



**State Water Implementation  
Fund for Texas**

## Abridged Application

Due by midnight on February 1, 2022

Submit via Email: [SWIFT@twdb.texas.gov](mailto:SWIFT@twdb.texas.gov)

Apply Online: <https://ola.twdb.texas.gov>

By submitting this abridged application, you understand and confirm that the information provided is true and correct to the best of your knowledge and further understand that the failure to submit a complete abridged application by the stated deadlines, or to respond in a timely manner to additional requests for information, may result in the withdrawal of the abridged application without review.

### GENERAL INFORMATION

Entity Name	County	Regional Water Planning Area
Port of Corpus Christi Authority of Nueces County, Texas	Nueces	N - Coastal Bend

<b>Contact</b> Who should TWDB contact with questions during the review of this submission?	<b>Name</b>	Kent Britton
	<b>Title</b>	Chief Financial Officer
	<b>Phone</b>	361-885-6114
	<b>Email</b>	Kbritton@pocca.com

### PROJECT DESCRIPTION

Project Name As it appears in the 2022 State Water Plan		Seawater Desalination	
Where can the project be found in the 2021 <u>Regional</u> Water Plan?  TWDB Staff will utilize information from both the State and Regional water plans to identify and review the project.	The project is described on page #:	5D.10-33 to 5D.10-38	
	The capital cost is listed on page #:	5D.10-37	
Phase(s) Applied For		<input checked="" type="checkbox"/> Planning <input type="checkbox"/> Acquisition <input checked="" type="checkbox"/> Design <input checked="" type="checkbox"/> Construction	
Population Served When Fully Operational		379,509	

## DESCRIPTION OF PROPOSED PROJECT COMPONENTS

Please be sure this description includes all major project components and clearly states what the project seeks to accomplish. A high level of detail is not necessary at this stage—such information is collected later in the application process—but the description should make clear that the proposed work is the same as identified in the regional water plan.

Port of Corpus Christi proposes to construct a desalination plant at the Harbor Island site near Corpus Christi, Texas. The site is located along the Corpus Christi Ship Channel near Port Aransas. This facility is expected to produce up to 50 MGD of product water with an anticipated discharge flow of 96 MGD based on 40% recovery of permeate water during reverse osmosis (RO) processing. The desalination facility will utilize RO to produce water. The plant intake will consist of seawater pumped from the Gulf of Mexico. The proposed diffuser from this facility will discharge into the Corpus Christi Ship Channel.

Pre-treatment will include removing sediment in the form of total suspended solids (TSS). The plant will use several clarification and filtration pretreatment processes for this purpose. The final treatment step will be membrane desalination using Reverse Osmosis. The low TDS permeate will then be treated to reduce corrosiveness, chlorinated, and distributed for potable water use. The suspended solids will be concentrated into a dried sludge for offsite disposal.

### **Proposed Pre-Treatment and Treatment Unit Processes**

The following unit processes will be utilized in the desalination facility:

- Intake screens to remove large particulate from seawater
- Intake clarification with chemical coagulation to remove algae and suspended solids
- Strainers to remove fine debris
- Ultrafiltration to remove fine TSS
- Reverse Osmosis to remove TDS
- Calcite filters to add alkalinity to the permeate to reduce its corrosiveness
- Chlorination
- Distribution pumping
- Energy recovery
- Discharge of the membrane brine or reject under a TPDES permit
- Thickening of the clarifier underflow
- Consolidation of the ultrafiltration membrane backwash solids with thickened clarifier underflow
- Dewatering of consolidated sludge streams
- Discharge of the thickener supernatant and dewatering filtrate under a TPDES permit

### **Distribution System**

Approximately 22 miles of pipeline (42-inch) will be used to deliver water to industrial customers in San Patricio County and 2 miles is estimated for delivery to industrial customers in Nueces County. Additionally, this includes a 26.3 MGD primary pump station.

