



## PROJECT FUNDING REQUEST

**BOARD DATE:** June 12, 2024

**Team Manager:** Nancy Richards

### ACTION REQUESTED

Consider approving by resolution a request from the Brazosport Water Supply Corporation (Brazoria County) for \$2,500,000 in financing from the Texas Water Development Fund for planning of a reservoir expansion project.

### STAFF RECOMMENDATION

☒ Approve ☐ No Action

### BACKGROUND

The Brazosport Water Supply Corporation (Corporation) was created in October 2022 for the purpose of providing water supply service to one or more political subdivisions which service municipalities and private corporations. The Corporation is to be operated for the benefit of the Brazosport Water Authority (BWA) and The Dow Chemical Company (Dow). Membership of the Corporation's board of directors consists of five members: three members from BWA and two from Dow.

### PROJECT NEED AND DESCRIPTION

The Brazosport Water Authority (BWA), a wholesale water provider, and The Dow Chemical Company (Dow) are seeking to mitigate extended drought conditions and increase the reliability of the raw water supply in Brazoria County. The Brazosport Water Supply Corporation (Corporation) was incorporated to expand the Dow Harris Reservoir and Pump Station. The Corporation will store and supply water to BWA and Dow's Texas operations site in Freeport. BWA and Dow currently use the Brazoria and Harris Reservoirs, both operated by Dow, with an approximate combined storage capacity of 27,000 acre-feet of surface water primarily drawn from the Brazos River. The project is being developed to increase the total river water pumping and storage capacity available for use by BWA and its customers, Dow, and other industrial users. Additional storage capacity will provide more flexibility in managing surface water resources and increase drought resilience during conditions when pumping from the Brazos River may be limited or curtailed. BWA and Dow seek to increase the river water pumping and storage capacity to maximize the utility and reliability of existing water rights, water supplies, and infrastructure. The proposed reservoir will provide six months of total storage available through the two existing reservoirs and the proposed reservoir to help mitigate extended drought conditions and increase the reliability of the regional water supply.

The proposed Dow Reservoir and Pump Station Expansion Project, now known as the Harris Expansion Project, would provide additional water storage capacity by constructing an off-channel reservoir and associated infrastructure, including a 150,000 gallons per minute pumping station, located immediately north of the existing Harris Reservoir site in

<b>COMMITMENT PERIOD:</b> THREE (3) MONTHS TO EXPIRE SEPTEMBER 30, 2024
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Brazoria County. The off-channel reservoir will include an approximately 2,000-acre impoundment with a storage capacity of 50,000 acre-feet. The Corporation agrees to allocate the reservoir storage capacity in the following proportional amounts: 15 percent BWA and 85 percent Dow. This project will almost triple the total storage capacity available. Funds will be used for Pre-Construction Planning, including on-boarding a Construction Manager at Risk (CMAR) contractor, Owner's Advisors, and engineer of record. The Corporation has submitted a SWIFT application for additional planning, acquisition, design, and construction of the full reservoir project.

#### **PROJECT SCHEDULE**

<b>Task</b>	<b>Schedule Date</b>
Closing	August 15, 2024
Engineering Feasibility Report Completion (End of Planning Phase)	September 15, 2024
Design Phase Completion	November 15, 2024
Start of Construction	February 1, 2025
Construction Completion	May 31, 2028

#### **KEY ISSUES**

- The US Army Corps of Engineers issued the Record of Decision for this overall project in November 2023.
- The Corporation is requesting bond proceeds to include a reserve fund in the DFund request. The reserve fund will be based on maximum annual debt service payments and replenished over a 12-month period, if needed.
- Dow owns the existing Harris and Brazoria Reservoirs located in Brazoria County. The Corporation will own the Harris Expansion reservoir. Per the operating services agreement, Dow will operate the reservoir, as it currently does with the Harris and Brazoria Reservoirs.
- Funds will be used for Pre-Construction Planning. The Corporation submitted a SWIFT application for additional planning, acquisition, design, and construction of the full reservoir project on May 13, 2024. The financial analysis includes the potential issuance of \$750 million in 2024 SWIFT funds.

