Abridged Application

Due by midnight on February 1, 2022
Submit via Email: 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

Contact Who should TWDB contact with questions during the review of this submission?	**Name**	Kent Britton
	Title	Chief Financial Officer
	Phone	361-885-6114
	Email	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 Regional 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	☒ Planning ☐ Acquisition ☒ Design ☒ 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.

Emergency Select all that apply	☐ Applicant/entity's water supply will last less than 180 days. ☐ Applicant has received or applied for Federal emergency funding. ☒ None of the above.

Agricultural Efficiency Project?		
☐ Yes ☒ No		
If "Yes," agricultural efficiency improvement achieved by implementing the project: Please provide an attachment showing the basis for your calculation.	☐ <1% ☐ 1%-1.9% ☐ 2%-5.9% ☐ 6%-9.9%	☐ 10%-13.9% ☐ 14%-17.9% ☐ ≥18%

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:	☒ Conservation	☐ Water Loss	☐ N/A

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

Readiness to Proceed Select all that apply	☐ Preliminary planning or design work (30% of total project) has been completed or is not required. ☐ Applicant is prepared to begin implementation or construction within 18 months of application deadline. ☐ 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:		$
Total Estimated Project Costs		$ 500,000,000

Anticipated Commitments Please attach proposed schedule for multi-year commitments.	☐ One-Time Commitment	☒ Multi-Year Commitments

Anticipated Debt Service Structure Please attach explanation if requesting non-level debt service.	☐ Level	☒ Other Request

LIST OF WATER SYSTEMS SERVED BY THE PROPOSED PROJECT

NAME	PWS ID
City of Corpus Christi	10554
Nueces County Water District #4	10571

ATTACHMENTS CHECKLIST

☐ Methodology for determining agricultural conservation savings (if applicable)

☒ Proposed multi-year commitment schedule (if applicable)

☐ Proposed debt service structure (if applicable)

SUBMITTAL

Instructions	To submit your Abridged Application via email, please send this form to SWIFT@twdb.texas.gov.
	To submit your Abridged Application using TWDB's Online Loan Application tool, please visit https://ola.twdb.texas.gov.

TWDB Contact Information	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: http://www.twdb.texas.gov/financial/programs/swift/regional_project_teams.asp.
	For general SWIFT program inquiries, please email SWIFT@twdb.texas.gov.