



DADE COUNTY  
**WATER & SEWER**  
AUTHORITY  
BOARD OF DIRECTORS

*REGULAR MEETING*

*FEBRUARY 28, 2023*

**DADE COUNTY WATER AND SEWER AUTHORITY**

**REGULAR BOARD MEETING AGENDA**

**FEBRUARY 28, 2023 6:30 P.M.**

**MEETING LOCATION CHANGED DUE TO SCHEDULING CONFLICT**

**DADE COUNTY WATER & SEWER AUTHORITY MAIN OFFICE**

**250 BOND STREET**

1. Call to Order
  - a. Prayer and Pledge of Allegiance
  - b. Roll call
2. Approve minutes from previous meeting
3. Fiscal Matters
  - a. Monthly Financial Report
4. Appearances
5. Legal Matters
6. Old Business
  - a. USDA Project Update
  - b. GEFA Project Update
7. New Business
  - a. 2022 Water Audit
8. Executive Session (if any)
9. Citizen Participation
10. Adjournment

MINUTES OF  
DADE COUNTY WATER AND SEWER AUTHORITY  
January 24, 2023

Members Present

Eddie Cantrell, Chairperson  
Timothy Fowler  
Darrell Pardue  
Allen Townsend

Members Absent

Daniel Glecier, II, Vice Chairperson

Others Present

Sherri Walker  
Elizabeth Zeller

The regularly-scheduled monthly meeting of the Dade County Water and Sewer Authority ("Water Authority") was held at the Dade County Commission Building at 6:30 p.m., on January 24, 2022. Chairperson Cantrell called the meeting to order and announced that the meeting was officially posted and legally advertised as required by the open meeting laws of the State of Georgia, and that a quorum of the members was present. Mr. Cantrell opened the meeting with prayer and the pledge of allegiance.

A roll call of board members was taken with attendance as noted in the table above.

Mr. Townsend made a motion to approve the minutes of the December 2022 meeting. Mr. Pardue seconded the motion and all approved.

Financial Report

Mrs. Zeller presented the financial report. She reported that the December 2022 revenue was \$300,330.49 and expenses were \$321,665.84 for a net loss of \$21,335.35. There were 4 new taps during the month. Mrs. Zeller gave the operational report, listing the work for all three departments for December. Mr. Pardue made a motion to approve the Financial Report, and the motion was seconded by Mr. Townsend and all approved.

Legal Matters

Chairman Eddie Cantrell welcomed Tim Fowler to the board after he was appointed to replace Travis Daniel for the Sand Mountain District. Chairman Cantrell informed the board of the bylaws/charter, which require the board to elect a chairperson, vice-chairperson, and secretary annually. Mr. Cantrell was recommended by Darrell Pardue to continue serving as Chairperson of the Dade County Water and Sewer Authority Board, the motion was seconded by Mr. Townsend, and all approved. For Vice-Chairperson/Secretary, Mr. Cantrell recommended Mr.

Daniel Glecier. Allen Townsend motioned for Mr. Glecier to become acting Vice-Chairperson/Secretary, which was seconded by Mr. Fowler and all approved.

#### Appearances

There were no appearances.

#### Old Business

A brief update on USDA Projects was provided by Sherri Walker, General Manager. Water Main Upgrades Contract #1, Rehabilitation of Water Storage Tanks Hooker, and Lookout Tanks Contract #4, and ECWAG have been completed. The Meter Replacement Program under Contract #2 is still in progress. Of the 4,200 meters, 2,536 have been installed by the contractor. The pumps were expected to be pulled and the spacer plate installed the week of January 23, 2023, but they have been delayed due to a crane delay.

#### New Business

Mrs. Sherri Walker, General Manager presented the Georgia EPD public water system sanitary survey report to the board. The authority had minor deficiencies, but no significant ones. To treat surface water, the plant requires a particle counting device that records the combined filter effluent. Dade County Water Treatment Plant does not have a filtered water counter. A quote of \$9,350.00 was provided by ICS (Instrumentation Calibration Services) for a particle counter for filtered water. Mr. Townsend motioned for the purchase of the counter for the water treatment plant, which was seconded by Mr. Pardue.

A low interest loan application was submitted on January 4, 2023, to GEFA for a loan of \$1,874,400.00 to install a Center Flow Band Screen System at the raw water intake to protect the newly installed pumps. On Monday, February 13, 2023, at 10:00 a.m., a public hearing will be held to inform the public of improvements to the Authority's water system. As a result, Georgia's Rules for Safe Drinking Water will be met.

