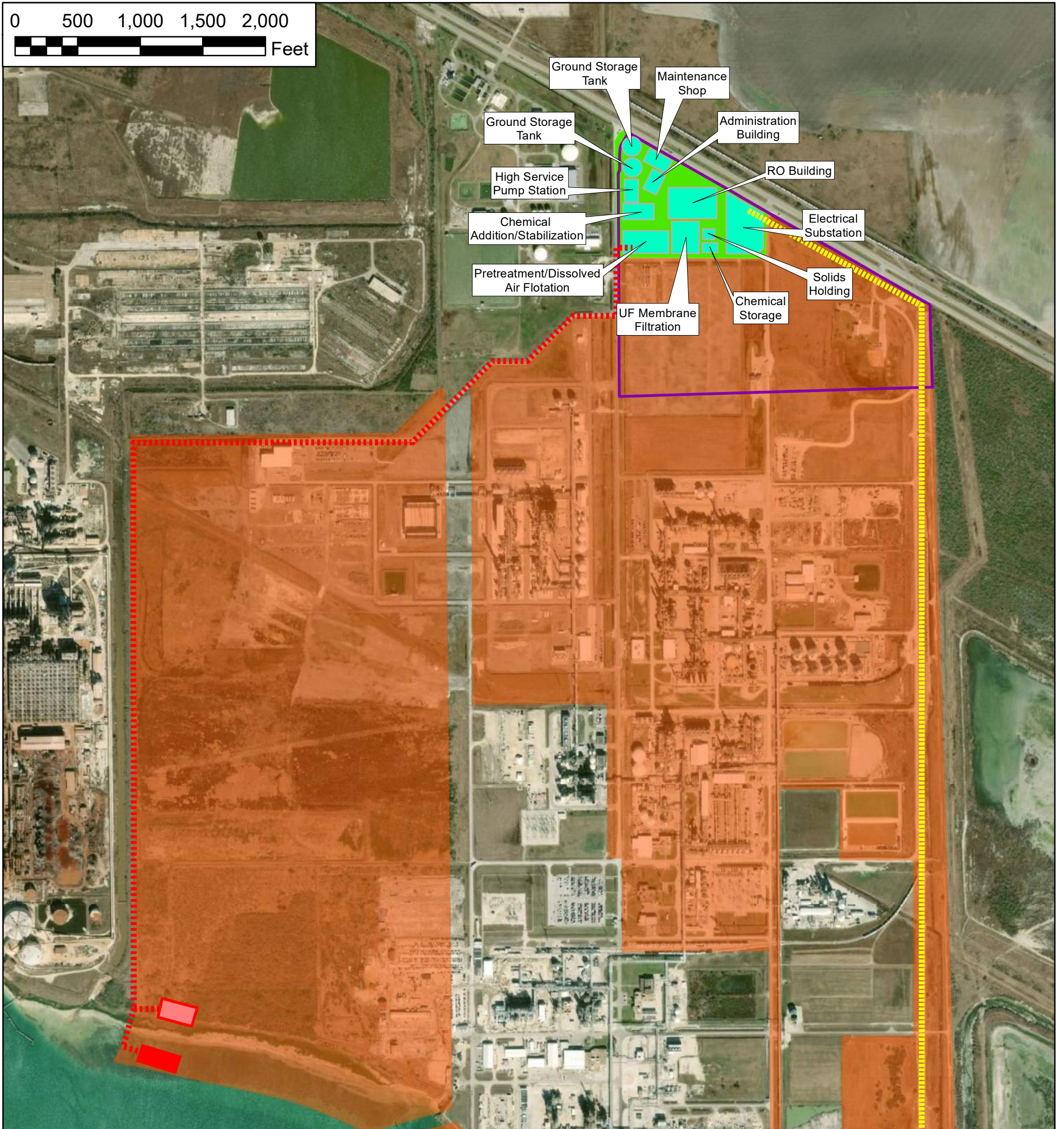
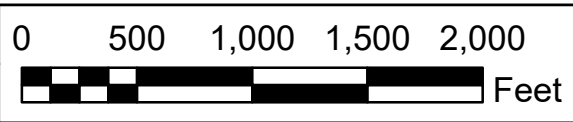
FIGURE

# **Attachment F**

**Facility Map**

**FEMA Map**

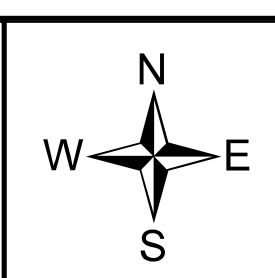




**Legend**

- Raw Water Intake Pump Station
- Raw Water Intake Area
- Intake Pipeline
- Discharge Pipeline
- Discharge Diffuser Ports
- Discharge Diffuser Array Area
- Proposed Site Plan
- Proposed Property Boundary
- Applicant's Facility Boundary
- Land Owned By Occidental Chemical Corp

**Freese and Nichols**  
 4055 International Plaza Suite 200  
 Fort Worth, Texas 76109-4895  
 817-735-7300



**City of Corpus Christi  
 Seawater Desalination Plant**

**Facility Map**

FN JOB NO	COR19468
FILE	H:/Location.mxd
DATE	2/13/2020
SCALE	1:24,000
DESIGNED	ANM
DRAFTED	ANM

**4**

**Figure**



### NOTES TO USERS

This map is for use in determining the Federal Flood Insurance Program in areas of non-saturated soils and is not intended for use in areas of saturated soils. The map is not a substitute for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study.

To obtain more detailed information on areas of non-saturated soils, users are encouraged to refer to the National Flood Insurance Program (NFIP) Manual and the Flood Insurance Study (FIS) for the community. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study.

Coastal Area Flood Elevations (CAFE) are the maximum water surface elevations for coastal flooding. These elevations are based on a 100-year storm surge and are used to determine the flood insurance risk for coastal areas. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study.

The Flood Insurance Study (FIS) is a study of the community's flood risk. It includes information on the community's flood risk, the community's flood risk, and the community's flood risk. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study.

Custom areas of special flood hazard may be shown on the map. These areas are shown on the map and are used to determine the flood insurance risk for these areas. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study.

Zone A areas are areas of special flood hazard. These areas are shown on the map and are used to determine the flood insurance risk for these areas. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study.

Flood insurance coverage is available for areas of special flood hazard. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study.

Map Information Includes:  
FIRM No. 48060459E  
FIRM Effective Date: 11/04/2016  
Community Name: SAN PATRICO COUNTY, TEXAS  
Panel No. 463 of 656

To obtain more detailed information on areas of special flood hazard, users are encouraged to refer to the National Flood Insurance Program (NFIP) Manual and the Flood Insurance Study (FIS) for the community. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study.

