

PROJECT FUNDING REQUEST

BOARD DATE: March 9, 2023 **Team Manager:** Nancy Richards

ACTION REQUESTED

Consider approving by resolution a request from the Northwest Harris County Municipal Utility District No. 22 (Harris County) for \$3,770,000 in financing from the Texas Water Development Fund for planning, acquisition, design, and construction of water and wastewater system improvements.

STAFF RECOMME	NDATION
	No Action

BACKGROUND

The Northwest Harris County Municipal Utility District No. 22 (District) is located in Harris County approximately 20 miles north of downtown Houston. The District provides water and wastewater services to a population of approximately 3,800 residents and 1,055 connections.

PROJECT NEED AND DESCRIPTION

The District used 2015 Clean Water State Revolving Funds for its portion of a wastewater treatment plant upgrade project, which it co-owns with Northwest Harris County MUD Nos. 21 and 23. Costs have exceeded the original budget, and the District is requesting additional funds to complete its share of the project. Additionally, the District's Water Well No. 2 is failing due to potential casing leaks and needs replacement.

The District intends to complete the upgrades at the wastewater treatment plant, construct a new water well to replace the existing well, provide an emergency generator at its sanitary lift station, expand/upgrade the supervisory control and data acquisition (SCADA) and surveillance systems for the water and wastewater utilities.

PROJECT SCHEDULE

Task	Schedule Date
Closing	October 1, 2023
Engineering Feasibility Report Completion	November 1, 2023
(End of Planning Phase)	
Design Phase Completion	June 3, 2024
Start of Construction	April 1, 2024
Construction Completion	December 1, 2025

KEY ISSUES

The District received a \$3,080,000 commitment from the Clean Water State Revolving Fund in June 2015 to rehabilitate its collection system and upgrade components at its wastewater treatment plant. The District has completed or is near completion on five

COMMITMENT PERIOD: SEVEN (7) MONTHS TO EXPIRE OCTOBER 31, 2023

contracts under that commitment. In March 2022, bids opened on the wastewater treatment plant upgrades, which exceeded the District's remaining funds. The District opted to use approximately \$620,000 of its operating fund on the contract while it worked on the Development Fund application for the remaining funds along with other work needed on its water system.

LEGAL/SPECIAL CONDITIONS

- Notification to alter its legal status
- Notification of conversion or conveyance

Attachments

- 1. Financial Review
- 2. Project Budget
- 3. Resolution (23-)
- 4. Water Conservation Review
- 5. Location Map

Financial Review Northwest Harris County MUD #22

Risk Score: 2A Audit Reviewed: FY 2022

Key Indicators

Indicator	Result	Benchmark
Population Growth, Average Annual 2010-2020	County: 1.04%	State: 1.49%
Top 10 Customers % of Total Tax Revenue	8.30%	10-15%
Median Household Income as % of State	85%	100%
Days of Cash on Hand (3-year Average)	529 days	30-149 days
Debt Service Coverage Ratio	1.0x	1.0x
Debt-to-Operating Revenues	2.02	4.00-5.99x
Unemployment Rate (December, 2022)	Houston: 3.80%	State: 3.60%
Working Capital Ratio	44.0	> 1.0

Key Risk Score Strengths

- A high working capital ratio provides the District with ample resources to cover short-term liabilities and shows a strong liquidity position.
- The top 10 customers of as a percentage of total tax revenue is below the benchmark indicating that the District is not reliant on a single taxpayer.

Key Risk Score Concerns

• The unemployment rate for the City is slightly higher than the State. However, the City has shown population and assessed valuation increases over the past 5 years.

PLEDGE

Legal Pledge Name	Ad Valorem Tax
Type of Pledge	□ Tax □ Revenue □ Tax & Revenue □ Contract □ Other
Revenue Pledge Level	☐ First ☐ Second ☐ Third ☒ N/A

TAXES

	2022 Tax Year Rate	Max Projected Tax Rate (Year 2025)	Maximum Allowable Rate	3-Year Avg Current Tax Collections	Assessed Valuation
Maintenance & Operation	\$0.4800	\$0.4800		99%	
Interest & Sinking	\$0.1200	\$0.1704	Unlimited		\$233,802,643
Total Tax Rate	\$0.6000	\$0.6504			

Cost Savings

Based on a 20-year maturity schedule and current interest rates, the District could save approximately \$192,759 over the life of the financing.