#### **LEGAL/SPECIAL CONDITIONS**

- Conversion or conveyance

#### **Attachments:**

1. Financial Review
2. Project Budget
3. Resolution (24- )
4. Water Conservation Review
5. Location Map

# Financial Review

## Brazosport Water Supply Corporation

Risk Score: Brazosport Water Authority (BWA): 2B  
Dow Chemical Company: 2B

Audit Reviewed: FY 2023

### Key Indicators

Indicator	Dow	BWA	Benchmark
Population Growth, Average Annual 2010-2020	County: 1.74%	County: 1.74%	State: 1.49%
Cash Balance Ratio	0.71%	-3.59%	0-9.99%
Median Household Income as % of State	N.A.%	116%	100%
Days of Cash on Hand (3-year Average)	26 days	480 days	30-149 days
Net Fixed Assets/ Annual Depreciation	8 Years	22 years	12-24 years
Debt Service Coverage Ratio	4.88X	1.82x	1.0x
Debt-to-Operating Revenues	0.33X	9.14X	4.00-5.99x
Unemployment Rate (March 2024)	County:4.30%	County: 4.30%	State: 4.10%
Working Capital Ratio	1.79	11.21	> 1.0

### Key Risk Score Strengths

- Both the BWA's and Dow's working capital ratios meet and exceed the benchmark. BWA and Dow have resources to cover current and short-term liabilities, demonstrating a strong liquidity position.
- BWA has sufficient system revenues to meet the proposed contractual obligation. BWA's system revenues increased approximately 56 percent from 2018 to 2023. BWA's system revenues totaled \$13,299,897 in 2018 and \$20,732,450 in 2023.
- Dow's debt to operating revenues are below the benchmark indicating Dow has the ability to maintain the contractual obligations. In 2023, the Corporation's operating revenues totaled \$44.6 billion and has \$14.7 billion in existing and proposed debt.

### Key Risk Score Concerns

- BWA has a high debt to operating revenues ratio due to the contractual obligations and all outstanding debt is supported by system revenues. BWA reviews water rates annually and implements rates as necessary to maintain debt service coverage.
- BWA's cash balance decreased from \$8,017,958 in 2018 to \$7,272,791 in 2023, primarily due to an increase in capital assets and capital improvements to its water system.
- Dow Chemical Company's cash on hand is below the benchmark. However, the Corporation has other liquidity sources if needed such as investments and committed lines of credit totaling \$9.8 billion. Dow's liquidity sources, including cash and cash equivalents total \$12.8 billion in 2023.
- Dow has sufficient net sales to support the contractual obligations. However, the accuracy of Dow's water rates is uncertain, as are rate increases and frequency. Dow's water revenues account for less than one percent of the total operating revenues. The majority of Dow's operating revenues are made up of other business segments, such as industrial intermediates and infrastructure, packaging and specialty plastics, and performance materials and coatings. All of Dow's net sales revenues will be available to support the contractual obligations.

**PLEDGE**

Legal Pledge Name	Contract Revenues
Type of Pledge	<input type="checkbox"/> Tax <input type="checkbox"/> Revenue <input type="checkbox"/> Tax & Revenue <input checked="" type="checkbox"/> Contract <input type="checkbox"/> Other
Revenue Pledge Level	<input checked="" type="checkbox"/> First <input type="checkbox"/> Second <input type="checkbox"/> Third <input type="checkbox"/> N/A

**RATES AND CHARGES-Brazosport Water Authority**

Average Monthly wholesale Use	Gallons/Month	Avg. Current Rate Per 1,000 Gallons	Projected Rate per 1,000 Gallons
WATER	459,717,500	\$4.24	\$4.24

**RATES AND CHARGES- Dow Chemical Company**

Average Monthly Wholesale Use	Gallons/Month	*Avg. Current Raw Water Rate per 1,000 Gallons	*Avg. Current Treated Water Rate per 1,000 Gallons	*Avg. Projected Raw Water Rate per 1,000 Gallons	*Avg. Projected Treated Water Rate per 1,000 Gallons
WATER	2,762,707,000	\$1.30	\$2.78	\$1.30	\$2.78

\* These are water rate estimates provided by Dow. Dow's raw water rates vary from \$0.48 to \$2.78 per 1,000 Gallons, and treated water rates vary from \$1.07 to \$9.01 per 1,000 Gallons.

**Cost Savings**

Based on a 10-year maturity schedule and current interest rates, the Corporation could save approximately \$111,183 over the life of the financing.