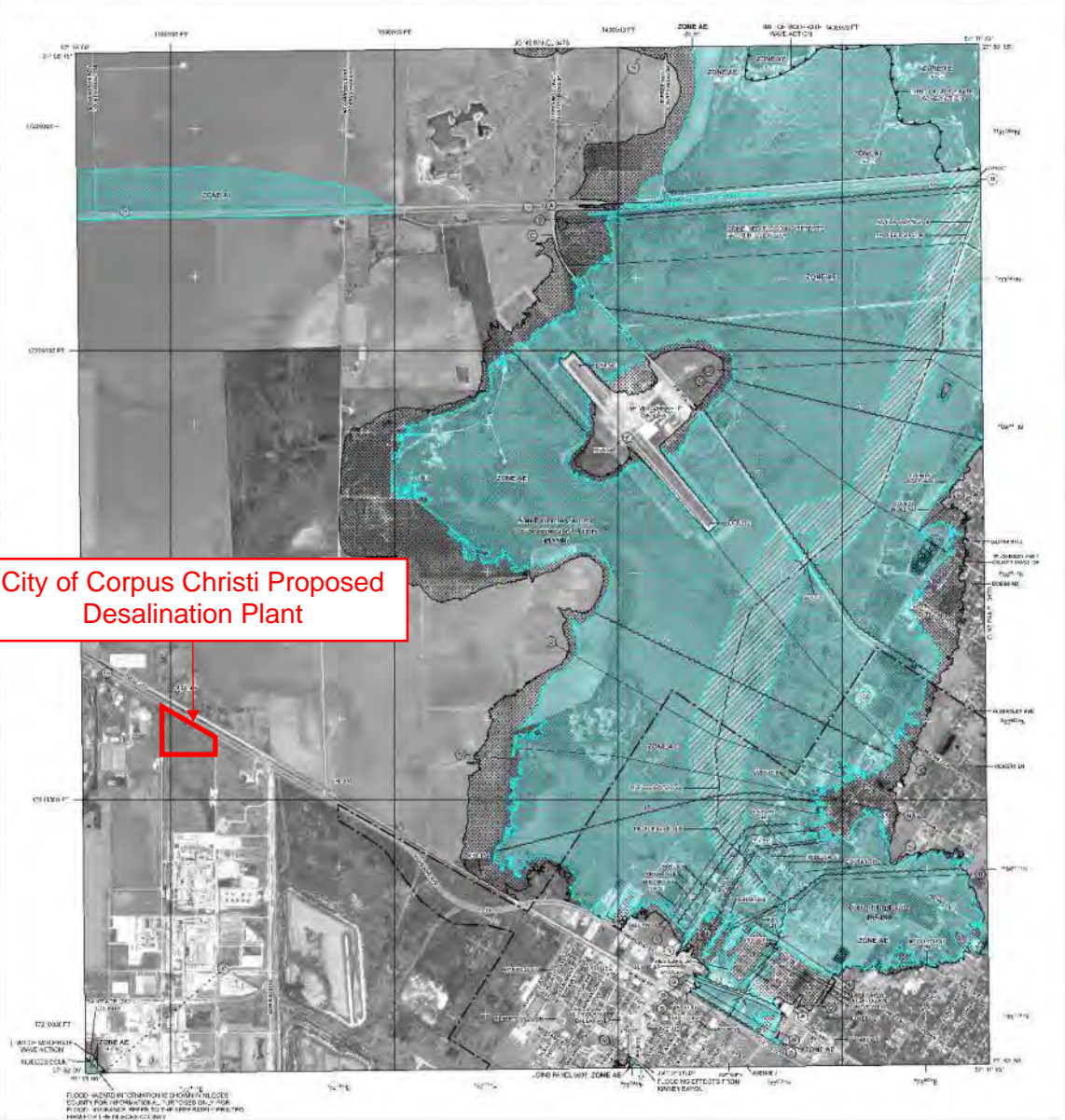
The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study.

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City of Corpus Christi Proposed  
Desalination Plant



### LEGEND

The map is for use in determining the Federal Flood Insurance Program in areas of non-saturated soils and is not intended for use in areas of saturated soils. The map is not a substitute for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study. The map is not intended to be used as the basis for a site-specific flood insurance study.

- Zone A
- Zone AE
- Zone X
- Zone V
- Zone D
- Zone S
- Coastal Area Flood Elevations (CAFE)
- Special Flood Hazard Areas (SFHA)
- Zone AE
- Zone X
- Zone V
- Zone D
- Zone S
- Coastal Area Flood Elevations (CAFE)
- Special Flood Hazard Areas (SFHA)

Map Information Includes:  
FIRM No. 48060459E  
FIRM Effective Date: 11/04/2016  
Community Name: SAN PATRICO COUNTY, TEXAS  
Panel No. 463 of 656

**FIRM**  
FLOOD INSURANCE RATE MAP  
SAN PATRICO COUNTY,  
TEXAS  
AND INCORPORATED AREAS

PANEL 463 OF 656  
(SEE MAP INDEX FOR PANEL AROUNDING THIS PANEL)

COMMUNITY: SAN PATRICO COUNTY, TEXAS  
EFFECTIVE DATE: NOVEMBER 4, 2016  
FIRM NUMBER: 48060459E

NATIONAL FLOOD INSURANCE PROGRAM

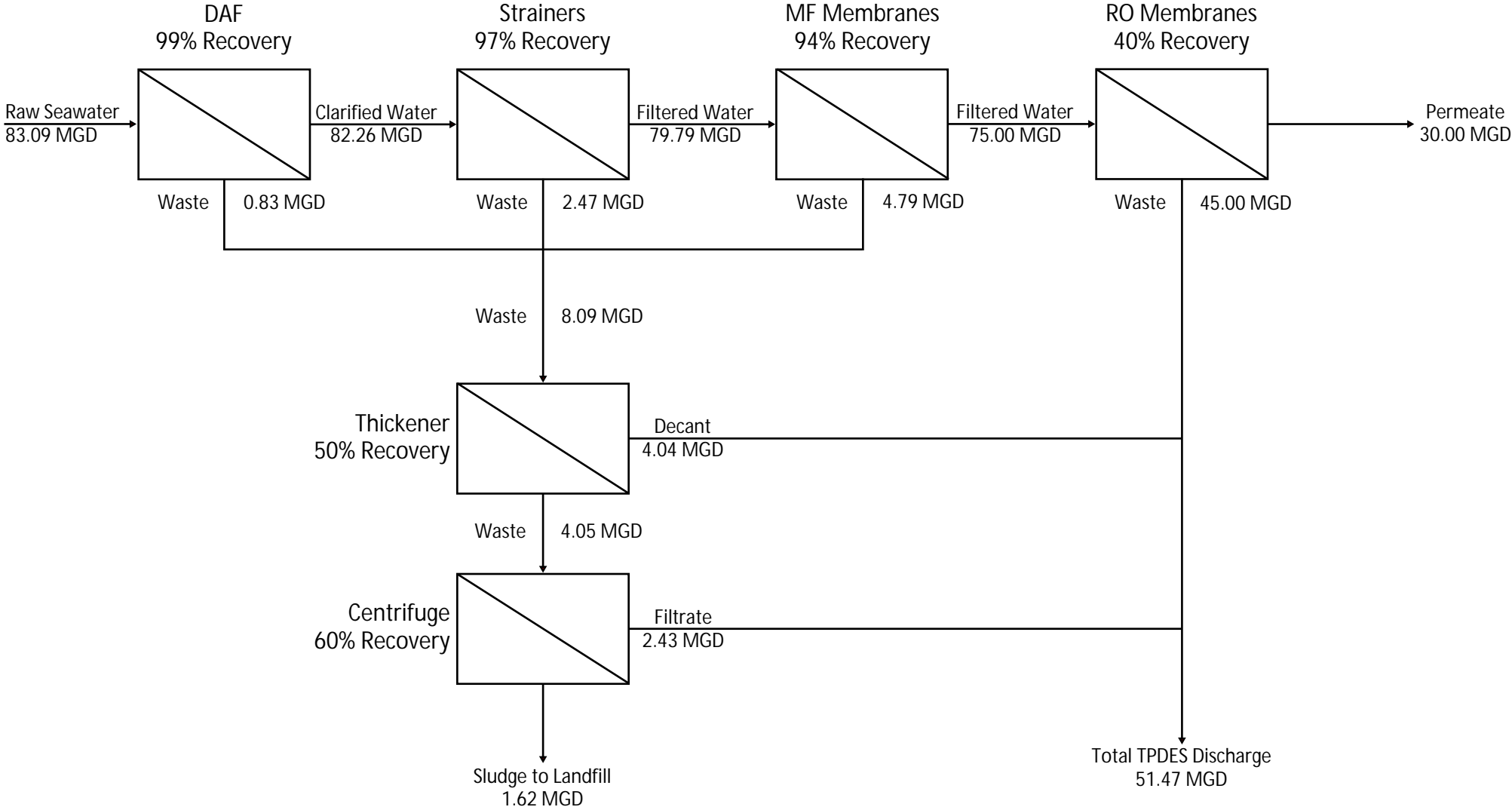


# **Attachment G**

**Flow Schematics**

**Water Balance Sheets**

# City of Corpus Christi Proposed La Quinta Channel Desalination Plant Process Flow Diagram - Initial Phase



**City of Corpus Christi**  
**Proposed La Quinta Channel Desalination Plant**  
**Water Balance Sheet - Initial 34 MGD Plant**

Date of Revision:

