

Texas Water

Development Board

OLA ID 1307539

PIF No. 13263

Entity Name: Brazosport WA

Project Name: Dow Reservoir and Pump
Station Expansion

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Funding Type SWIFT

Contact Information

County Brazoria

Entity Contact Information	Engineering Firm Contact Information
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DeptName	DeptName
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	Firm Name Jacobs Engineering Group Inc.
Make Changes N	Make Changes Y
No Entity TxWISE Id	No Engineering TxWISE Id

Service Area

Population Served 172,192

Project Description

Project Name Dow Reservoir and Pump Station Expansion

Where can Project be found in the most recent Regional Water Plan?

The project is described on page #: 879

The capital cost is listed on page #: 881

Region H - REGION H

Phase(s) Applied For

Planning N

Acquisition N

Design Y

Construction N

Emergency

Applicant/entity's water supply will last less than 180 days. Y

Applicant has received or applied for Federal emergency funding. N

None of the above. N

Agricultural Efficiency Project? N

Estimated average annual residential water bill \$1

Annual Median Household Income \$1

Project will produce water Y

Project will conserve water N

Please provide the volume of water anticipated to be produced or conserved by the project per decade:

2020	2030	2040	2050	2060	2070
84000	84000	84000	84000	84000	84000

Project will address water loss N

Description of Proposed Project Components The Brazosport Water Authority (BWA) is a wholesale water provider that provides treated drinking water to cities, unincorporated portions of Brazoria and Fort Bend Counties, The Dow Chemical Company (Dow) and other industries, and 2 Texas Department of Criminal Justice facilities. To increase reliability of the raw water supply for these municipal, industrial and institutional customers, BWA is proposing to construct additional surface water storage in an off-channel reservoir.

The proposed Dow Reservoir and Pump Station Expansion Project (included in Region H Regional Water Plan), now known as the Harris Expansion Project (Project), would provide additional water storage capacity by constructing an off-channel (upland) reservoir and associated infrastructure (e.g., pump station) located immediately north of the existing Harris Reservoir site in Brazoria County. The off-channel reservoir would include an approximately 2,000-acre impoundment with a nominal storage capacity of 50,000 acre-feet providing an annual yield of approximately 84,000 acre-feet, an intake and pump station to divert Dow's and BWA's existing

surface water rights from the Brazos River, an outlet to Oyster Creek and an emergency spillway. The Project also includes floodplain enhancements in Oyster Creek, stream restoration and temporary construction staging and laydown areas.

The Project facilities are intended to provide a reliable water supply from the Brazos River for BWA's customers and Dow's raw water supply for the Texas Operations in Freeport, Texas during extended periods of low stream flows and/or drought. The proposed off-channel reservoir will be operated in conjunction with the existing Brazoria and Harris reservoirs to supplement the total available storage capacity and to provide additional operational flexibility.

Evaluation Criteria

1. Population: Municipalities served by BWA include Angleton, Brazoria, Brazoria County, Clute, Freeport, Lake Jackson, Oyster Creek, Richwood, and Rosenberg totaling a population of 169,227 (estimated 2020) residents. They also provided service to 2 Texas Department of Criminal Justice units with 1,546-person capacity for the Clemens Unit and 1,419-person capacity for the Wayne Scott Unit for a total population of 172,192.
2. Projects that will serve a diverse urban and rural population: In addition to the industrial and institutional users, five populations served by BWA are urban (e.g., greater than 10,000 population) including Angleton, Clute, Freeport, Lake Jackson and Rosenberg. The remaining four are rural populations as defined in the Texas Administrative Code.
3. Projects which provide regionalization: BWA provides drinking water to eight (8) municipalities and Brazoria County. BWA also provides potable water to Dow and other industries as well as two TDCJ prison units.
4. Projects that meet a high percentage of the water supply needs of the water users to be served calculated from those served and needs that will be met during the first decade the project becomes operational, based on state water plan data: In combination with groundwater desalination, contract with the City of Rosenberg, and this storage facility, it is estimated to be at least 75% of the needs met.
5. Local contribution (funds already invested, cash on hand and/or in-kind services): To date, Dow has already invested approximately \$20.5 million for engineering, land acquisition, environmental studies, permitting, geotechnical investigations and related activities. An additional \$7 million is anticipated to be expended this year to progress permitting, design, and planning. Total project cost (including construction) is estimated at \$400,000,000.
6. Financial capacity of the applicant to repay the financial assistance provided: BWA and Dow will enter into a contractual agreement regarding design, construction and operation of the proposed Project. It is anticipated that the term sheet shall be developed prior to the full application submittal date later in 2020 and a fully executed contract will be provided prior to loan closing.

