

The Capital Finance Report includes the following.

1. Current Year Budget to Actual
2. Historical Activity
3. Look Ahead Forecast

Background: The strategic financial goals for the Great Lakes Water Authority are to be positioned as a solid AA category credit by meeting or exceeding rating agency criteria thereby reducing the cost of capital and, ultimately, the charges for regional water and sewer infrastructure.

The path to becoming a solid AA credit is based upon rebalancing debt financing with revenue generated capital (also known as pay-as-you-go) to fund the capital improvement plan (CIP) for large construction projects as well as capital outlay for equipment and other assets. By reducing the portion of annual revenue dollars that are dedicated to debt service, the following types of metrics used by rating agencies will improve.

Operating Margin	Free Cash as a Percentage of Depreciation
Debt Service Coverage	Net Position
Debt to Operating Revenue	Debt/Asset Ratio

At least annually, GLWA compares these metrics compared to prior years and to peer utilities. While progress continues to be made, a maximum debt financing approach compounded in decades past coupled with material swap termination fees in the 2011/2012 era increased the predecessor entity’s debt to a very high level compared to peers.

To reduce GLWA bonded debt service over time, an annual, incremental amount is budgeted to increase Improvement & Extension (I&E) funds. In addition, realized positive budget variances are also transferred to the I&E Fund to fund future capital improvements without increasing the debt burden.

The Master Bond Ordinances (MBO) define the I&E funds as being established within the MBO Trust for use in improving, enlarging, extending, or bettering the regional water and sewer systems.

Note: *This report is for the regional system only. The MBOs also establish similar funds for the local Detroit Water & Sewerage Department water and sewer systems. Capital program activities for DWSD are reported in their annual, audited financial statements.*

Purpose of this Report: This is the inaugural Capital Finance Report. Beginning FY 2021, this report will be presented to the Audit Committee bi-annually. This report delivers on the promise of transparency by presenting historical information to provide context, current year information to share timely and relevant data, and long-term financial plans to

demonstrate GLWA's strategic financial goal of reducing overall debt financing by utilizing accumulated I&E funds.

Current Year Budget to Actual

The budgeted sources of activity in the I&E funds are largely transfers in from the operating fund from current year revenue requirement collections and budgetary operating savings from current or prior years. Budgeted uses are for capital outlay and transfers for large capital improvement projects.

Table 1 - Water and Sewer Improvement & Extension Fund FY 2020 Budget to Actual below summarizes activity to date through April 30, 2020. Explanatory notes follow the table.

	Water			Sewer			
	Adopted Budget	Actual thru April 2020	Key %'s	Adopted Budget	Actual thru April 2020	Key %'s	
Sources							
1	Revenue Requirement (Budgeted) Transfers	\$ 30,125,500	\$ 22,593,751	75%	\$ 25,461,600	\$ 19,096,200	75%
2	Pending Amendment - DWSD Shortfall	-	(1,132,254)		-	(10,748,519)	
3	Cumulative Optimization	-	-		-	-	
4	Unrealized Market Value Adjustment	-	(921,838)		-	(88,883)	
Total Sources		<u>30,125,500</u>	<u>20,539,659</u>	<u>68%</u>	<u>25,461,600</u>	<u>8,258,798</u>	<u>32%</u>
Uses							
5	Transfers for CIP	45,000,000	-	0%	-	-	
Capital Uses							
6	Contractual Services	-	138,289		-	1,470,853	
7	Supplies & Other Expenses	-	-		-	-	
8	Capital Outlay	<u>10,125,300</u>	<u>6,033,980</u>	<u>60%</u>	<u>20,122,200</u>	<u>3,578,818</u>	<u>18%</u>
Total Capital Uses		<u>10,125,300</u>	<u>6,172,269</u>		<u>20,122,200</u>	<u>5,049,671</u>	
Total Uses		<u>55,125,300</u>	<u>6,172,269</u>	<u>11%</u>	<u>20,122,200</u>	<u>5,049,671</u>	<u>25%</u>
Increase (Decrease) in Reserves		<u>\$ (24,999,800)</u>	<u>\$ 14,367,390</u>		<u>\$ 5,339,400</u>	<u>\$ 3,209,127</u>	