Dade County Water & Sewer Authority met with officials from the Northwest Georgia Regional Commission and Georgia Department of Community Affairs on January 11, 2023. The two projects, a line replacement on Hwy 299 for \$769,688.00 and additional feed to the Industrial Park for \$378,125.00, could potentially qualify for ARC funding (Appalachian Regional Commission). As a first step, the authority will issue a request for qualifications for engineering services. To ensure qualified engineering services are provided, this is a federal law requirement. NWGRC is drafting our RFQ (Request for Qualifications). It is the Authority's responsibility to select a committee of 3-5 members to review the packets.

#### Executive Session

There was no executive session.

There being no further business before the Water Authority Board, the Chair called for a motion to dismiss. Mr. Townsend made a motion to dismiss, and the motion was seconded by Mr. Pardue. The motion was passed unanimously, and the meeting was adjourned. The next regularly-scheduled meeting is set for February 28, 2023 at 6:30 p.m., in the Dade County Commission Building.

As recorded by:

Attested by:

\_\_\_\_\_  
Eddie Cantrell, Chairperson

\_\_\_\_\_  
Allen Townsend, Board Member

**DADE COUNTY WATER & SEWER AUTHORITY**  
**Profit & Loss**  
**January 2023**

	<u>Jan 23</u>
<b>Income</b>	
402 · INCOME WATER RENTS	322,135.76
403 · INCOME-SEWER COLLECTION FEES	3,433.68
404 · INCOME/MISCELLANEOUS	11,942.42
405 · INTEREST INCOME	59.60
406 · TAP FEE INCOME	13,350.00
408 · SEWER SURCHARGE INCOME	76.43
<b>Total Income</b>	<u>350,997.89</u>
<b>Gross Profit</b>	<u>350,997.89</u>
<b>Expense</b>	
501 · CREDIT CARD PROCESSING FEES	4,198.41
501.1 · CHECK PROCESSING FEES	121.15
507 · ELECTRICITY EXPENSE	41,137.70
508 · EMPLOYEE BENEFITS	29,866.75
509 · INSURANCE	1,095.12
511 · INTEREST EXPENSE GEFA LOAN	2,082.17
512 · INTEREST PAYING CHARGE	73.96
513 · MATERIALS AND SUPPLIES	10,962.03
514 · CHEMICALS	19,781.70
515 · MISCELLANEOUS	418.97
516 · OFFICE EXPENSE AND POSTAGE	7,150.23
517 · INTEREST EXPENSE ON NRWA LOAN	89.60
519 · PROFESSIONAL FEES	85.00
520 · COMPUTER MAINTENANCE	10,750.00
522 · REPAIRS AND MAINTENANCE	25,568.30
523 · REPAIRS & MAINTENANCE - OFFICE	248.92
524 · SALARIES AND WAGES	82,733.47
525 · PAYROLL TAXES	6,329.09
526 · TELEPHONE	1,033.08
530 · EMPLOYEE UNIFORMS	968.45
535 · TRUCK EXPENSE	4,592.28
545 · JANITORIAL EXPENSE	300.00
546 · DUES AND SUBSCRIPTIONS	468.99
549 · WATER UTILITY EXPENSE	558.92
553 · EDUCATIONAL EXPENSE	525.00
554 · WHEELAGE & TREATMENT CHARGES	2,141.07
REVENUE BOND SINKING FUND	37,159.38
<b>Total Expense</b>	<u>290,439.74</u>
<b>Net Income</b>	<u><u>60,558.15</u></u>