Responsible Authority	Brazosport WSC
Program	WDF
Commitment Number	L1001748
Project Number	21818
List Year	2023
Type of Pledge	Contract Revenue Pledge
Pledge Level (if applicable)	First Lien
Legal Description	\$2,500,000 Brazosport Water Supply Corporation Combined Fee Revenue Bonds (BWSC Reservoir Project), Proposed Taxable Series 2024A
Tax-exempt or Taxable	Taxable
Refinance	No
Outlay Requirement	No
Disbursement Method	Escrow
Outlay Type	Outlay <> Escrow Release
Qualifies as Disadvantaged	No
Financial Managerial & Technical Complete	N/A
Phases Funded	Planning
Pre-Design	No
Project Consistent with State Water Plan	Yes
Water Conservation Plan	Adopted
Overall Risk Score	2B

PROJECT TEAM				
Team Manager	Financial Analyst	Engineering Reviewer	Environmental Reviewer	Attorney
Nancy Richards	Chelsea Duran	Lucia Loera	Britt Paredes	Breann Hunter

ISSUE BEING EVALUATED  
FOR ILLUSTRATION PURPOSES ONLY  
Brazosport Water Supply Corporation

**\$2,500,000 Brazosport Water Supply Corporation Combined Fee Revenue Bonds (BWSC Reservoir Project), Proposed Taxable Series 2024A**

<b>Dated Date:</b>	<b>8/1/2024</b>	<b>Source:</b>	<b>WDF</b>
<b>Delivery Date:</b>	<b>8/1/2024</b>	<b>Rate:</b>	<b>5.35%</b>
<b>First Interest:</b>	<b>2/15/2025</b>	<b>IUP Year:</b>	<b>2023</b>
<b>First Principal:</b>	<b>2/15/2026</b>	<b>Case:</b>	<b>Contract Revenues</b>
<b>Last Principal:</b>	<b>2/15/2035</b>	<b>Admin.Fee:</b>	<b>\$0</b>
<b>Fiscal Year End:</b>	<b>12/31</b>	<b>Admin. Fee Payment Date:</b>	<b>N/A</b>
<b>Required Coverage:</b>	<b>1.0</b>		

<b>*PROJECTED</b>		<b>**CURRENT</b>	<b>\$2,500,000 ISSUE</b>				<b>\$750,000,000 Series 2024-2027</b>		
<b>FISCAL YEAR</b>	<b>NET SYSTEM REVENUES</b>	<b>DEBT SERVICE</b>	<b>PRINCIPAL PAYMENT</b>	<b>INTEREST RATE</b>	<b>INTEREST PAYMENT</b>	<b>TOTAL PAYMENT</b>	<b>TOTAL PAYMENT</b>	<b>TOTAL DEBT SERVICE</b>	<b>COVERAGE</b>
2025	\$3,397,528,427	\$995,050,016	\$0	-	\$138,169	\$138,169	\$0	\$995,188,185	3.41
2026	3,397,528,427	699,678,679	195,000	5.24%	127,888	322,888	-	700,001,567	4.85
2027	3,397,528,427	1,839,923,664	205,000	5.24%	117,408	322,408	-	1,840,246,072	1.85
2028	3,397,528,427	1,210,572,611	220,000	5.25%	106,262	326,262	-	1,210,898,873	2.81
2029	3,397,528,427	1,712,903,265	230,000	5.25%	94,450	324,450	7,080,000	1,720,307,714	1.97
2030	3,397,528,427	1,396,476,749	240,000	5.26%	82,100	322,100	12,410,000	1,409,208,849	2.41
2031	3,397,528,427	480,705,237	255,000	5.28%	69,056	324,056	14,975,000	496,004,293	6.85
2032	3,397,528,427	1,481,466,141	270,000	5.32%	55,142	325,142	17,405,000	1,499,196,283	2.27
2033	3,397,528,427	1,050,376,123	280,000	5.35%	40,470	320,470	18,225,000	1,068,921,593	3.18
2034	3,397,528,427	932,535,759	295,000	5.40%	25,015	320,015	19,090,000	951,945,774	3.57
2035	3,397,528,427	400,205,974	310,000	5.50%	8,525	318,525	20,010,000	420,534,499	8.08
		\$12,199,894,217	\$2,500,000		\$864,485	\$3,364,485	\$109,195,000	\$12,312,453,702	