11/26/2019

**Design Process**

Manufacturer or approved equal	Design paramters	Recovery
Submerged fine self-cleaning screen	Johnson 2.0 mm openings; velocity < 0.5 fps	100%
Rapid Mixer	Lightening G value 1,000/sec	100%
Clarifier-Dissolved Air Flotation	Xylem 10 gpm/sf	99%
Strainer self-cleaning	Arkal Filtration 300 micron discs	97%
Microfiltration membranes	PALL, inc. Microza	94%
Cartridge Filters	Lenntech 5 microns	100%
Reverse Osmosis	Dow Film-Tec Seawater 8 gfd	40%
Carbon dioxide addition	pH < 6.5	100%
Calcite filters (alkalinity)	pH > 8.3	100%
Chlorination / ammonia	Chloramine < 4 mg/l	100%
Clawwell Storage		
High Service Pump Station		
Solids Thickener		
Centrifuge		
Solids to landfill ( daily cover)		

Water Balance:		55.39 MGD
Clar-DAF sludge	99.00%	54.84 MGD
Strainer backwash	97.00%	53.19 MGD
MF Membranes Backwash	94.00%	50.00 MGD
RO permeate recovery	40.00%	
RO Brine reject	60.00%	
Decant (supernatant) thickner	50.00%	
Centrifuge filtrate return	60.00%	

**Raw Water Total Feed:**

<b>Permeate</b>	<b>20 MGD</b>
RO Feed Water	50.00 MGD
<b>Total Raw Water Feed</b>	<b>55.39 MGD</b>

**TPDES Discharge :**

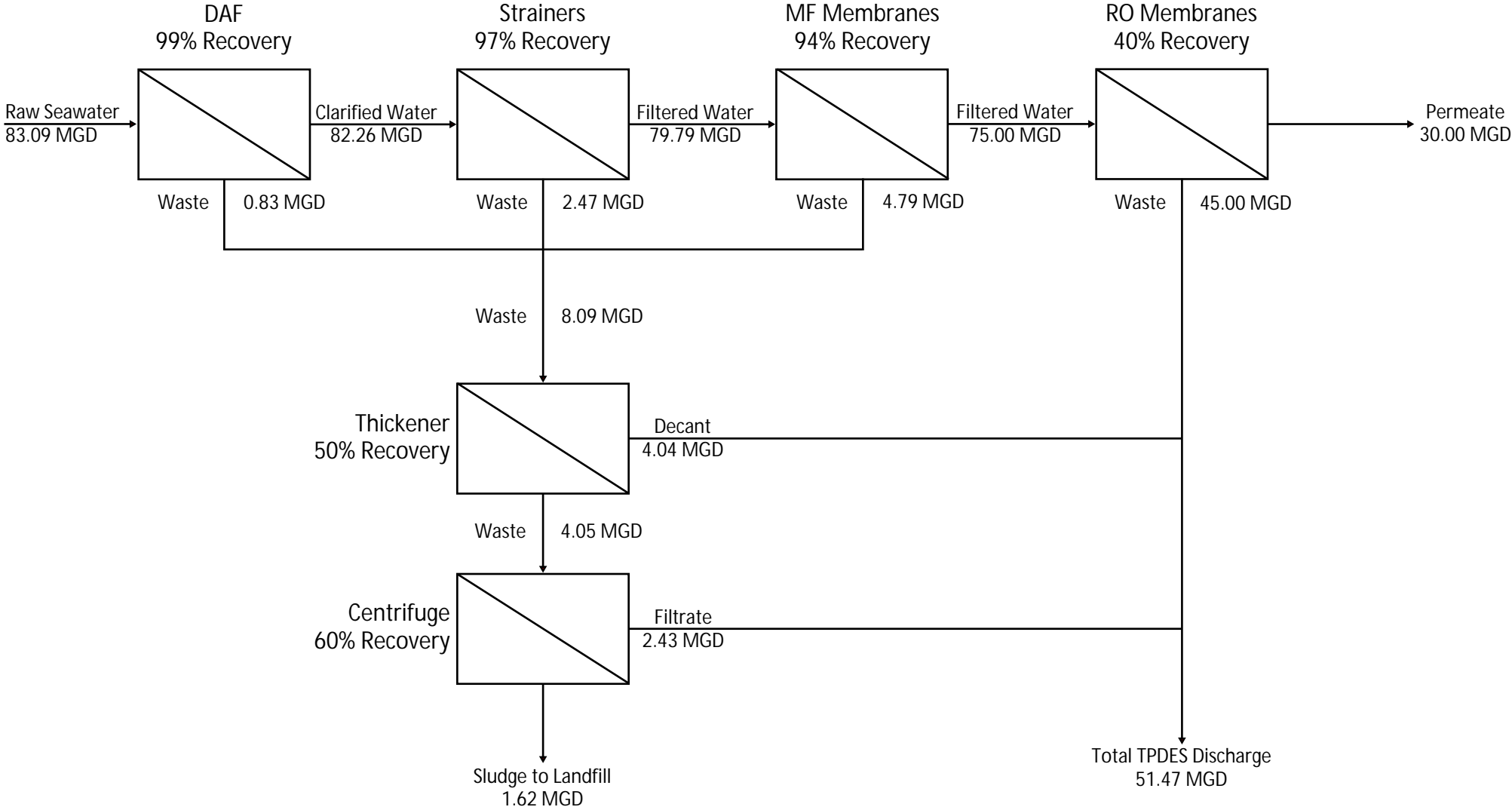
RO Brine discharge	30.00 MGD
Clar-DAF	0.55 MGD
Strainer	1.65 MGD
MF Backwash	3.19 MGD
Sub-total	5.39 MGD
Thickener Decant	2.70 MGD
Centrifuge filtrate	1.62 MGD
<b>Total Discharge: RO Brine + Thickener/Centrifuge Return</b>	<b>34.31 MGD</b>

**Maximum Daily Discharge 120.00%**

**Maximum Daily Discharge 41.17 MGD**

Sludge Disposal to landfill 1.08 MGD

# City of Corpus Christi Proposed La Quinta Channel Desalination Plant Process Flow Diagram - Interim Phase



**City of Corpus Christi**  
**Proposed La Quinta Channel Desalination Plant**  
**Water Balance Sheet - Expanded 51 MGD Plant**

Date of Revision:

11/26/2019

**Design Process**

Manufacturer or approved equal	Design paramters	Recovery
Submerged fine self-cleaning screen	Johnson 2.0 mm openings; velocity < 0.5 fps	100%
Rapid Mixer	Lightening G value 1,000/sec	100%
Clarifier-Dissolved Air Flotation	Xylem 10 gpm/sf	99%
Strainer self-cleaning	Arkal Filtration 300 micron discs	97%
Microfiltration membranes	PALL, inc. Microza	94%
Cartridge Filters	Lenntech 5 microns	100%
Reverse Osmosis	Dow Film-Tec Seawater 8 gfd	40%
Carbon dioxide addition	pH < 6.5	100%
Calcite filters (alkalinity)	pH > 8.3	100%
Chlorination / ammonia	Chloramine < 4 mg/l	100%
Clawwell Storage		
High Service Pump Station		
Solids Thickener		
Centrifuge		
Solids to landfill ( daily cover)		

Water Balance:		83.09 MGD
Clar-DAF sludge	99.00%	82.25 MGD
Strainer backwash	97.00%	79.79 MGD
MF Membranes Backwash	94.00%	75.00 MGD
RO permeate recovery	40.00%	
RO Brine reject	60.00%	
Decant (supernatant) thickner	50.00%	
Centrifuge filtrate return	60.00%	

**Raw Water Total Feed:**

<b>Permeate</b>	<b>30 MGD</b>
RO Feed Water	75.00 MGD
<b>Total Raw Water Feed</b>	<b>83.09 MGD</b>