7. Projects which address an emergency need: A multi-year drought began throughout Texas in 2005 with 2011 being the driest year on record in Texas. By October 2011, 97 percent of the state was in extreme or exceptional drought conditions. During this drought period, flows in the Brazos River were significantly lower than during average conditions. Had such severe drought conditions continued, Brazosport Water Authority may have had to significantly curtail usage for municipal and industrial users that rely on its water supply system for a reliable source of water. During that drought, the Texas Commission on Environmental Quality (TCEQ) required BWA to trigger their drought management plan as water in storage would meet less than 30 days of projected water supply. The Dow Reservoir and Pump Station project, along with the ongoing groundwater desalination project and a water contract with the city of Rosenberg is expected to meet 180 days of water supply to meet emergency needs for BWA and its wholesale customers. In addition to BWA curtailment of municipal supplies, Dow may have had to reduce essential functions at their facility which could have significant economic impacts on the region and the state.

8. Projects which are ready to proceed: The project is currently at the end of the 30% design phase and ready to continue engineering. No additional water rights are required.

9. Entities that have demonstrated water conservation or projects which will achieve water conservation, including preventing the loss of water: As a wholesale water provider, BWA does not track per capita water use. Water loss program and annual audit are not applicable wholesale water providers. BWA Conservation and Drought Management plans are on file with the Texas Water Development Board. Further, BWA requires that their wholesale customers adopt Conservation and Drought Management plans.

Demonstrating their commitment to conservation, Dow has pursued an active conservation program, implementing water-efficiency measures at their facilities resulting in permanent water savings of approximately 20,286 acre-feet per year - an approximate ten percent reduction of their freshwater demand from the Brazoria and Harris reservoirs. The Texas Commission of Environmental Quality recognized Dow with an Environmental Excellence Award for the water-savings achievements (TCEQ, 2013).

10. Priority assigned by the applicable regional water planning group within the project sponsor's primary planning region: In the 2016 Region H prioritization ranked the Dow Reservoir and Pump Station Expansion 135 out of 638 total planned projects.

LIST OF WATER SYSTEMS SERVED BY THE PROPOSED PROJECT

NAME	PWS ID
Brazosport Water Authority	0200497
City of Angleton	0200002
City of Brazoria	0200003
City of Clute	0200004
City of Freeport	0200005
City of Lake Jackson	0200006
City of Richwood	0200035
City of Oyster Creek	0200230
DOW Chemical Company Plant A	0200027
DOW Chemical Company Plant B	0200232
City of Rosenberg	0790003

Readiness to Proceed to Construction

Preliminary planning or design work (30% of total project) has been completed or is not required.

Y

Applicant is prepared to begin implementation or construction within 18 months of application deadline. N

Applicant has acquired all water rights associated with the proposed project, or none will be required. Y

Estimated Costs

TWDB Requested Amount

Low-Interest Loan Amount

Deferred Loan Amount \$15000000.00

Board Participation Amount

Local Contribution Amount \$27500000.00

Other Amount

Other Desc

Total Estimated Project Costs \$42500000.00

Anticipated Debt Service for 2018 Loan Closing is anticipated to be: LEVEL

Submittal

I, Susan Butler, as the designated authorized representative of the Brazosport WA, hereby approve and authorize the submission of this project information form to the Texas Water Development Board. I certify that all information contained herein is true and correct to the best of my knowledge. I understand the failure to submit a complete project information form by the stated deadlines may result in the withdrawal of the form without review.

Submitted by Susan Butler

Telephone Number (210) 422-8958

Submitted date 2020-02-03 12:08:25.15