\* Includes DOW and BWA's Net System Revenues

\*\* Includes DOW and BWA's Current Debt Service

<b>AVERAGE (MATURITY) LIFE</b>	<b>6.46 YEARS</b>
<b>NET INTEREST RATE</b>	<b>5.354%</b>
<b>COST SAVINGS</b>	<b>\$111,183</b>
<b>AVERAGE ANNUAL REQUIREMENT</b>	<b>\$305,862</b>

*Disclaimer: This is a working document and is provided as a courtesy. All information contained herein, including the proposed interest rate, is subject to change upon further review of the TWDB in accordance with 31 Texas Administrative Code Chapters 363, 371, 375, or 384, as applicable. The TWDB does not function as a financial advisor to anyone in connection with this financing. The information contained in this document is used by TWDB staff to analyze the application for financing is illustrative only and does not constitute any guaranty of future rates. The TWDB makes no claim regarding the applicability of the information at closing, at which time actual rates will be set.*



**Project Budget Summary**  
**Brazosport WSC**  
**21818 - Dow Reservoir and Pump Station**  
**Expansion**

Budget Items	TWDB Funds	Total
<b>Basic Engineering Services</b>		
Planning	\$2,081,000	\$2,081,000
<b>Subtotal for Basic Engineering Services</b>	<b>\$2,081,000</b>	<b>\$2,081,000</b>
<b>Fiscal Services</b>		
Bond Counsel	\$100,000	\$100,000
Bond Reserve Fund	\$250,000	\$250,000
Financial Advisor	\$33,125	\$33,125
Fiscal/Legal	\$6,000	\$6,000
Issuance Costs	\$29,875	\$29,875
<b>Subtotal for Fiscal Services</b>	<b>\$419,000</b>	<b>\$419,000</b>
<b>Total</b>	<b>\$2,500,000</b>	<b>\$2,500,000</b>

A RESOLUTION OF THE TEXAS WATER DEVELOPMENT BOARD  
APPROVING AN APPLICATION FOR FINANCIAL ASSISTANCE  
IN THE AMOUNT OF \$2,500,000  
TO BRAZOSPORT WATER SUPPLY CORPORATION  
FROM THE FINANCIAL ASSISTANCE ACCOUNT OF  
THE TEXAS WATER DEVELOPMENT FUND II  
THROUGH THE PROPOSED PURCHASE OF  
\$2,500,000 BRAZOSPORT WATER SUPPLY CORPORATION  
COMBINED FEE REVENUE BONDS (BWSC RESERVOIR PROJECT)  
PROPOSED TAXABLE SERIES 2024A

(24- )

Recitals:

The Brazosport Water Supply Corporation, located in Brazoria County, Texas, Corporation, filed an application for financial assistance in the amount of \$2,500,000 from the Financial Assistance Account of the Texas Water Development Fund II, established by Texas Water Code § 17.959, to finance water system improvements, identified as Project No. 21818.

The Corporation seeks financial assistance from the Texas Water Development Board (TWDB) in the amount of \$2,500,000 through the TWDB's purchase of \$2,500,000 Brazosport Water Supply Corporation Combined Fee Revenue Bonds (BWSC Reservoir Project), Proposed Taxable Series 2024A (together with all authorizing documents (Obligations)), all as is more specifically set forth in the application and in recommendations of the TWDB's staff.

The Corporation has offered a pledge of contract revenue as sufficient security for the repayment of the Obligations.

In accordance with Texas Water Code § 17.124, the TWDB has considered all matters required by law and in particular the following:

1. the needs of the area to be served by the water supply project, the benefit of the water supply project to the area, the relationship of the water supply project to the overall, statewide water needs, and the relationship of the water supply project to the approved regional and state water plans; and
2. the availability of revenue to the Corporation, from all sources, for the ultimate repayment of the cost of the water supply project, including interest.

Findings:

1. The public interest requires state assistance in the water supply project, in accordance with Texas Water Code § 17.125(a)(1).