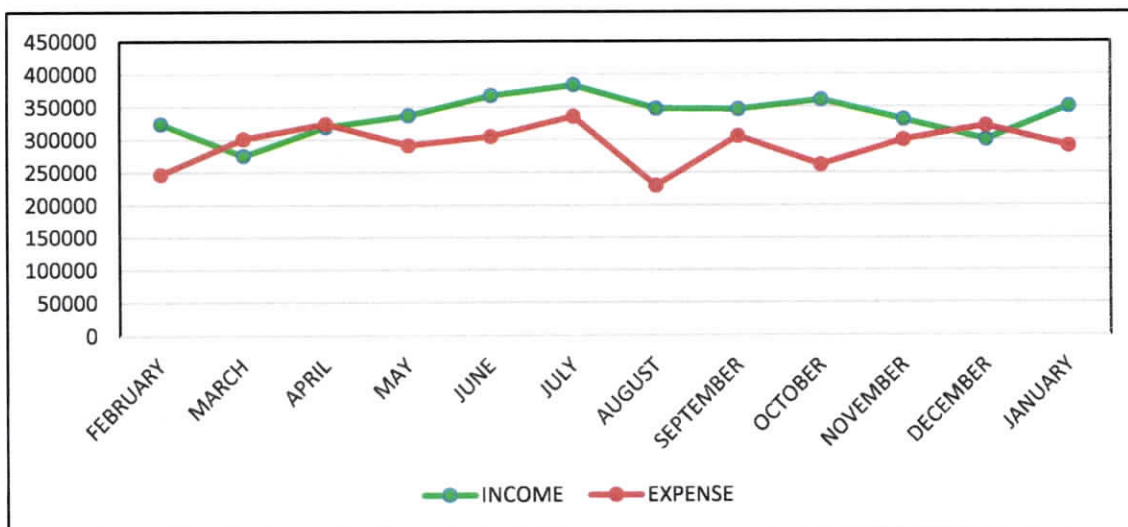


#New Taps= 7

January 2023	Current Month	Previous Month
Total accts 60 days and over	\$30,355.34	\$37,162.44
Total accts 90 days and over	\$15,100.57	\$13,279.92
Total Active Accounts	7,410	7,391
Total Water Services	8,590	8,583
Total gallons water billed	43.6	34.6
Total water pumped	64.8	68.9
Percentage of water loss	33%	50%

### 12 MONTH INCOME/EXPENSE

BILLING MONTH	PRIOR YEAR			CURRENT YEAR		
	PRIOR YEAR INCOME	PRIOR YEAR EXPENSE	PRIOR YEAR NET INCOME	INCOME	EXPENSE	NET INCOME
FEBRUARY	\$313,693.57	\$311,381.00	\$2,312.57	\$324,797.73	\$247,030.76	\$77,766.97
MARCH	\$283,758.09	\$274,217.60	\$9,540.49	\$275,664.73	\$301,637.46	(\$25,972.73)
APRIL	\$308,287.90	\$297,535.43	\$10,752.47	\$319,740.25	\$324,570.76	(\$4,830.51)
MAY	\$313,715.01	\$267,167.37	\$46,547.64	\$337,379.08	\$291,330.74	\$46,048.34
JUNE	\$372,731.13	\$223,712.56	\$149,018.57	\$367,557.28	\$304,815.73	\$62,741.55
JULY	\$342,993.69	\$304,911.47	\$38,082.22	\$383,630.94	\$336,007.10	\$47,623.84
AUGUST	\$364,167.87	\$263,479.34	\$100,688.53	\$347,442.59	\$229,682.80	\$117,759.79
SEPTEMBER	\$367,515.71	\$266,073.76	\$101,441.95	\$346,836.82	\$305,392.47	\$41,444.35
OCTOBER	\$305,934.16	\$369,819.05	(\$63,884.89)	\$360,878.52	\$261,604.16	\$99,274.36
NOVEMBER	\$297,773.14	\$265,564.61	\$32,208.53	\$331,019.59	\$299,696.82	\$31,322.77
DECEMBER	\$311,470.60	\$78,073.82	\$233,396.78	\$300,330.49	\$321,665.84	(\$21,335.35)
JANUARY	\$304,613.45	\$275,664.82	\$28,948.63	\$350,997.89	\$290,439.74	\$60,558.15
TOTALS	\$3,886,654.32	\$3,197,600.83	\$689,053.49	\$4,046,275.91	\$3,513,874.38	\$532,401.53

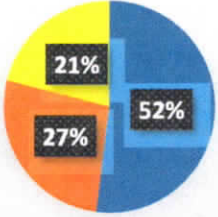


Dade County Water and Sewer Authority  
 Fixed Charges Coverage Ratio  
 as of 01/31/2023

Change in net position	194,282.87	X	
Plus: Interest expense	72,363.93	X	
Plus: Depreciation	<u>395,923.92</u>	X	
Net Revenues to date			662,570.72
Number of months in current fiscal year	7.00		
Net Revenues annualized for the year		\$	1,135,836.00
Fixed Charges			
Plus: Scheduled interest payments for FY	171,164.75	#	
Plus: Scheduled principal payment for FY	<u>613,484.44</u>	#	
Total Scheduled Fixed Charges			<u>784,649.19</u>
Calculated ratio			<u>1.45</u>
Required ratio for revenue bonds			<u>1.10</u>
Required ratio for GEFA loan			<u>1.05</u>



**OPERATIONS SUMMARY REPORT  
JANUARY 2022**

OFFICE SUMMARY	
<b>PAYMENT PROCESSING</b>  	52% IN OFFICE PAYMENTS/DROP BOX
	27% AUTOMATIC DRAFT PAYMENTS
	21% ONLINE WEB PAYMENTS
	6583 PAYMENTS PROCESSED
	197 WORK ORDERS PROCESSED

MAINTENANCE SUMMARY			
WORK ORDER CODE	TOTALS	WORK ORDER CODE	
METER CHANGE OUT	14	REREAD METER	13
CHECK METER	43	REPAIR METER	4
CHECK PRESSURE	5	CUT OFF FOR RETURN CHECK	0
FLUSH LINES	10	STOP REPAIR	3
LEAK REPORTED IN AREA	4	TAP	8
CUT OFF	24	TRANSMITTER INSTALL	6
CUT ON	25	TRANSMITTER CHANGE OUT	4
PULL METER DATA	13	NON PAYMENT DISCONNECT	37
READ AND LEAVE ON	34	IPERL MAINTENANCE	0
<b>TOTAL WORKORDERS</b>			<b>247</b>