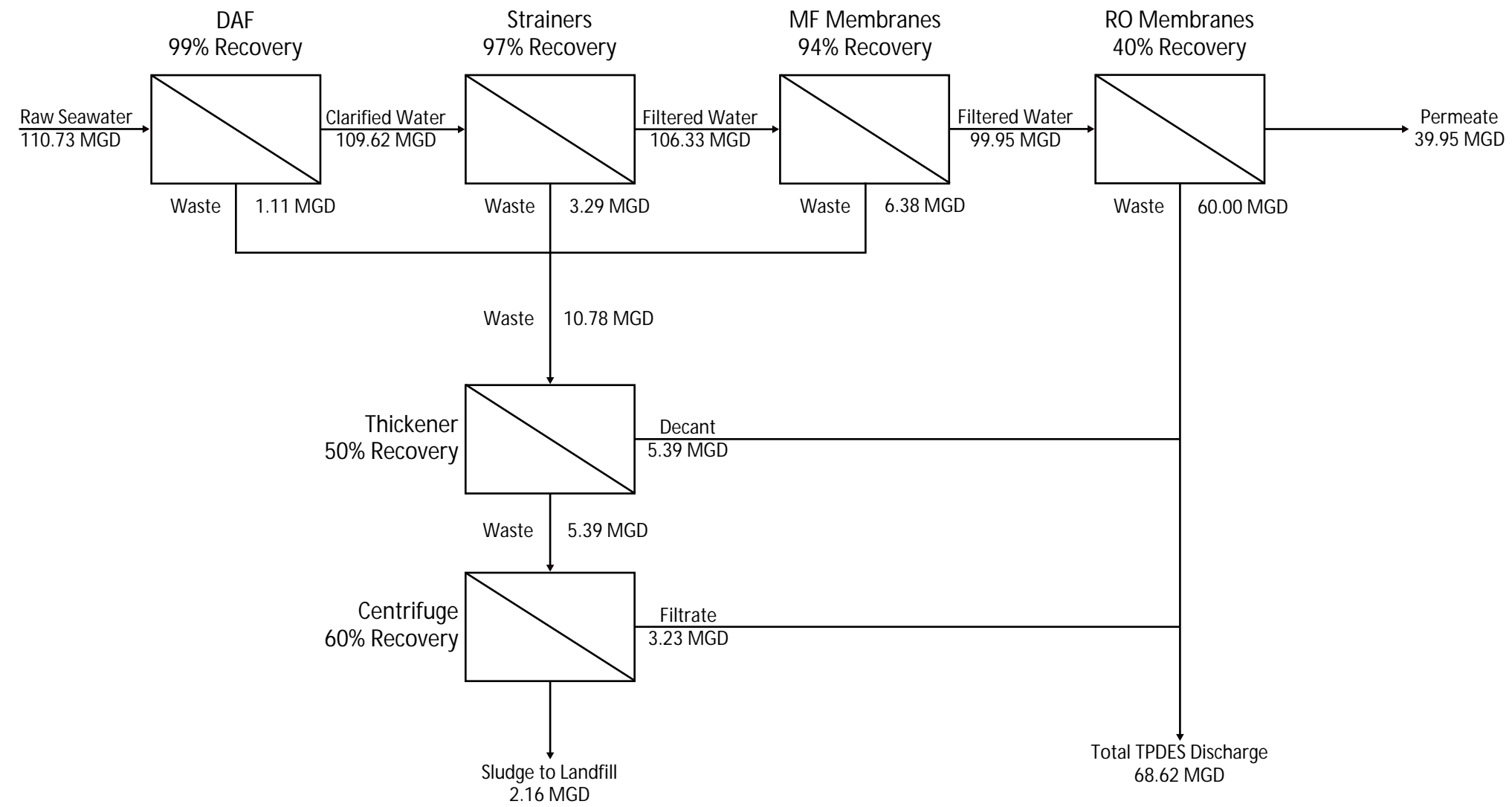
**TPDES Discharge :**

RO Brine discharge	45.00 MGD
Clar-DAF	0.83 MGD
Strainer	2.47 MGD
MF Backwash	4.79 MGD
Sub-total	8.09 MGD
Thickener Decant	4.04 MGD
Centrifuge filtrate	2.43 MGD
<b>Total Discharge: RO Brine + Thickener/Centrifuge Return</b>	<b>51.47 MGD</b>

**Maximum Daily Discharge 120.00%**

<b>Maximum Daily Discharge</b>	<b>61.76 MGD</b>
Sludge Disposal to landfill	1.62 MGD

# City of Corpus Christi Proposed La Quinta Channel Desalination Plant Process Flow Diagram - Ultimate Phase



**City of Corpus Christi**  
**Proposed La Quinta Channel Desalination Plant**  
**Water Balance Sheet - Ultimate 69 MGD Plant**

Date of Revision:

11/26/2019

**Design Process**

Manufacturer or approved equal	Design paramters	Recovery
Submerged fine self-cleaning screen	Johnson 2.0 mm openings; velocity < 0.5 fps	100%
Rapid Mixer	Lightening G value 1,000/sec	100%
Clarifier-Dissolved Air Flotation	Xylem 10 gpm/sf	99%
Strainer self-cleaning	Arkal Filtration 300 micron discs	97%
Microfiltration membranes	PALL, inc. Microza	94%
Cartridge Filters	Lenntech 5 microns	100%
Reverse Osmosis	Dow Film-Tec Seawater 8 gfd	40%
Carbon dioxide addition	pH < 6.5	100%
Calcite filters (alkalinity)	pH > 8.3	100%
Chlorination / ammonia	Chloramine < 4 mg/l	100%
Clawwell Storage		
High Service Pump Station		
Solids Thickener		
Centrifuge		
Solids to landfill ( daily cover)		

Water Balance:		110.78 MGD
Clar-DAF sludge	99.00%	109.67 MGD
Strainer backwash	97.00%	106.38 MGD
MF Membranes Backwash	94.00%	100.00 MGD
RO permeate recovery	40.00%	
RO Brine reject	60.00%	
Decant (supernatant) thickner	50.00%	
Centrifuge filtrate return	60.00%	

**Raw Water Total Feed:**

<b>Permeate</b>	<b>40 MGD</b>
RO Feed Water	100.00 MGD
<b>Total Raw Water Feed</b>	<b>110.78 MGD</b>

**TPDES Discharge :**

RO Brine discharge	60.00 MGD
Clar-DAF	1.11 MGD
Strainer	3.29 MGD
MF Backwash	6.38 MGD
Sub-total	10.78 MGD
Thickener Decant	5.39 MGD
Centrifuge filtrate	3.23 MGD
<b>Total Discharge: RO Brine + Thickener/Centrifuge Return</b>	<b>68.62 MGD</b>

**Maximum Daily Discharge 120.00%**

**Maximum Daily Discharge 82.35 MGD**

Sludge Disposal to landfill 2.16 MGD

November 29, 2021

Mr. Jaspinder Singh  
Water Quality Division (MC-148)  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, TX 78711-3087

Re: Application for Proposed Permit No. WQ0005290000 (EPA I.D. No. TX139891)  
Permit Application Attachment G Update  
Applicant: City of Corpus Christi (CN600131858)  
Site: La Quinta Desalination Plant (RN110940558)

Dear Mr. Singh:

Freese and Nichols, Inc. (FNI), on behalf of the City of Corpus Christi, is providing materials to replace Attachment G of the original application for Wastewater Permit No. WQ0005290000 for the La Quinta Desalination Plant. The updated flow schematics and water balance sheets reflect minor revisions to quantity and quality information regarding sludge produced. The proposed plant flow is not affected as a result of the update to the provided materials.

Please feel free to contact me for additional information as necessary.