Project Data Summary

NW Harris Co MUD # 22
WDF
L1001611
21810
2022
Tax Pledge
N/A
\$3,770,000 Northwest Harris County Municipal District No. 22 Unlimited Tax Bonds, Proposed Series 2023
Tax-Exempt
No
Yes
Escrow
Outlay <> Escrow Release
No
N/A
Planning, Acquisition, Design and Construction
Yes
Yes
Adopted
2A

		PROJECT TEAM		
Team Manager	Financial Analyst	Engineering Reviewer	Environmental Reviewer	Attorney
Nancy Richards	Arnoldo Rubio	Matthew Young	Britt Paredes	Annette Mass

ISSUE BEING EVALUATED FOR ILLUSTRATION PURPOSES ONLY Northwest Harris County MUD #22

\$3,770,000 Northwest Harris County Municipal District No. 22 Unlimited Tax Bonds, Proposed Series 2023

Dated Date: 10/1/2023 WDF **Delivery Date:** 10/1/2023 Rate: 4.14% 4/1/2024 **IUP Year:** 2022 **First Interest:** First Principal: 4/1/2024 Case: Tax Last Principal: 4/1/2044 Admin.Fee: \$0 Fiscal Year End: 09/30 Admin. Fee Payment Date: N/A Required Coverage: 1.0 **Total Assessed Valuation:** \$233,802,643

	PROPOSED	TAX REVENUES	PROJECTED	CURRENT		\$3,770,000) ISSUE			
FISCAL	TAX	WITH COLL. @	TOTAL	DEBT	PRINCIPAL	INTEREST	INTEREST	TOTAL	TOTAL DEBT	
YEAR	RATE	99%	REVENUES	SERVICE	PAYMENT	RATE	PAYMENT	PAYMENT	SERVICE	COVERAGE
2024	\$0.1396	\$324,014	\$324,014	\$243,264	\$5,000	3.18%	\$75,750	\$80,750	\$324,014	1.00
2025	0.1704	395,572	395,572	239,232	5,000	2.88%	151,340	156,340	395,572	1.00
2026	0.1685	391,144	391,144	234,948	5,000	2.92%	151,196	156,196	391,144	1.00
2027	0.1665	386,420	386,420	230,370	5,000	2.96%	151,050	156,050	386,420	1.00
2028	0.1643	381,505	381,505	225,603	5,000	3.00%	150,902	155,902	381,505	1.00
2029	0.1621	376,315	376,315	220,563	5,000	3.03%	150,752	155,752	376,315	1.00
2030	0.1598	370,956	370,956	215,355	5,000	3.06%	150,601	155,601	370,956	1.00
2031	0.1467	340,448	340,448	-	190,000	3.09%	150,448	340,448	340,448	1.00
2032	0.1484	344,577	344,577	-	200,000	3.11%	144,577	344,577	344,577	1.00
2033	0.1501	348,357	348,357	-	210,000	3.32%	138,357	348,357	348,357	1.00
2034	0.1514	351,385	351,385	-	220,000	3.54%	131,385	351,385	351,385	1.00
2035	0.1523	353,597	353,597	-	230,000	3.74%	123,597	353,597	353,597	1.00
2036	0.1551	359,995	359,995	-	245,000	3.91%	114,995	359,995	359,995	1.00
2037	0.1553	360,415	360,415	-	255,000	4.04%	105,415	360,415	360,415	1.00
2038	0.1573	365,113	365,113	-	270,000	4.14%	95,113	365,113	365,113	1.00
2039	0.1568	363,935	363,935	-	280,000	4.23%	83,935	363,935	363,935	1.00
2040	0.1581	367,091	367,091	-	295,000	4.29%	72,091	367,091	367,091	1.00
2041	0.1591	369,436	369,436	-	310,000	4.36%	59,436	369,436	369,436	1.00
2042	0.1598	370,920	370,920	-	325,000	4.41%	45,920	370,920	370,920	1.00
2043	0.1622	376,587	376,587	-	345,000	4.46%	31,587	376,587	376,587	1.00
2044	0.1621	376,200	376,200	-	360,000	4.50%	16,200	376,200	376,200	1.00
		,		\$1,609,335	\$3,770,000		\$2,294,642	\$6,064,642	\$7,673,977	