NOTES	
219	811 LINE LOCATES
10	WATER MAIN LEAKS REPAIRED
8	TAPS INSTALLED

TREATMENT PLANT SUMMARY	
MONTHLY SAMPLING	QUARTERLY DBP SAMPLING
1 TOC SAMPLE - 01/10/2023	TTHM-TRICHALOMETHANES - NEXT TEST FEB
20 COLIFORM SAMPLES - 01/25/2023	HAA-HALOACETIC ACIDS - NEXT TEST FEB

**RECEIVED 15 EMERGENCY CALLS**

REPAIRED WELL PUMP
HIRED NEW PALNT OPERATOR

## DADE COUNTY WATER &amp; SEWER AUTHORITY

## Balance Sheet

As of January 31, 2023

02/21/23

Accrual Basis

	<u>Jan 31, 23</u>
<b>ASSETS</b>	
<b>Current Assets</b>	
<b>Checking/Savings</b>	
100 · PETTY CASH	
100.1 · VAULT	250.00
100.2 · CASH DRAWER #1	200.00
100.3 · CASH DRAWER #2	200.00
100.4 · PETTY CASH	300.00
<b>Total 100 · PETTY CASH</b>	<b>950.00</b>
101 · CASH IN BANK REVENUE WF	513,510.52
103.2 · PROPERTY LEASE	1,005.00
103.4 · GEFA REVENUE ACCT	539.68
103.5 · USDA REVENUE	380.00
103.6 · USDA SINKING FUND	400.00
104 · CASH IN BANK O&M ACCOUNT	249,279.60
105 · CASH IN BANK PAYROLL	43,001.67
108 · METER DEPOSIT ACCOUNT	294,286.52
109 · METER DEPOSIT SAVINGS	98,000.00
110 · SINKING FUND	625,386.35
110.1 · REVENUE BOND SINKING FUND	209,659.41
111 · TAP FEE REVENUE	391,403.45
112 · TAP FEE SAVINGS	137,597.37
193 · CASH IN BANK - MONEY MARKET	26,858.83
193.1 · MONEY MARKET-RET. DOUG ANDERTON	196,356.89
<b>Total Checking/Savings</b>	<b>2,788,615.29</b>
<b>Other Current Assets</b>	
113 · CUSTOMER A/R - WATER	451,187.17
114 · ALLOWANCE FOR DOUBTFUL ACCT	-12,100.00
115 · ACCRUED INTEREST RECEIVABLE	4,058.26
117 · CUSTOMER A/R - SEWER SURCHARGE	-642.31
1170 · A/R MISC. CHARGES	36,757.97
118 · INVENTORY	289,029.89
119 · PREPAID EXPENSES	79,101.37
131.1 · Unbilled Revenue	70,700.00
<b>Total Other Current Assets</b>	<b>918,092.35</b>
<b>Total Current Assets</b>	<b>3,706,707.64</b>
<b>Fixed Assets</b>	
120 · COMPUTER EQUIPMENT	149,411.22
122 · ACCUMULATED DEPRECIATION	-21,258,649.71
124 · TOOLS AND EQUIPMENT	531,818.12
127 · VEHICLES	528,872.74
129 · BUILDINGS AND IMPROVEMENTS	259,231.80
137 · INVESTMENTS IN WATER SYSTEM	21,951,358.37
143 · SEWER SYSTEM	59,788.34
162 · LAND	504,173.52
195.2 · CONSTRUCTION IN PROGRESS	3,001,462.07
196 · TREATMENT PLANT IMPROVEMENTS	3,400,784.89
199 · WATER TANK IMPROVEMENTS	1,803,224.10
<b>Total Fixed Assets</b>	<b>10,931,475.46</b>
<b>TOTAL ASSETS</b>	<b>14,638,183.10</b>
<b>LIABILITIES &amp; EQUITY</b>	
<b>Liabilities</b>	
<b>Current Liabilities</b>	
Accounts Payable	
2000 · *Accounts Payable	106,467.20
<b>Total Accounts Payable</b>	<b>106,467.20</b>