<b>Emergency</b> Select all that apply	<input type="checkbox"/> Applicant/entity's water supply will last less than 180 days. <input type="checkbox"/> Applicant has received or applied for Federal emergency funding. <input checked="" type="checkbox"/> None of the above.
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Agricultural Efficiency Project?		
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>If "Yes," agricultural efficiency improvement achieved by implementing the project:</b>  Please provide an attachment showing the basis for your calculation.	<input type="checkbox"/> <1%	<input type="checkbox"/> 10%-13.9%
	<input type="checkbox"/> 1%-1.9%	<input type="checkbox"/> 14%-17.9%
	<input type="checkbox"/> 2%-5.9%	<input type="checkbox"/> ≥18%
	<input type="checkbox"/> 6%-9.9%	

Household Cost Factor			
Household Cost Factor calculated by dividing the service area's average residential water bill by its annual median household income. For regional projects, these should represent the combined service areas of all participating entities.			
Estimated average annual residential water bill:	\$352	Annual Median Household Income:	\$52,271

The proposed project addresses:	<input checked="" type="checkbox"/> Conservation <input type="checkbox"/> Water Loss <input type="checkbox"/> N/A
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Volume of Water Produced/Conserved (in Acre/Feet per Year)					
Please provide the total water supply project yield of the entire project on an annual basis in acre-feet per year, for each planning decade. A water volume in the 2040 decade, for example, is assumed to come online in or prior to the year 2040 but is a snapshot annual volume for that decade; it is not a sum of the annual use in the decade.					
2020	2030	2040	2050	2060	2070
0	56,044	56,044	56,044	56,044	56,044

<b>Readiness to Proceed</b> Select all that apply	<input type="checkbox"/> Preliminary planning or design work (30% of total project) has been completed or is not required.
	<input type="checkbox"/> Applicant is prepared to begin implementation or construction within 18 months of application deadline.
	<input type="checkbox"/> Applicant has acquired all water rights associated with the proposed project, or none will be required.

## ESTIMATED COSTS

Low-interest Loan	\$
Deferred Loan	\$ 115,000,000
Board Participation	\$ 380,000,000
Local Contribution	\$ 5,000,000
Other:	\$
<b>Total Estimated Project Costs</b>	<b>\$ 500,000,000</b>

<b>Anticipated Commitments</b> Please attach proposed schedule for multi-year commitments.	<input type="checkbox"/> One-Time Commitment <input checked="" type="checkbox"/> Multi-Year Commitments
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<b>Anticipated Debt Service Structure</b> Please attach explanation if requesting non-level debt service.	<input type="checkbox"/> Level <input checked="" type="checkbox"/> Other Request
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## LIST OF WATER SYSTEMS SERVED BY THE PROPOSED PROJECT

[illegible]

## ATTACHMENTS CHECKLIST

- ☐ Methodology for determining agricultural conservation savings (if applicable)
- ☒ Proposed multi-year commitment schedule (if applicable)
- ☐ Proposed debt service structure (if applicable)

## SUBMITTAL

<b>Instructions</b>	To submit your Abridged Application via email, please send this form to <a href="mailto:SWIFT@twdb.texas.gov">SWIFT@twdb.texas.gov</a> .
	To submit your Abridged Application using TWDB's Online Loan Application tool, please visit <a href="https://ola.twdb.texas.gov">https://ola.twdb.texas.gov</a> .
<b>TWDB Contact Information</b>	If you would like to schedule a meeting to discuss your project with TWDB staff, please contact the Regional Project Development Team for your region: <a href="http://www.twdb.texas.gov/financial/programs/swift/regional_project_teams.asp">http://www.twdb.texas.gov/financial/programs/swift/regional_project_teams.asp</a> .
	For general SWIFT program inquiries, please email <a href="mailto:SWIFT@twdb.texas.gov">SWIFT@twdb.texas.gov</a> .