2. In its opinion the tax or revenue pledged by the Corporation will be sufficient to meet all the Obligations assumed by the Corporation during the succeeding period of not more than 50 years, in accordance with Texas Water Code § 17.125(a)(2).
3. The Corporation has adopted and implemented a water conservation program for the more efficient use of water that will meet reasonably anticipated local needs and conditions and that incorporates practices, techniques or technology prescribed by the Texas Water Code and TWDB's rules.
4. The application and financial assistance requested meet the requirements of Chapter 17, Subchapters D, E, and L, Water Code, and the TWDB's rules set forth in 31 TAC Chapter 363, Subchapter A.

NOW THEREFORE, based on these findings, the TWDB resolves:

A commitment is made by the TWDB to the Brazosport Water Supply Corporation for financial assistance in the amount of \$2,500,000 from the Financial Assistance Account of the Texas Water Development Fund II, to be evidenced by the TWDB's purchase of \$2,500,000 Brazosport Water Supply Corporation Combined Fee Revenue Bonds (BWSC Reservoir Project), Proposed Taxable Series 2024A. This commitment will expire on September 30, 2024.

This commitment is conditioned as follows:

Standard Conditions:

1. This commitment is contingent on a future sale of bonds by the TWDB or on the availability of funds on hand as determined by the TWDB.
2. This commitment is contingent upon the issuance of a written approving opinion of the Attorney General of the State of Texas stating that the Corporation complied with all of the requirements of the laws under which the Obligations were issued; that the Obligations were issued in conformance with the Constitution and laws of the State of Texas; and that the Obligations are valid and binding obligations of the Corporation.
3. This commitment is contingent upon the Corporation's compliance with all applicable laws, rules, policies, and guidance (as these may be amended from time to time to adapt to a change in law, in circumstances, or any other legal requirement), including but not limited to 31 TAC Chapter 363.

4. The Obligations must provide that the Obligations can be called for early redemption only in inverse order of maturity, and on any date beginning on or after the first interest payment date that is 10 years from the dated date of the Obligations, at a redemption price of par, together with accrued interest to the date fixed for redemption.
5. The Obligations must provide that the Corporation, or an obligated person for whom financial or operating data is presented to the TWDB in the application for financial assistance either individually or in combination with other issuers of the Corporation's Obligations or obligated persons, will, at a minimum, covenant to comply with requirements for continuing disclosure on an ongoing basis substantially in the manner required by Securities and Exchange Commission (SEC) in 17 CFR § 240.15c2-12 (Rule 15c2-12) and determined as if the TWDB were a Participating Underwriter within the meaning of such rule, such continuing disclosure undertaking being for the benefit of the TWDB and the beneficial owners of the Corporation's Obligations, if the TWDB sells or otherwise transfers such Obligations, and the beneficial owners of the TWDB's bonds if the Corporation is an obligated person with respect to the bonds under SEC Rule 15c2-12.
6. The Obligations must require the Corporation to use any surplus financial assistance proceeds from the Obligations remaining after completion of a final accounting in a manner approved by the Executive Administrator.
7. The Obligations must provide that the TWDB may exercise all remedies available to it in law or equity, and any provision of the Obligations that restricts or limits the TWDB's full exercise of these remedies will be of no force and effect.
8. Financial assistance proceeds are public funds. Therefore, the Obligations must require that these proceeds be held at a designated state depository institution or other properly chartered and authorized institution in accordance with the Public Funds Investment Act, Government Code, Chapter 2256 and the Public Funds Collateral Act, Government Code, Chapter 2257.
9. Proceeds of this commitment must not be used by the Corporation when sampling, testing, removing, or disposing of contaminated soils or media at the project site. The Obligations must provide that the Corporation is solely responsible for liability resulting from acts or omissions of the Corporation, its employees, contractors, or agents arising from the sampling, analysis, transport, storage, treatment, recycling, and disposition of any contaminated sewage sludge, contaminated sediments or contaminated media that may be generated by the Corporation, its contractors, consultants, agents, officials, and employees as a result of activities relating to the Project to the extent permitted by law.