## DADE COUNTY WATER &amp; SEWER AUTHORITY

## Balance Sheet

As of January 31, 2023

02/21/23

Accrual Basis

	Jan 31, 23
<b>Other Current Liabilities</b>	
202 · DUE TO SEWER SYSTEM	60,620.14
205 · ACCRUED INTEREST PAYABLE	4,580.26
207 · ACCRUED SALARIES AND WAGES	32,793.00
208 · GEORGIA WITHHOLDING TAX	3,580.39
209 · FEDERAL WITHHOLDING TAX	-0.30
2100 · Payroll Liabilities	-120.27
217 · 457 RETIREMETN BENEFIT PLAN	-243.36
218 · EMP. UNIFORMS-EMPLOYEE PORTION	-540.47
235 · ACCRUED RETIREMENT BENEFIT	194,234.24
240 · NRWA LOAN	34,960.44
<b>Total Other Current Liabilities</b>	<b>329,864.07</b>
<b>Total Current Liabilities</b>	<b>436,331.27</b>
<b>Long Term Liabilities</b>	
171.3 · BOND PREMIUM - 2011	371,165.35
171.4 · ACC AMORT-BOND PREMIUM 2011	-226,280.86
182 · DEF. LOSS ISSUE EXPIRING 07-28	-284,979.25
182.1 · 2003 DEF. LOSS ISSUE EXP 07-28	-343,775.64
183 · ACCUM AMORT-ISSUE EXP. 07-28	240,679.81
184.1 · ACCUM AMORT ISSUE EXP 07-28	234,215.00
206 · DEF. METER DEPOSITS DUE - WF	195,740.10
211 · ACCRUED VACATION	37,358.11
214 · BONDS PAYABLE - 2011 REFUNDING	2,665,000.00
223 · GEFA LOAN DW2020035	3,788,301.84
230 · GEFA LOAN # 2010L08WS	661,615.01
231 · GEFA LOAN RESERVOIR #RF2018001	327,863.31
<b>Total Long Term Liabilities</b>	<b>7,666,902.78</b>
<b>Total Liabilities</b>	<b>8,103,234.05</b>
<b>Equity</b>	
305 · RETAINED EARNINGS TFF	625,386.35
308 · INVESTED IN CAPITAL ASSETS, NET	4,153,011.00
3900 · Retained Earnings	1,562,268.83
Net Income	194,282.87
<b>Total Equity</b>	<b>6,534,949.05</b>
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b>14,638,183.10</b>

## DADE COUNTY WATER &amp; SEWER AUTHORITY

## Profit &amp; Loss

November 2022 through January 2023

02/21/23

Accrual Basis

	Nov 22	Dec 22	Jan 23	TOTAL
<b>Income</b>				
402 · INCOME WATER RENTS	306,337.86	276,516.86	322,135.76	904,990.48
403 · INCOME-SEWER COLLECTION FEES	3,563.00	3,384.72	3,433.68	10,381.40
404 · INCOME/MISCELLANEOUS	5,337.93	629.37	11,942.42	17,909.72
405 · INTEREST INCOME	50.56	51.17	59.60	161.33
406 · TAP FEE INCOME	15,650.00	7,920.00	13,350.00	36,920.00
408 · SEWER SURCHARGE INCOME	80.24	69.92	76.43	226.59
<b>Total Income</b>	<b>331,019.59</b>	<b>288,572.04</b>	<b>350,997.89</b>	<b>970,589.52</b>
<b>Gross Profit</b>	<b>331,019.59</b>	<b>288,572.04</b>	<b>350,997.89</b>	<b>970,589.52</b>
<b>Expense</b>				
501 · CREDIT CARD PROCESSING FEES	4,149.25	4,491.65	4,198.41	12,839.31
501.1 · CHECK PROCESSING FEES	118.00	121.90	121.15	361.05
502 · DEPRECIATION	56,560.56	56,560.56	56,560.56	169,681.68
506 · BAD DEBTS	-304.93	0.00	0.00	-304.93
507 · ELECTRICITY EXPENSE	37,385.98	39,302.52	41,137.70	117,826.20
508 · EMPLOYEE BENEFITS	26,827.88	25,081.18	29,866.75	81,775.81
509 · INSURANCE	1,095.12	43,169.12	1,095.12	45,359.36
510 · INTEREST ON BONDS PAYABLE	740.08	51,196.33	740.08	52,676.49
511 · INTEREST EXPENSE GEFA LOAN	2,111.27	2,096.74	2,082.17	6,290.18
512 · INTEREST PAYING CHARGE	0.00	0.00	73.96	73.96
513 · MATERIALS AND SUPPLIES	3,846.83	8,071.53	10,962.03	22,880.39
514 · CHEMICALS	18,495.90	4,053.82	19,781.70	42,331.42
515 · MISCELLANEOUS	-915.73	253.57	418.97	-243.19
516 · OFFICE EXPENSE AND POSTAGE	5,039.72	5,184.48	7,150.23	17,374.43
517 · INTEREST EXPENSE ON NRWA LOAN	93.96	91.78	89.60	275.34
518 · BOARD MEMBER FEES	0.00	2,850.00	0.00	2,850.00
519 · PROFESSIONAL FEES	15,585.00	417.50	85.00	16,087.50
520 · COMPUTER MAINTENANCE	0.00	0.00	10,750.00	10,750.00
522 · REPAIRS AND MAINTENANCE	16,613.07	37,354.41	25,568.30	79,535.78
523 · REPAIRS & MAINTENANCE - OFFICE	0.00	0.00	248.92	248.92
524 · SALARIES AND WAGES	110,000.02	93,547.67	82,733.47	286,281.16
525 · PAYROLL TAXES	8,881.40	7,156.42	6,329.09	22,366.91
526 · TELEPHONE	1,030.42	1,532.16	1,033.08	3,595.66
530 · EMPLOYEE UNIFORMS	431.90	494.28	968.45	1,894.63
535 · TRUCK EXPENSE	8,137.50	5,231.19	4,592.28	17,960.97
542 · TRAVEL EXPENSES	219.24	60.62	0.00	279.86
545 · JANITORIAL EXPENSE	300.00	300.00	300.00	900.00
546 · DUES AND SUBSCRIPTIONS	215.15	197.59	468.99	881.73
548 · MEALS AND ENTERTAINMENT	627.30	1,033.51	0.00	1,660.81
549 · WATER UTILITY EXPENSE	539.62	539.62	558.92	1,638.16
553 · EDUCATIONAL EXPENSE	0.00	0.00	525.00	525.00
554 · WHEELAGE & TREATMENT CHARGES	2,013.57	2,170.91	2,141.07	6,325.55
<b>Total Expense</b>	<b>319,838.08</b>	<b>392,561.06</b>	<b>310,581.00</b>	<b>1,022,980.14</b>
<b>Net Income</b>	<b>11,181.51</b>	<b>-103,989.02</b>	<b>40,416.89</b>	<b>-52,390.62</b>