AVERAGE (MATURITY) LIFE	14.69 YEARS
NET INTEREST RATE	4.144%
COST SAVINGS	\$192,759
AVERAGE ANNUAL REQUIREMENT	\$288,792

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 NW Harris Co MUD # 22 21810 - Water and Wastewater Projects Dfund

Budget Items	This Commitment	Total
Construction		
Construction	\$2,748,324.00	\$2,748,324.00
Subtotal for Construction	\$2,748,324.00	\$2,748,324.00
Basic Engineering Services		
Construction Engineering	\$0.00	\$0.00
Design	\$361,584.00	\$361,584.00
Planning	\$38,000.00	\$38,000.00
Subtotal for Basic Engineering Services	\$399,584.00	\$399,584.00
Special Services		
Application	\$22,000.00	\$22,000.00
Water Conservation Plan	\$5,000.00	\$5,000.00
Subtotal for Special Services	\$27,000.00	\$27,000.00
Fiscal Services		
Bond Counsel	\$75,400.00	\$75,400.00
Capitalized Interest	\$188,500.00	\$188,500.00
Financial Advisor	\$75,400.00	\$75,400.00
Fiscal/Legal	\$3,770.00	\$3,770.00
Issuance Costs	\$33,158.00	\$33,158.00
Loan Origination Fee	\$60,464.00	\$60,464.00
Subtotal for Fiscal Services	\$436,692.00	\$436,692.00
Other		
Land/Easements Acquisition	\$158,400.00	\$158,400.00
Subtotal for Other	\$158,400.00	\$158,400.00
Total	\$3,770,000.00	\$3,770,000.00

A RESOLUTION OF THE TEXAS WATER DEVELOPMENT BOARD
APPROVING AN APPLICATION FOR FINANCIAL ASSISTANCE IN THE AMOUNT OF
\$3,770,000 TO NORTHWEST HARRIS COUNTY MUNICIPAL UTILITY DISTRICT NO. 22
FROM THE FINANCIAL ASSISTANCE ACCOUNT OF
THE TEXAS WATER DEVELOPMENT FUND II
THROUGH THE PROPOSED PURCHASE OF
\$3,770,000 NORTHWEST HARRIS COUNTY MUNICIPAL UTILITY DISTRICT NO. 22
UNLIMITED TAX BONDS PROPOSED SERIES 2023

(23 -)

WHEREAS, the Northwest Harris County Municipal Utility District No. 22, located in Harris County, Texas (District), has filed an application for financial assistance in the amount of \$3,770,000 from the Financial Assistance Account of the Texas Water Development Fund II, established by Texas Water Code § 17.959, to finance water and wastewater system improvements, identified as Project No. 21810; and

WHEREAS, the District seeks financial assistance from the Texas Water Development Board (TWDB) in the amount of \$3,770,000 through the TWDB's purchase of \$3,770,000 Northwest Harris County Municipal Utility District No. 22 Unlimited Tax Bonds, Proposed Series 2023 (together with all authorizing documents "Obligations"), all as is more specifically set forth in the application and in recommendations of the TWDB's staff; and

WHEREAS, the District has offered a pledge of unlimited tax as sufficient security for the repayment of the Obligations; and

WHEREAS, the commitment is approved for funding under the TWDB's pre-design funding option, and initial and future releases of funds are subject to 31 TAC \S 363.16; and

WHEREAS, in accordance with Texas Water Code §§ 17.124 and 17.275, the TWDB has considered all matters required by law and in particular the following:

- 1. the water quality needs of the waters into which effluent from the treatment works will be discharged, the benefit of the treatment works to such water quality needs, the relationship of the treatment works to the overall, statewide water quality needs, and the relationship of the treatment works to water quality planning for the state;
- 2. 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