Sincerely,

Katie Leatherwood, P.G.  
Freese and Nichols, Inc.

cc: Mr. Esteban Ramos, City of Corpus Christi  
File COR20596

Attachments

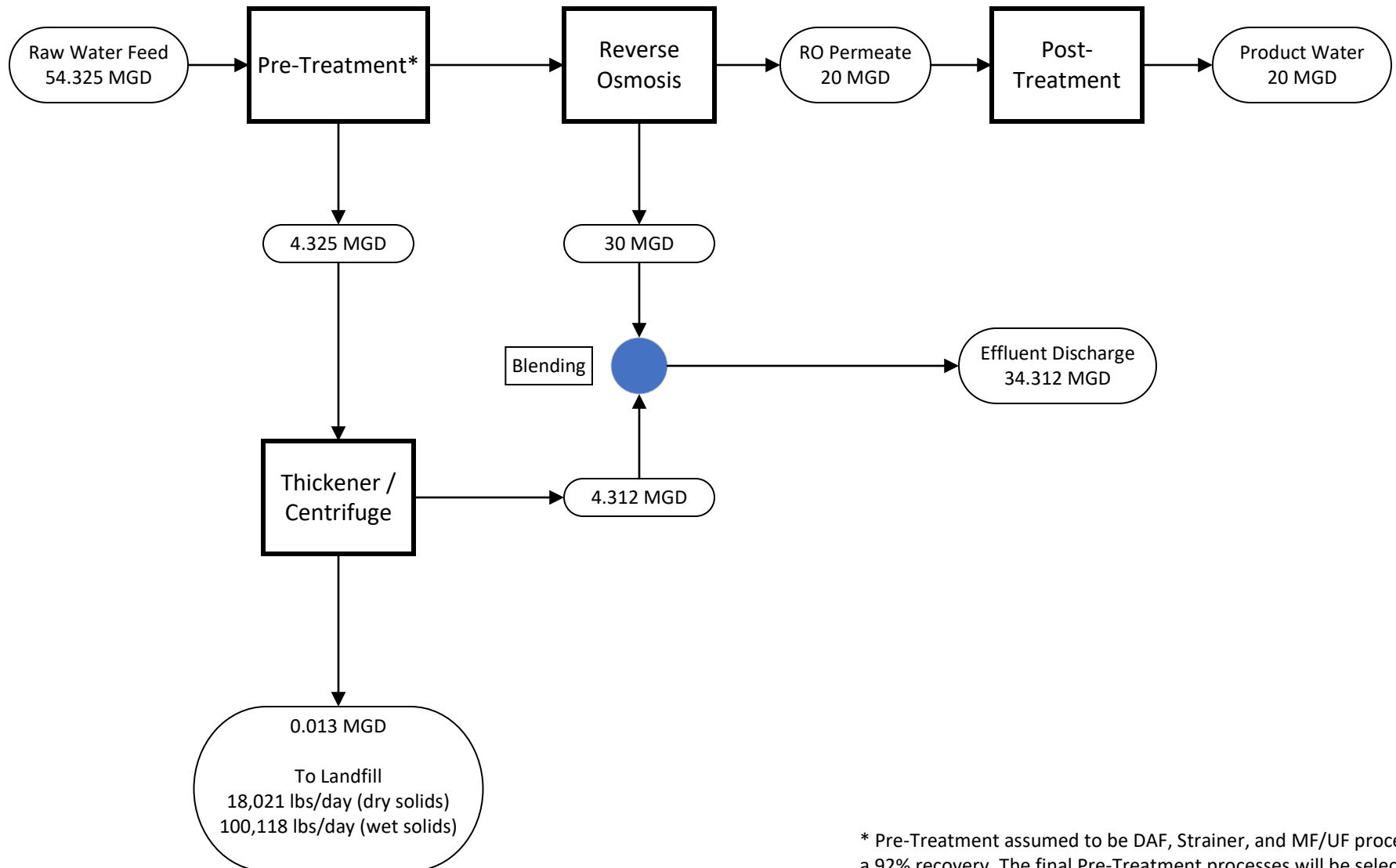


# **Attachment G**

**La Quinta Plant**

**Flow Schematics  
Water Balance Sheets**

**City of Corpus Christi La Quinta Seawater Desalination  
20 MGD Water Production / RO Recovery 40%  
Water Balance Flow Chart**



\* Pre-Treatment assumed to be DAF, Strainer, and MF/UF processes with a 92% recovery. The final Pre-Treatment processes will be selected by the General Contractor to achieve a recovery  $\geq 92\%$

**City of Corpus Christi  
Proposed La Quinta Channel Desalination Plant  
Water Balance Sheet - Initial 20 MGD Plant**

Date of Revision:

11/18/2021

**Design Process**

Manufacturer or approved equal	Design parameters	Recovery
Submerged fine self-cleaning screen	Johnson 2.0 mm openings; velocity < 0.5 fps	100%
Rapid Mixer	Lightening G value 1,000/sec	100%
Clarifier-Dissolved Air Flotation	Xylem 10 gpm/sf	98.00%
Strainer self-cleaning	Arkal Filtration 300 micron discs	98.86%
Microfiltration membranes	PALL, Inc. Microza	95.00%
Cartridge Filters	Lenntech 5 microns	100%
Reverse Osmosis	Dow Film-Tec Seawater 8 gfd	40%
Carbon dioxide addition	pH < 6.5	100%
Calcite filters (alkalinity)	pH > 8.3	100%
Chlorination / ammonia	Chloramine < 4 mg/l	100%
Clearwell Storage		
High Service Pump Station		
Solids Thickener		
Centrifuge		
Solids to landfill ( daily cover)		

**Water Balance:**

	54.32 MGD
Clar-DAF sludge	98.00% 53.24 MGD
Strainer backwash	98.86% 52.63 MGD
MF Membranes Backwash	95.00% 50.00 MGD
RO permeate recovery	40.00%
RO Brine reject	60.00%
Decant (supernatant) thickener	60.00%
Centrifuge filtrate return	99.25%

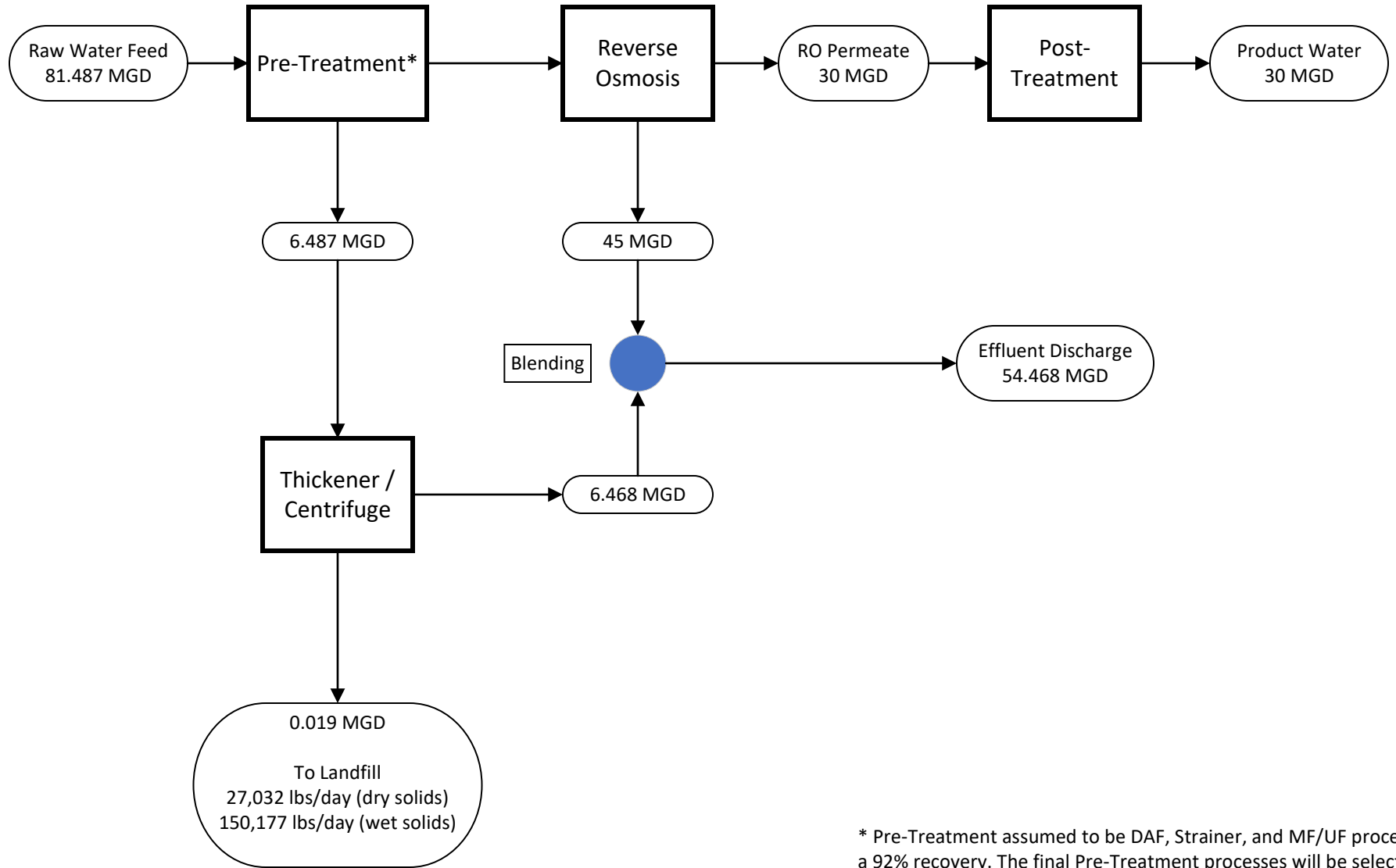
**Raw Water Total Feed:**

<b>Permeate</b>	<b>20 MGD</b>
RO Feed Water	50.00 MGD
<b>Total Raw Water Feed</b>	<b>54.325 MGD</b>
<b>Maximum Daily Raw Water Peaking Factor</b>	<b>120.00%</b>
<b>Maximum Daily Raw Water Total Feed</b>	<b>65.19 MGD</b>