## **PROJECT UPDATES**

**AS OF 2/24/2023**

**CONTRACT #1 - WATER MAIN UPGRADES  
COMPLETE**

**CONTRACT #2 - METER REPLACEMENT PROGRAM**

**IN PROGRESS**

CONTRACTORS HAVE INSTALLED 2,774 OF 4,200 METERS

**CONTRACT #3 - PUMP STATION UPGRADES**

**SAND MOUNTAIN PUMPSTATION**

**IN PROGRESS**

TENCARVA REMOVED THE PUMPS, INSTALLED THE SPACER PLATE AND REINSTALLED PUMPS  
STARTUP COULD NOT OCCUR UNTIL THE TRANSDUCER CAN BE REPLACED

**CONTRACT #4 - REHABILITATION OF WATER STORAGE TANKS**

**HOOKER & LOOKOUT TANKS COMPLETE**

**COMPLETE**

**ECWAG - (EMERGENCY COMMUNITY WATER ASSISTANCE GRANT)**

**COMPLETE**

# AWWA Free Water Audit Software: Worksheet

FWAS v6.0

American Water Works Association

Water Audit Report for: **DADE COUNTY WATER & SEWER AUTHORITY**  
 Audit Year: **2022** Jan 01 2022 - Dec 31 2022 CALENDAR

Click 'n' to add notes To edit water system info: [go to start page](#)  
 Click 'g' to determine data validity grade

To access definitions, click the input name

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

Water Supplied Error Adjustments

choose entry option:

<b>WATER SUPPLIED</b>	Volume from Own Sources: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="7"/>	821.229	MG/Yr	<input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/>	2.00%	percent	<input type="text" value="under-registration"/>		
VOSE	Water Imported: <input type="text" value="n"/> <input type="text" value="g"/>	0.000	MG/Yr						VOSEA
WI	Water Exported: <input type="text" value="n"/> <input type="text" value="g"/>	0.000	MG/Yr						WIEA
WE									WEEA
<b>WATER SUPPLIED:</b>		<b>837.989</b>	MG/Yr						

<b>AUTHORIZED CONSUMPTION</b>	Billed Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	496.572	MG/Yr						
BMAC	Billed Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>		MG/Yr						
BUAC	Unbilled Metered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="n/a"/>		MG/Yr						
UMAC	Unbilled Unmetered: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	51.263	MG/Yr						
UUAC									
<b>AUTHORIZED CONSUMPTION:</b>		<b>547.835</b>	MG/Yr						

<b>WATER LOSSES</b>	<b>290.154</b> MG/Yr								
<b>Apparent Losses</b>									
Default option selected for Systematic Data Handling Errors, with automatic data grading of 3									
SDHE	Systematic Data Handling Errors: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	1.241	MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>					
CMi	Customer Metering Inaccuracies: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	26.135	MG/Yr	<input type="text" value="5.00%"/> <input type="text" value="percent"/>		<input type="text" value="under-registration"/>			
UC	Unauthorized Consumption: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="3"/>	1.241	MG/Yr	<input type="text" value="0.25%"/> <input type="text" value="default"/>					
Default option selected for Unauthorized Consumption, with automatic data grading of 3									
<b>Apparent Losses:</b>		<b>28.618</b>	MG/Yr						