- 3. the availability of revenue to the District, from all sources, for the ultimate repayment of the cost of the treatment works and water supply project, including interest.
- 4. that the District has been designated, pursuant to Texas Water Code § 26.082, to provide a regional system to serve all or part of the waste disposal needs of a defined area, the development of such systems being the declared policy of the legislature; and

WHEREAS, the TWDB hereby finds:

- 1. that the public interest requires state assistance in the water supply project, in accordance with Texas Water Code § 17.125(a)(1);
- 2. that the public interest will benefit from state assistance in the financing of this project, in accordance with Texas Water Code § 17.277(a);
- 3. that the District 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. that in its opinion the tax and/or revenue pledged by the District will be sufficient to meet all the Obligations assumed by the District during the succeeding period of not more than 50 years, in accordance with Texas Water Code § 17.125(a)(2);
- 5. that the application and financial assistance requested meet the requirements of Texas Water Code, Chapter 17, Subchapters D, E, F, and L, and 31 TAC Chapter 363, Subchapter A;
- 6. that the TWDB has approved a regional water plan for the region of the state that includes the area benefiting from the project and the needs to be addressed by the project will be addressed in a manner that is consistent with the approved regional and state water plans, as required by Texas Water Code § 16.053(j);
- 7. that the current water audit required by Texas Water Code § 16.0121 has been completed by the District and filed with the TWDB, in accordance with Texas Water Code § 16.053(j); and
- 8. that any treatment works to be financed under the application will consider cost-effective innovative, nonconventional methods of treatment such as rock reed, root zone, ponding, irrigation, or other methods that may have been developed by the National Aeronautics and Space Administration or the Tennessee Valley Authority, in accordance with Texas Water Code § 17.189;

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

9. A commitment is made by the TWDB to the Northwest Harris County Municipal Utility District No. 22 for financial assistance in the amount of \$3,770,000 from the Financial Assistance Account of the Texas Water Development Fund II, to be evidenced by the TWDB's purchase of \$3,770,000 Northwest Harris County Municipal Utility District No. 22 Unlimited Tax Bonds, Proposed Series 2023. This commitment will expire on October 31, 2023.

Such commitment is conditioned as follows:

Standard Conditions:

- 10. this commitment is contingent on a future sale of bonds by the TWDB or on the availability of funds on hand;
- 11. this commitment is contingent upon the issuance of a written approving opinion of the Attorney General of the State of Texas stating that the District has complied with all of the requirements of the laws under which said Obligations were issued; that said Obligations were issued in conformity with the Constitution and laws of the State of Texas; and that said Obligations are valid and binding obligations of the District;
- 12. this commitment is contingent upon the District's compliance with all applicable laws, rules, policies, and guidance (as these may be amended from time to adapt to a change in law, in circumstances, or any other legal requirement), including but not limited to 31 TAC Chapter 363;
- 13. the Obligations must provide that the Obligations can be called for early redemption (Early Redemption) only in inverse order of maturity, and on any date beginning on or after the first interest payment date which 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;
- 14. the Obligations must include a provision wherein the District, 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 District'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 District's Obligations, if the TWDB sells or otherwise transfers such Obligations, and the beneficial owners of the TWDB's bonds if the