10. Before closing, the Corporation must submit documentation evidencing the adoption and implementation of sufficient system rates and charges or, if applicable, the levy of an interest and sinking tax rate sufficient for the repayment of all system debt service requirements.
11. Before closing, and if required under the TWDB's financial assistance program and not previously provided with the application, the Corporation must submit an executed engineering contract as appropriate for the project scope of work, and an executed financial advisor contract and executed bond counsel contract as appropriate for the work to be performed in obtaining the TWDB's financial assistance for the project, in a form and substance satisfactory to the Executive Administrator. Fees to be reimbursed under any consulting contract must be reasonable in relation to the services performed, must be reflected in the contract, and must be acceptable to the Executive Administrator.
12. Before closing, when any portion of financial assistance proceeds are to be held in escrow or in trust, the Corporation must execute an escrow agreement or trust agreement, approved as to form and substance by the Executive Administrator, and must submit that executed agreement to the TWDB.
13. The Executive Administrator may require that the Corporation execute a separate financing agreement in form and substance acceptable to the Executive Administrator.
14. The Corporation must immediately notify TWDB, in writing, of any suit against it by the Attorney General of Texas under Texas Penal Code § 1.10(f) (related to federal laws regulating firearms, firearm accessories, and firearm ammunition).

Water Supply Corporation Conditions:

15. The Obligations must include a provision stating that the Corporation's indebtedness to the TWDB shall be secured by:
  - a. a first or parity lien on the gross revenues of the Corporation's water system (System); and
  - b. an access easement of the System site for planning and development of the project.
16. Before closing, the Corporation must obtain a commitment from a title insurance company in accordance with the standards established by the Texas Department of Insurance, resulting in the issuance of a mortgage title insurance policy on the access easement, upon which the TWDB will be given a first or parity lien mortgage. A copy of the mortgage title insurance policy shall be submitted to the TWDB within thirty (30) days of its execution.

17. Before release of funds for construction, the Corporation must provide the TWDB with evidence that the necessary acquisitions of land, leases, easements, and rights-of-way have been completed, or that the Corporation has the legal authority necessary to complete the acquisitions.
18. Before closing, the Corporation must submit to the Executive Administrator evidence that the Corporation's bylaws have been amended to include the following requirements:
  - a. as long as the Corporation is indebted for a loan or loans made by or through the TWDB, the bylaws shall not be altered, amended, or repealed without the prior written consent of the Executive Administrator; and
  - b. the Corporation is a nonprofit entity; no part of the income of the Corporation will be distributed to the Corporation's members, directors, or officers.
19. Before closing, if the Corporation is pledging a lien on real property that is to be on parity with a lien or liens on real property securing debt that will remain outstanding after closing the TWDB's loan, then the Corporation must execute a Parity Agreement with each entity that holds such debt that is acceptable in form and substance to the Executive Administrator.
20. The Obligations shall include a special covenant prohibiting the Corporation from encumbering, pledging, or otherwise impairing the revenues of the System in any manner with respect to the payment of any Obligations or with respect to any liability, except for the payment of the following: (1) maintenance and operating expenses payable within the current fiscal year with current revenues; and (2) additional debt, and that the Corporation shall in no way encumber, pledge or otherwise impair its title to the land used by or for the System or any interests therein, including improvements and facilities of the System, without prior TWDB approval.

Pledge Conditions:

21. Upon request by the Executive Administrator, the Corporation must submit annual audits of contracting parties for the Executive Administrator's review.
22. The Obligations must require the Corporation to maintain and enforce the contracts with its customers so that the revenues paid to the Corporation by its customers are sufficient to meet the revenue requirements of the Corporation's obligations arising from the operation of the water and sewer system.
23. The Obligations must provide that the pledged contract revenues from the Corporation will not be pledged to the payment of any additional parity

obligations of the Corporation secured by a pledge of the same contract revenues unless the Corporation demonstrates to the Executive Administrator's satisfaction that the pledged contract revenues will be sufficient for the repayment of all Obligations and additional parity obligations.

24. Before closing, the Corporation must submit executed contracts between the Corporation and the contracting parties regarding the contract revenues pledged to the payment of the Corporation's Obligations, in form and substance acceptable to the Executive Administrator. The contracts must include provisions consistent with the provisions of this Resolution regarding the contracting parties' annual audits, the setting of rates and charges, and collection of revenues sufficient to meet the Corporation's debt service obligations and additional parity obligations.

Special Conditions:

25. The Corporation must notify the Executive Administrator in writing 30 days before taking any actions to alter its legal status in any manner.
26. The Obligations must require that the Corporation notify the Executive Administrator in writing before any action by it to convey its Obligations held by the TWDB to another entity. The conveyance and the assumption of the Obligations must be approved by the TWDB.