**TPDES Discharge :**

RO Brine discharge	30.00 MGD
Clar-DAF	1.09 MGD
Strainer	0.61 MGD
MF Backwash	2.63 MGD
Sub-total	4.325 MGD
Thickener Decant	2.59 MGD
Centrifuge filtrate	1.72 MGD
Total thickener/centrifuge discharge	4.312 MGD
<b>Total Discharge: RO Brine + Thickener/Centrifuge Return</b>	<b>34.312 MGD</b>
<b>Maximum Daily Discharge</b>	<b>120.00%</b>
<b>Maximum Daily Discharge</b>	<b>41.17 MGD</b>
Sludge Disposal to landfill	0.013 MGD

**City of Corpus Christi La Quinta Seawater Desalination  
30 MGD Water Production / RO Recovery 40%  
Water Balance Flow Chart**



\* Pre-Treatment assumed to be DAF, Strainer, and MF/UF processes with a 92% recovery. The final Pre-Treatment processes will be selected by the General Contractor to achieve a recovery  $\geq 92\%$

**City of Corpus Christi  
Proposed La Quinta Channel Desalination Plant  
Water Balance Sheet - Expanded 30 MGD Plant**

Date of Revision:

11/18/2021

**Design Process**

Manufacturer or approved equal	Design parameters	Recovery
Submerged fine self-cleaning screen	Johnson 2.0 mm openings; velocity < 0.5 fps	100%
Rapid Mixer	Lightening G value 1,000/sec	100%
Clarifier-Dissolved Air Flotation	Xylem 10 gpm/sf	98.00%
Strainer self-cleaning	Arkal Filtration 300 micron discs	98.86%
Microfiltration membranes	PALL, Inc. Microza	95.00%
Cartridge Filters	Lenntech 5 microns	100%
Reverse Osmosis	Dow Film-Tec Seawater 8 gfd	40%
Carbon dioxide addition	pH < 6.5	100%
Calcite filters (alkalinity)	pH > 8.3	100%
Chlorination / ammonia	Chloramine < 4 mg/l	100%
Clearwell Storage		
High Service Pump Station		
Solids Thickener		
Centrifuge		
Solids to landfill ( daily cover)		

**Water Balance:**

	81.49 MGD
Clar-DAF sludge	98.00% 79.86 MGD
Strainer backwash	98.86% 78.95 MGD
MF Membranes Backwash	95.00% 75.00 MGD
RO permeate recovery	40.00%
RO Brine reject	60.00%
Decant (supernatant) thickener	60.00%
Centrifuge filtrate return	99.25%

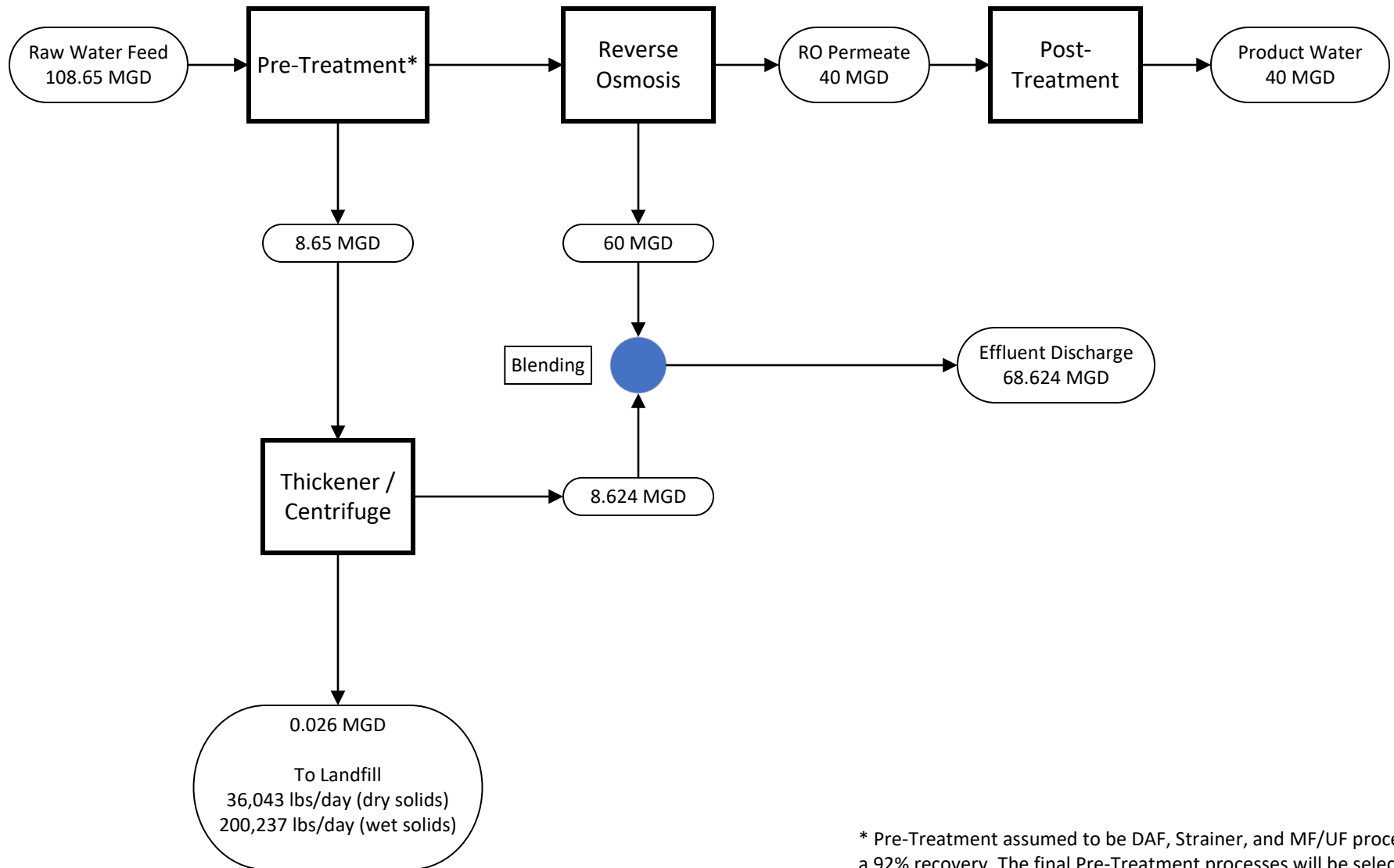
**Raw Water Total Feed:**

<b>Permeate</b>	<b>30 MGD</b>
RO Feed Water	75.00 MGD
<b>Total Raw Water Feed</b>	<b>81.487 MGD</b>
<b>Maximum Daily Raw Water Peaking Factor</b>	<b>120.00%</b>
<b>Maximum Daily Raw Water Total Feed</b>	<b>97.78 MGD</b>

**TPDES Discharge :**

RO Brine discharge	45.00 MGD
Clar-DAF	1.63 MGD
Strainer	0.91 MGD
MF Backwash	3.95 MGD
Sub-total	6.487 MGD
Thickener Decant	3.8925 MGD
Centrifuge filtrate	2.5755 MGD
Total thickener/centrifuge discharge	6.468 MGD
<b>Total Discharge: RO Brine + Thickener/Centrifuge Return</b>	<b>51.468 MGD</b>
<b>Maximum Daily Discharge</b>	<b>120.00%</b>
<b>Maximum Daily Discharge</b>	<b>61.76 MGD</b>
Sludge Disposal to landfill	0.019 MGD