<b>Real Losses</b>	<b>Real Losses: 261.536</b> MG/Yr								
<b>WATER LOSSES:</b>		<b>290.154</b>	MG/Yr						

<b>NON-REVENUE WATER</b>	<b>NON-REVENUE WATER: 341.417</b> MG/Yr								
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<b>SYSTEM DATA</b>									
Lm	Length of mains: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="8"/>	364.0	miles	(including fire hydrant lead lengths)					
Nc	Number of service connections: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/>	8,516		(active and inactive)					
	Service connection density:	23	conn./mile main						
Are customer meters typically located at the curbstop/property line? <input type="text" value="Yes"/>									
Lp	Average length of customer service line has been set to zero and a data grading of 10 has been applied								
AOP	Average Operating Pressure: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="6"/>	104.0	psi						

<b>COST DATA</b>									
CRUC	Customer Retail Unit Charge: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="10"/>	\$4.80	\$/1000 gallons (US)	Total Annual Operating Cost					
VPC	Variable Production Cost: <input type="text" value="n"/> <input type="text" value="g"/> <input type="text" value="9"/>	\$712.81	\$/Million gallons	<input type="text" value=""/> \$/yr (optional input)					

**WATER AUDIT DATA VALIDITY TIER:**

\*\*\* The Water Audit Data Validity Score is in Tier IV (71-90). See Dashboard tab for additional outputs. \*\*\*
[go to dashboard](#)

A weighted scale for the components of supply, consumption and water loss is included in the calculation of the Water Audit Data Validity Score

**PRIORITY AREAS FOR ATTENTION TO IMPROVE DATA VALIDITY:**

Based on the information provided, audit reliability can be most improved by addressing the following components:

- |                                  |
|----------------------------------|
| 1: Volume from Own Sources (VOS) |
| 2: Billed Metered (BMAC)         |
| 3: Unauthorized Consumption (UC) |

**KEY PERFORMANCE INDICATOR TARGETS:**

OPTIONAL: If targets exist for the operational performance indicators, they can be input below:

Unit Total Losses:	<input type="text" value=""/>	gal/conn/day
Unit Apparent Losses:	<input type="text" value=""/>	gal/conn/day
Unit Real Losses <sup>1</sup> :	<input type="text" value=""/>	gal/conn/day
Unit Real Losses <sup>2</sup> :	<input type="text" value=""/>	gal/mile/day

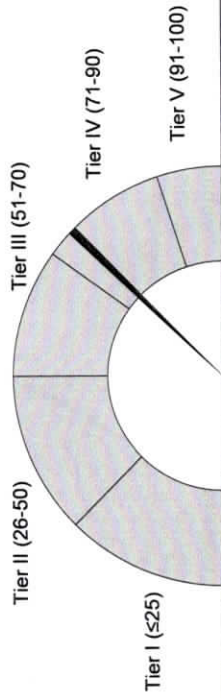
If entered above by user, targets will display on KPI gauges (see Dashboard)



**Data Validity**

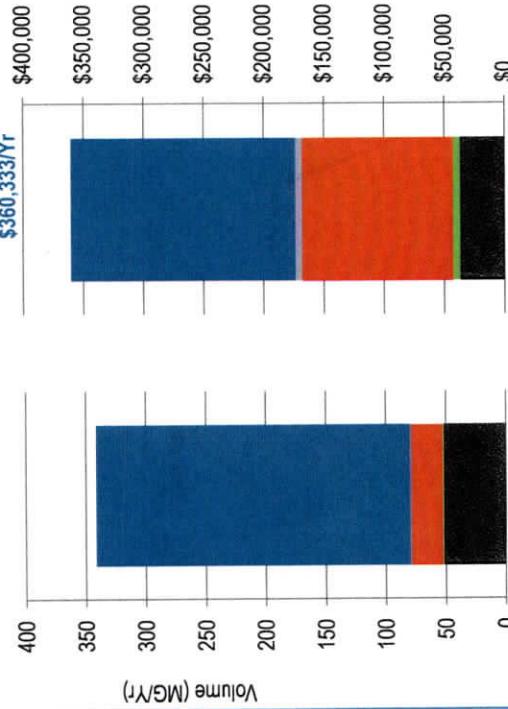
**Data Validity Score: 74** Data Validity Tier: **Tier IV (71-90)**