APPROVED and ordered of record this, the 12th day of June 2024.

TEXAS WATER DEVELOPMENT BOARD

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Brooke T. Paup, Chairwoman

DATE SIGNED: \_\_\_\_\_

ATTEST:

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Bryan McMath, Interim Executive Administrator

Water  
Wastewater  
Other

## WATER CONSERVATION REVIEW

Review Date:

Project ID:

Entity:

Other entity:

### WATER CONSERVATION PLAN DATE:

Approvable

Adopted

	Total GPCD	Residential GPCD	Water Loss GPCD
Baseline			
5-year Goal			
10-year Goal			

### WATER LOSS AUDIT YEAR:

Service connections:

Length of main lines (miles):

Water Loss GCD:

Retail population:

Connections per mile:

Water Loss GPCD:

ILI:

Real Loss GMD:

### WATER LOSS THRESHOLDS

Water Loss Project:

Waiver Requested:

Wholesale Adjusted:

Threshold Type:

Apparent Loss GCD		Real Loss GCD	
Reported	Threshold	Reported	Threshold

Does the applicant meet Water Loss Threshold Requirements?

Yes

No

NA

### ADDITIONAL INFORMATION

### STAFF NOTES AND RECOMMENDATIONS

## DEFINITIONS

**Adopted** refers to a water conservation plan that meets the minimum requirements of the water conservation plan rules and has been formally approved and adopted by the applicant's governing body.

**Apparent losses** are paper losses that occur when the water reaches a customer, but the volume is not accurately measured and/or recorded due to unauthorized consumption, customer meter inaccuracy, or billing system and collection data errors.

**Approvable** refers to a water conservation plan that substantially meets the minimum requirements of the water conservation plan rules but has not yet been adopted by the applicant's governing body.

**Best Management Practices** are voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific time frame.

**GPCD** means gallons per capita per day.

**GCD** means gallons per connection per day.

**GMD** means gallons per mile per day.

**Infrastructure Leakage Index (ILI)** is the current annual real loss divided by the unavoidable annual real loss (theoretical minimum real loss) and only applies to utilities with more than 3,000 connections and a connection density of more than 16 connections per mile. The **ILI** is recommended to be less than 3 if water resources are greatly limited and difficult to develop, between 3 and 5 if water resources are adequate to meet long-term needs but water conservation is included in long-term water planning, and between 5 and 8 if water resources are plentiful, reliable, and easily extracted. The **ILI** is recommended as a bench marking tool, but until there is increased data validity of the variables used in the calculation, the **ILI** should be viewed with care.

**NA** means not applicable.

**Real losses** are the physical losses, largely leakage, from the infrastructure: mains, valves, and storage tank overflows. Real loss constitutes background leakage (unreported and difficult to detect), unreported leakage (leaks that do not surface but could be detected), and reported leakage (leaks that often surface and those that are detected by the utility through leak detection).

**Residential GPCD** is the amount of residential water use (single and multi-family customer use) divided by the residential population divided by 365.

**Total GPCD** is the amount of total system input volume divided by the retail population divided by 365.

**Total water loss** is the sum of the apparent and real water losses.

**Water loss** is the difference between the input volume and the authorized consumption within a water system. Water Loss consists of real losses and apparent losses.

**Water Loss GPCD** is the amount of water loss divided by the retail population divided by 365.

**Water Loss per Connection per Day** Calculated as the water loss volume divided by the number service connections divided by 365. This indicator allows for reliable performance tracking in the water utility's efforts to reduce water losses. It replaces water loss percentage.

**Water Loss Thresholds** are levels of real and apparent water loss determined by the connection density of a retail public utility, at or above which a utility receiving financial assistance from the Texas Water Development Board must use a portion of that financial assistance to mitigate the utility's system water loss.

**Wholesale Adjusted** represents that some utilities provide large volumes of wholesale water to other providers that travel through the general distribution system, so a calculation has been established to adjust for that volume of wholesale water. These adjustments are only applicable for use in determining whether a utility meets or exceeds water loss thresholds in review of their application for financial assistance. These adjustments should not be used for performance tracking or benchmarking.



## Brazosport WSC Brazoria County