**City of Corpus Christi La Quinta Seawater Desalination  
40 MGD Water Production / RO Recovery 40%  
Water Balance Flow Chart**



\* Pre-Treatment assumed to be DAF, Strainer, and MF/UF processes with a 92% recovery. The final Pre-Treatment processes will be selected by the General Contractor to achieve a recovery  $\geq 92\%$

**City of Corpus Christi  
Proposed La Quinta Channel Desalination Plant  
Water Balance Sheet - Ultimate 40 MGD Plant**

Date of Revision:

11/18/2021

**Design Process**

Manufacturer or approved equal	Design parameters	Recovery
Johnson	2.0 mm openings; velocity < 0.5 fps	100%
Lightening	G value 1,000/sec	100%
Xylem	10 gpm/sf	98.00%
Arkal Filtration	300 micron discs	98.86%
PALL, Inc.	Microza	95.00%
Lenntech	5 microns	100%
Dow Film-Tec Seawater	8 gfd	40%
	pH < 6.5	100%
	pH > 8.3	100%
	Chloramine < 4 mg/l	100%
Clearwell Storage		
High Service Pump Station		
Solids Thickener		
Centrifuge		
Solids to landfill ( daily cover)		

**Water Balance:**

	108.65 MGD
Clar-DAF sludge	98.00% 106.48 MGD
Strainer backwash	98.86% 105.26 MGD
MF Membranes Backwash	95.00% 100.00 MGD
RO permeate recovery	40.00%
RO Brine reject	60.00%
Decant (supernatant) thickener	60.00%
Centrifuge filtrate return	99.25%

**Raw Water Total Feed:**

<b>Permeate</b>	<b>40 MGD</b>
RO Feed Water	100.00 MGD
<b>Total Raw Water Feed</b>	<b>108.650 MGD</b>
<b>Maximum Daily Raw Water Peaking Factor</b>	<b>120.00%</b>
<b>Maximum Daily Raw Water Total Feed</b>	<b>130.38 MGD</b>

**TPDES Discharge :**

RO Brine discharge	60.00 MGD
Clar-DAF	2.17 MGD
Strainer	1.21 MGD
MF Backwash	5.26 MGD
Sub-total	8.650 MGD
Thickener Decant	5.19 MGD
Centrifuge filtrate	3.43 MGD
Total thickener/centrifuge discharge	8.624 MGD
<b>Total Discharge: RO Brine + Thickener/Centrifuge Return</b>	<b>68.624 MGD</b>
<b>Maximum Daily Discharge</b>	<b>120.00%</b>
<b>Maximum Daily Discharge</b>	<b>82.35 MGD</b>
Sludge Disposal to landfill	0.026 MGD

# **Attachment H**

## **Supplemental Information**

Ambient Background Flow Velocity Report

Water Quality Characterization Protocol and Report



**SUBJECT:** Background and Tidal Current Velocity Studies

**DATE:** 1/15/2020

**PROJECT:** City of Corpus Christi Seawater Desalination

## Purpose

Understand ambient water velocities, tidal influence, and hydrodynamics in the Inner Harbor Ship Channel and La Quinta Channel. This will be accomplished by partnering with the Texas Water Development Board (TWDB) to borrow Acoustic Doppler Current Profiler (ADCP) instruments and with land-owners to deploy those instruments in the vicinity of proposed seawater desalination plant outfall locations. Ambient velocity and hydrodynamics data will be incorporated into the concentrate diffusion modeling in order to more appropriately predict concentrate diffusion in the receiving water bodies.

## Instrumentation

SonTek SL 500 Series (side-looker ADCP) (<https://www.sontek.com/sontek-sl-series>). To measure direction and velocity of flow in the Inner Harbor Channel and La Quinta Channel up to 400 feet from the instrument location. Instruments are on loan from the TWDB.

- Weight – 14 pounds
- Mounting dimensions: 14 inches wide by 9 inches high
- External power source required

## Protocol

ADCPs will be deployed in the vicinities of the proposed outfall locations. One instrument will be installed in the La Quinta Channel at a depth of 15 feet and one will be installed in the Inner Harbor Ship Channel at a depth of 21 feet. The instruments will be deployed once and retrieved after 3-6 months of data collection.

The ADCPs will be configured to record data in 10 cells along the instrument's beam. Each cell is approximately 11-meters long. Data points will be logged as averages of current direction and velocity in each cell for 5 minutes out of every 15-minute interval.

## Effort-to-Date

The Freese and Nichols Team performed site assessments of proposed outfall locations on both the Inner Harbor Ship Channel and La Quinta Channel. Prior to ADCP deployment, the Team ran transects with a down-looking ADCP (SonTek RiverSurveyor) to record snapshots of the channel bathymetry and current velocities and directions.

One ADCP was installed in the La Quinta Channel on November 13, 2019. Data were downloaded on December 20, 2019 and provided to Plummer Associates for incorporation into the concentrate diffusion modeling parameters. Modeling is ongoing.

Coordination with the landowner is ongoing for the outfall on the Inner Harbor Ship Channel. The ADCP will likely be installed in February at this location. As data are collected and retrieved from the instrument, they will be incorporated into the concentrate diffusion model for the proposed outfall on the Inner Harbor Ship Channel.

#### Path Forward

After the completion of the ambient velocity study, a summary report will be provided to TCEQ. Data will be incorporated into the modeling for both Inner Harbor and La Quinta Channel concentrate diffusion.

**TO:** Steve Ramos  
**CC:** Dan Grimsbo  
**FROM:** Jason Cocklin, P.E.  
**SUBJECT:** Seawater Desalination Source Water Characterization TM  
**DATE:** August 30, 2019  
**PROJECT:** Seawater Desalination

### Seawater Desalination Source Water Characterization

Duration: 1 year

To characterize seawater that will potentially be used as a raw water source for a proposed seawater desalination facility, Freese and Nichols, Inc. (FNI) developed a year-long sampling plan, with water quality samples to be collected twice monthly, monthly, or quarterly depending on the parameter. The City will contract with a lab to collect samples from two (2) preferred intake locations corresponding to two preferred sites for the proposed desalination facility. Parameters and sampling frequencies are provided in Table 1.

<b>Table 1: Seawater Source Water Characterization Sampling Parameters and Frequencies</b>			
<b>Parameter</b>	<b>Units</b>	<b>MCL</b>	<b>Sampling Frequency</b>
<b>Inorganics 30 TAC 290.104</b>			
Antimony	mg/L	0.006	Monthly
Arsenic	mg/L	0.01	Monthly
Asbestos	mg/L	7 million fibers/liter (longer than 10 µm)	Monthly
Barium	mg/L	2	Monthly
Beryllium	mg/L	0.004	Monthly
Cadmium	mg/L	0.005	Monthly
Chromium	mg/L	0.1	Monthly
Cyanide	mg/L	0.2 (as free Cyanide)	Monthly
Fluoride	mg/L	4	Monthly
Mercury	mg/L	0.002	Monthly
Nitrate	mg/L	10 (as Nitrogen)	Monthly
Nitrite	mg/L	1 (as Nitrogen)	Monthly
Nitrate + Nitrite (Total)	mg/L	10 (as Nitrogen)	Monthly
Perchlorate	mg/L	0.056 (MCL proposed by EPA; currently in comment period)	Monthly