See [Loss Control Planning](#) for Tier Details



**NRW Components Summary**

Total Volume of NRW = **341 MG/Yr** Total Cost of NRW = **\$360,333/Yr**



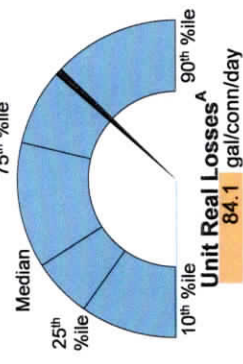
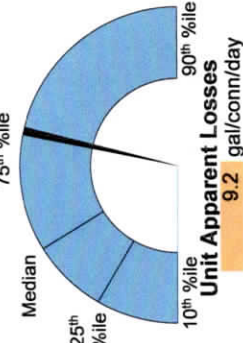
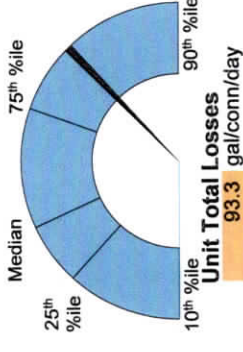
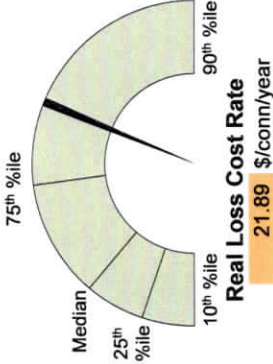
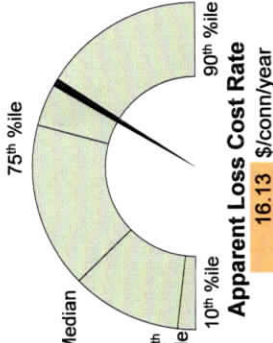
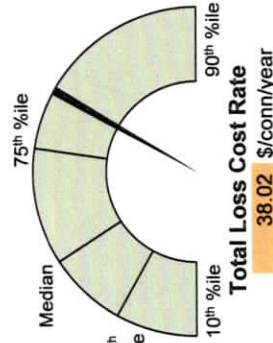
Component	Volume (MG/Yr)	Value (\$/Yr)	Basis of Valuation
Real Losses	28.6	\$137,367	CRUC
Systematic Data Handling Errors	261.5	\$186,425	VPC
Customer Metering Inaccuracies	341.4	\$360,333	VPC
Unbilled Authorized Cons			Blended
Unbilled Metered Authorized Cons			
Unauthorized Consumption			
Unbilled Unmetered Auth Cons			

**Actual KPI result**

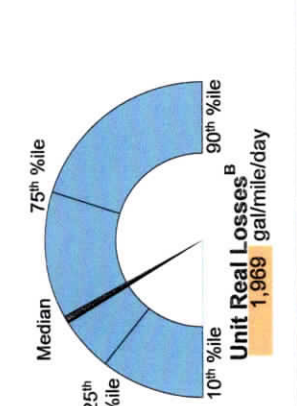
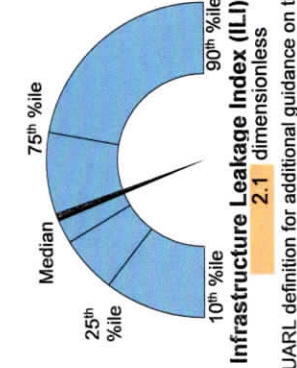
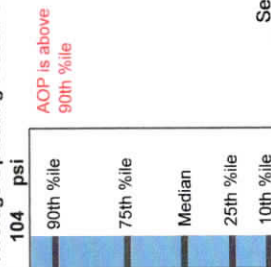
**Key Performance Indicators**

gauge %iles per validated industry ranges<sup>2</sup>

Target (see Worksheet)



**Average Operating Pressure**



See UARL definition for additional guidance on the ILI

**(UARL) Unavoidable Annual Real Losses** 123.2 MG/Yr 39.6 gal/conn/day

**Guidance Information for Key Performance Indicators**

- The eight indicators shown are the recommended suite per the AWWA Water Loss Control Committee 2020 Position on KPIs<sup>1</sup>.
- A suite of KPIs is necessary, as no single KPI can holistically communicate water loss performance for a given water system.
- See Table 1 below for Uses and Limitations for each KPI, excerpted from the AWWA Water Loss Control Committee Report (2020)<sup>1</sup>, with naming conventions updated.
- Percentiles (%iles) shown on KPI gauges come from Level 1 validated data in the AWWA WLCC Reference Water Audit Dataset (2020)<sup>2</sup>.
- KPI %iles shown above are not segregated by cohorts. Limited KPI data by cohorts may be found in WRF 4695 Guidance Manual, Appendix B (2019).
- Actual KPI results that fall below 10<sup>th</sup> %ile or above 90<sup>th</sup> %ile do not necessarily imply error, but should be viewed with scrutiny.
- Percentiles not intended to imply targets. Targets may be input by user for operational KPIs, if desired, on Worksheet.
- See UARL and ILI in Definitions tab for discussion of size and pressure limitations.
- Systems that fall on the extreme ends of size or connection density should use caution when interpreting Unit Losses KPIs.