- District is an obligated person with respect to such bonds under SEC Rule 15c2-12;
- 15. the Obligations must contain a provision requiring the District to levy a tax and/or maintain and collect sufficient rates and charges to produce system revenues in an amount necessary to meet the debt service requirements of all outstanding obligations and to maintain the funds established and required by the Obligations;
- 16. the Obligations must include a provision requiring the City to use any surplus loan proceeds from the Obligations remaining after completion of a final accounting in a manner as approved by the Executive Administrator; and
- 17. the Obligations must contain a provision 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 shall be of no force and effect;
- 18. financial assistance proceeds are public funds and, as such, the Obligations must include a provision requiring that these proceeds shall 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;
- 19. financial assistance proceeds shall not be used by the District when sampling, testing, removing or disposing of contaminated soils and/or media at the project site. The Obligations shall include an environmental indemnification provision wherein the District agrees to indemnify, hold harmless and protect the TWDB from any and all claims, causes of action or damages to the person or property of third parties arising from the sampling, analysis, transport, storage, treatment and disposition of any contaminated sewage sludge, contaminated sediments and/or contaminated media that may be generated by the District, its contractors, consultants, agents, officials and employees as a result of activities relating to the project to the extent permitted by law;
- 20. prior to closing, the District shall 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;
- 21. prior to closing, and if required under the TWDB's financial assistance program and not previously provided with the application, the District shall 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 that are 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;
- 22. prior to closing, when any portion of financial assistance proceeds are to be held in escrow or in trust, the District shall execute an escrow agreement or trust agreement, approved as to form and substance by the Executive Administrator, and shall submit that executed agreement to the TWDB;
- 23. the Executive Administrator may require that the District execute a separate financing agreement in form and substance acceptable to the Executive Administrator;
- 24. the District shall abide by all applicable construction contract requirements related to the use of iron and steel products produced in the United States, as required by Texas Government Code, Chapter 2252, Subchapter F and Texas Water Code § 17.183;
- 25. the District 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);

Conditions Related To Tax-Exempt Status:

- 26. prior to closing, the District's bond counsel must prepare a written opinion that states that the interest on the Obligations is excludable from gross income or is exempt from federal income taxation. Bond counsel may rely on covenants and representations of the District when rendering this opinion;
- 27. prior to closing, the District's bond counsel must prepare a written opinion that states that the Obligations are not "private activity bonds." Bond counsel may rely on covenants and representations of the District when rendering this opinion;
- 28. the Obligations must include a provision prohibiting the District from using the proceeds of this financial assistance in a manner that would cause the Obligations to become "private activity bonds" within the meaning of § 141 of the Internal Revenue Code of 1986, as amended (Code) and the Treasury Regulations promulgated thereunder (Regulations);
- 29. the Obligations must provide that no portion of the proceeds of the loan will be used, directly or indirectly, in a manner that would cause the Obligations to be "arbitrage bonds" within the meaning of § 148(a) of the Code and Regulations, including to acquire or to replace funds which were used, directly or indirectly, to acquire Nonpurpose Investments (as defined in the Code and Regulations) that produce a yield materially higher than the yield on the TWDB's bonds that are issued to provide financing for the loan (Source Series Bonds), other than Nonpurpose Investments acquired with:

- a. proceeds of the TWDB's Source Series Bonds invested for a reasonable temporary period of up to three (3) years after the issue date of the Source Series Bonds until such proceeds are needed for the facilities to be financed;
- b. amounts invested in a bona fide debt service fund, within the meaning of § 1.148-1(b) of the Regulations; and
- c. amounts deposited in any reasonably required reserve or replacement fund to the extent such amounts do not exceed the least of maximum annual debt service on the Obligations, 125% of average annual debt service on the Obligations, or 10 percent of the stated principal amount (or, in the case of a discount, the issue price) of the Obligations;
- 30. the Obligations must include a provision requiring the District take all necessary steps to comply with the requirement that certain amounts earned on the investment of gross proceeds of the Obligations be rebated to the federal government in order to satisfy the requirements of § 148 of the Code. The Obligations must provide that the District will:
 - a. account for all Gross Proceeds, as defined in the Code and Regulations, (including all receipts, expenditures and investments thereof) on its books of account separately and apart from all other funds (and receipts, expenditures and investments thereof) and retain all records of such accounting for at least six years after the final Computation Date. The District may, however, to the extent permitted by law, commingle Gross Proceeds of its loan with other money of the District, provided that the District separately accounts for each receipt and expenditure of such Gross Proceeds and the obligations acquired therewith;
 - b. calculate the Rebate Amount, as defined in the Code and Regulations, with respect to its loan, not less frequently than each Computation Date, in accordance with rules set forth in § 148(f) of the Code, § 1.148-3 of the Regulations, and the rulings thereunder. The District shall maintain a copy of such calculations for at least six years after the final Computation Date;
 - c. as additional consideration for the making of the loan, and in order to induce the making of the loan by measures designed to ensure the excludability of the interest on the TWDB's Source Series Bonds from the gross income of the owners thereof for federal income tax purposes, pay to the United States the amount described in paragraph (b) above within 30 days after each Computation Date;
 - d. exercise reasonable diligence to assure that no errors are made in the calculations required by paragraph (b) and, if such error is made, to

discover and promptly to correct such error within a reasonable amount of time thereafter, including payment to the United States of any interest and any penalty required by the Regulations;