Selenium	mg/L	0.05	Monthly
Thallium	mg/L	0.002	Monthly
<b>Secondary Constituent 30 TAC 290.105</b>			
Aluminum (Total)	mg/L	0.05 to 0.2	Monthly
Chloride	mg/L	300	Monthly
Color (true)	color units	15	Monthly
Copper	mg/L	1.0	Monthly
Corrosivity	Langlier index	Non-Corrosive	Monthly
Fluoride	mg/L	2.0	Monthly
Foaming Agents	mg/L	0.5	Monthly
Hydrogen sulfide	mg/L	0.05	Monthly
Iron (Total)	mg/L	0.3	Monthly
Manganese	mg/L	0.05	Monthly
Odor	TON	3 TON	Monthly
pH	units	> 7.0	Monthly
Silver	mg/L	0.1	Monthly
Sulfate	mg/L	300	Monthly
Total Dissolved Solids	mg/L	1,000	Monthly
Zinc	mg/L	5.0	Monthly
<b>Synthetic Organics 30 TAC 290.107</b>			
Alachlor	mg/L	0.002	Quarterly
Atrazine	mg/L	0.003	Quarterly
Benzopyrene	mg/L	0.0002	Quarterly
Carbofuran	mg/L	0.04	Quarterly
Chlordane	mg/L	0.002	Quarterly
Dalapon	mg/L	0.2	Quarterly
Dibromochloropropane	mg/L	0.0002	Quarterly
Di(2-ethylhexyl)adipate	mg/L	0.4	Quarterly
Di(2-ethylhexyl)phthalate	mg/L	0.006	Quarterly
Dinoseb	mg/L	0.007	Quarterly
Diquat	mg/L	0.02	Quarterly
Endothall	mg/L	0.1	Quarterly
Endrin	mg/L	0.002	Quarterly
Ethylene dibromide	mg/L	0.00005	Quarterly
Glyphosate	mg/L	0.7	Quarterly
Heptachlor	mg/L	0.0004	Quarterly
Heptachlor epoxide	mg/L	0.0002	Quarterly
Hexachlorobenzene	mg/L	0.001	Quarterly
Hexachlorocyclopentadiene	mg/L	0.05	Quarterly

Lindane	mg/L	0.0002	Quarterly
Methoxychlor	mg/L	0.04	Quarterly
N-Nitrosodimethylamine (NDMA)	mg/L	Emerging contaminant	Quarterly
Oxamyl (Vydate)	mg/L	0.2	Quarterly
Pentachlorophenol	mg/L	0.001	Quarterly
Picloram	mg/L	0.5	Quarterly
Polychlorinated biphenyls (PCBs)	mg/L	0.0005	Quarterly
Simazine	mg/L	0.004	Quarterly
Toxaphene	mg/L	0.003	Quarterly
2,3,7,8-TCDD (Dioxin)	mg/L	$3 \times 10^{-8}$	Quarterly
2,4,5-TP	mg/L	0.05	Quarterly
2,4-D	mg/L	0.07	Quarterly
<b>Volatile Organics 30 TAC 290.107</b>			
1,1-Dichloroethylene	mg/L	0.007	Quarterly
1,1,1-Trichloroethane	mg/L	0.2	Quarterly
1,1,2-Trichloroethane	mg/L	0.005	Quarterly
1,2-Dichloroethane	mg/L	0.005	Quarterly
1,2-Dichloropropane	mg/L	0.005	Quarterly
1,2,4-Trichlorobenzene	mg/L	0.07	Quarterly
Benzene	mg/L	0.005	Quarterly
Carbon tetrachloride	mg/L	0.005	Quarterly
cis-1,2-Dichloroethylene	mg/L	0.07	Quarterly
Dichloromethane	mg/L	0.005	Quarterly
Ethylbenzene	mg/L	0.7	Quarterly
Monochlorobenzene	mg/L	0.1	Quarterly
o-Dichlorobenzene	mg/L	0.6	Quarterly
para-Dichlorobenzene	mg/L	0.075	Quarterly
Styrene	mg/L	0.1	Quarterly
Tetrachloroethylene	mg/L	0.005	Quarterly
Toluene	mg/L	1	Quarterly
trans-1,2-Dichloroethylene	mg/L	0.1	Quarterly
Trichloroethylene	mg/L	0.005	Quarterly
Vinyl chloride	mg/L	0.002	Quarterly
Xylenes (total)	mg/L	10	Quarterly
<b>Radionuclide 30 TAC 290.108</b>			
Gross Alpha Particle Activity	pCi/L	15	Quarterly
Beta Particle and Photon	pCi/L	40 CFR §141.66(d)	Quarterly

Radioactivity			
Radium-226	pCi/L	*	Quarterly
Radium-228	pCi/L	*	Quarterly
Combined Radium 226 + 228	pCi/L	*sum ≤ 5	Quarterly
Uranium	µg/L	30	Quarterly
Radon-222	pCi/L	300 MCL or 4,000 AMCL	Quarterly
<b>Microbial 30 TAC 290.109</b>			
Coliform, Fecal	MPN/100 mL		Twice monthly
Coliform, Total	MPN/100 mL		Twice monthly
<i>Cryptosporidium</i>	oocysts/sample volume		Twice monthly
Enterococci	CFU/100 mL	35 CFU/100 mL	Twice monthly
<i>Giardia</i>	cysts/sample volume		Twice monthly
Heterotrophic Plate Count	CFU/mL		Twice monthly
<b>Plankton Community</b>			
Comb Jellies and other large plankton			Twice monthly
<b>Membrane Parameters</b>			
Algae Count	count/mL		Monthly
Alkalinity, Total as CaCO <sub>3</sub>	mg/L		Monthly
Aluminum (Dissolved)	mg/l		Monthly
Ammonia (as N)	mg/L		Monthly
Ammonium (NH <sub>4</sub> )	mg/L		Monthly
Bicarbonate	mg/L		Monthly
Boron	mg/L	2.4 Recommended by World Health Organization	Monthly
Bromide	mg/L		Monthly
Calcium	mg/L		Monthly
Carbon Dioxide	mg/L		Monthly
Cesium	mg/L		Monthly
Conductivity	µmhos/cm		Monthly
Dissolved Organic Carbon	mg/L		Monthly
Dissolved Oxygen	mg/L		Monthly
Hardness, Total as CaCO <sub>3</sub>	mg/L		Monthly
Iron (Dissolved)	mg/l		Monthly
Lead	mg/L	0.015 Action Level	Monthly
Magnesium	mg/L		Monthly
Oil and Grease	mg/L		Monthly
Oxidation Reduction Potential (ORP)	mV		Monthly

Phosphorus, Total	mg/L		Monthly
Potassium	mg/L		Monthly
Salinity (Field)			Monthly
Silica, Total (Colloidal)	mg/L		Monthly
Silica, Reactive			Monthly
Silica, Dissolved	mg/L		Monthly
Silicon, Total	mg/L		Monthly
Silt Density Index			Monthly
Sodium	mg/L	EPA is currently listing sodium on their Candidate Contaminant List to be regulated. The World Health Organization recommends a threshold of 200 mg/L for sodium.	Monthly
Strontium	mg/L		Monthly
Temperature	°F	< 90° F	Monthly
Tin	mg/L		Monthly
Total Petroleum Hydrocarbon (TPH)	mg/L	5	Monthly
Total Organic Carbon	mg/L	Reduction 30 TAC 290.112 (b)(1)	Monthly
Total Suspended Solids	mg/L		Monthly
Turbidity	NTU	0.5 combined; 0.3 individual can never exceed 5 NTU	Twice monthly, to coincide with microbial testing
UV254	nm wavelength		Monthly

# Seawater Desalination Regulated Water Quality Sampling Schedule

Tentative Dates	Sampling Event			Date Sampled
	Half-Monthly	Monthly	Quarterly	
	HM-1	M-1	Q-1	August 29, 2019
	HM-2			September 13, 2019
	HM-3	M-2		October 2, 2019
	HM-4			October 17, 2019
	HM-5	M-3		November 4, 2019
	HM-6			November 19, 2019
	HM-7	M-4	Q-2	December 9, 2019
	HM-8			6 Jan, 2020
20-24 Jan, 2020	HM-9	M-5		
3-7 Feb, 2020	HM-10			
17-21 Feb, 2020	HM-11	M-6		
2-6 Mar, 2020	HM-12			
16-20 Mar, 2020	HM-13	M-7	Q-3	
30 Mar - 3 Apr, 2020	HM-14			
13-17 Apr, 2020	HM-15	M-8		
27-30 Apr, 2020	HM-16			
11-15 May, 2020	HM-17	M-9		
25-29 May, 2020	HM-18			
8-12 Jun, 2020	HM-19	M-10	Q-4	
22-26 Jun, 2020	HM-20			
6-10 Jul, 2020	HM-21	M-11		
20-24 Jul, 2020	HM-22			
3-7 Aug, 2020	HM-23	M-12		
17-21 Aug, 2020	HM-24			