- 31. the Obligations must include a provision prohibiting the District from taking any action that would cause the interest on the Obligations to be includable in gross income for federal income tax purposes;
- 32. the Obligations must provide that the District will not cause or permit the Obligations to be treated as "federally guaranteed" obligations within the meaning of § 149(b) of the Code;
- 33. the Obligations must contain a covenant that the District will refrain from using the proceeds of the Obligations to pay debt service on another issue of obligations of the borrower in contravention of section 149(d) of the Code (related to "advance refundings");
- 34. the transcript must include a No Arbitrage Certificate or similar Federal Tax Certificate setting forth the District's reasonable expectations regarding the use, expenditure and investment of the proceeds of the Obligations;
- 35. the transcript must include evidence that the information reporting requirements of § 149(e) of the Code will be satisfied. This requirement may be satisfied by filing an IRS Form 8038 with the Internal Revenue Service. In addition, the applicable completed IRS Form 8038 or other evidence that the information reporting requirements of § 149(e) have been satisfied must be provided to the Executive Administrator within fourteen (14) days of closing. The Executive Administrator may withhold the release of funds for failure to comply;
- 36. the Obligations must provide that neither the District nor a related party thereto will acquire any of the TWDB's Source Series Bonds in an amount related to the amount of the Obligations to be acquired from the District by the TWDB;
- 37. the District's federal tax certificate shall provide that the weighted average maturity of the Obligations purchased by the TWDB does not exceed 120% of the weighted average reasonably expected economic life of the Project;

Pledge Conditions For The Loan:

38. the Obligations must contain a provision that for each year the Bonds are outstanding, the District will levy a debt service tax rate, and collect taxes sufficient for the repayment of annual principal and interest requirements on the Obligations;

PROVIDED, however, the commitment is subject to the following special conditions:

Special Conditions:

- 39. prior to the release of construction funds for that portion of a project that proposes surface water or groundwater development, the Executive Administrator must have issued a written finding that the District has the right to use the water that the project financed by the TWDB will provide;
- 40. the District must notify the Executive Administrator in writing thirty (30) days prior to taking any actions to alter its legal status in any manner;
- 41. the Obligations must include a provision requiring that the District notify the Executive Administrator in writing prior to 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 9th day of March 2023.

	TEXAS WATER DEVELOPMENT BOARD
	Brooke T. Paup, Chairwoman
	DATE SIGNED:
ATTEST:	
Ieff Walker Executive Δdminist	rator

Water
Wastewater
Other

WATER CONSERVATION REVIEW

Attachment 4 Review Date:

Project ID:

Entity: Other entity:

WATER CONSERVATION PLAN DATE: Approvable Adopted Total GPCD Residential GPCD Water Loss GPCD Baseline 5-year Goal

WATER LOSS AUDIT YEAR:

10-year Goal

Service connections: Length of main lines (miles): Water Loss GCD:

Retail population: Connections per mile: Water Loss GPCD:

IL11:

1 – Infrastructure Leakage Index only applicable if > 16 connections per mile and > 3,000 service connections

WATER LOSS THRESHOLDS Water Loss Project:

Wholesale Adjusted:	Apparent	Real Loss	Real Loss	Apparent	Real Loss	Real Loss
	Loss	Gallons per	Gallons per	Loss	Threshold	Threshold
	Gallons per	mile per	connection	Threshold	Gallons per	Gallons per
	connection	day	per day	Gallons per	mile per day	connection
	per day			connection		per day
Threshold Type:				per day		

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.

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.

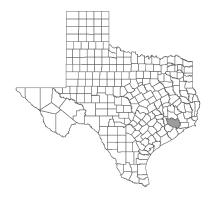
Water loss is the difference between the input volume and the authorized consumption within a water system. Water Loss consists of real losses and apparent losses.

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 size and 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.



Northwest Harris County MUD No. 22 Harris County