Sources of Improvement & Extension Funding:

1. Revenue Requirement (Budgeted) Transfers: Revenue Requirement transfers are budgeted annual transfers to support an increasing level of revenue financed capital over time.
2. Pending Amendment - DWSD Shortfall: To the extent that the DWSD's revenue collections are less than financial commitments pursuant to the leases and MBO, GLWA provides interim funding to cure any shortfall. Repayments terms and conditions are outlined in a 2018 Memorandum of Understanding (MOU).

3. Cumulative Optimization: Cumulative Optimization reflects an annual, yearend transfer of operational savings achieved in the current fiscal year and is in addition to budgeted revenue requirement transfers.
4. Unrealized Market Value Adjustments: Investment earnings in the I&E Fund are transferred to the general operating fund to reduce the burden on charges revenues. The amount on this line is amount is an accounting recognition of unrealized adjustments to the market value of investments in the I&E Fund.

Uses of Improvement & Extension Funding:

5. Transfers for CIP Capital Uses Contractual Services: This is a strategic use of I&E funds using pay-go rather than debt for large CIP projects.
6. Contractual Services: These expenses relate to other system improvements that do not meet capitalization thresholds.
7. Supplies & Other Expenses: These expenses relate to other system improvements that do not meet capitalization thresholds.
8. Capital Outlay: Reflects assets with a useful life of less than 20 years (generally non-construction capital outlay such as machinery, equipment, vehicles, and systems).

Budget to Actual Commentary: Budgeted transfers from revenue requirements are made monthly. As we move toward the end of the fiscal year, this amount may be adjusted to accommodate the DWSD budget shortfall and/or forecasted GLWA revenue and expense variance from the GLWA adopted budget. The budgeted transfer to fund the Water System CIP has not been required to date based upon the CIP spend rate. Amounts not spent this year carryforward to the subsequent year. Capital outlay (including contractual services) have a favorable variance. Some delays in projected spending have occurred to address other organizational priorities related to the COVID-19 pandemic.

Historical Activity

Improvement & Extension funds activity began with the stand-up of the GLWA on January 1, 2016 with the transfer of opening balances. Historically, budgeted transfers were completed annually after the close of the external audit, then as cash trends improved, and now as routine activities are in place. Beginning in December 2020, transfers are completed monthly after confirming available cash balances.

Tables 2 and 3 present a historical analysis of the I&E Fund activity beginning with GLWA's first twelve-month fiscal year (FY 2017) through current interim fiscal year reporting (April 2020).

Table 2 – Water Improvement & Extension Fund Rollforward summarizes the year-over-year sources and uses of monies within the Water I&E fund as reported in the Combining Statements of the GLWA Comprehensive Annual Financial Reports. Both tables reflect a steady increase of funds for use in the CIP.

This table also compares the fund Net Position to the ending cash balance. Due to the nature of activity in this fund, most of the variance between Net Position and Cash Balance is outstanding accounts payable at yearend.

Table 2 – Water Improvement & Extension Fund Rollforward

Water Improvement & Extension Fund	FY 2017	FY 2018	FY 2019	FY 2020 (thru April 30)	Cumulative Total
Sources					
Revenue Requirement Transfers	\$ 21,958,800	\$ 25,739,700	\$ 39,133,600	\$ 22,593,751	\$ 109,425,851
Cumulative Optimization ¹	88,141,200	21,000,000	8,561,400	-	117,702,600
Unrealized Market Value Adjustment	(207,919)	-	2,314,180	(921,838)	1,184,423
Total Sources	109,892,081	46,739,700	50,009,180	21,671,913	228,312,874
Uses					
Contractual Services	-	-	2,107,743	138,289	2,246,032
Supplies & Other Expenses	147,884	-	-	-	147,884
Capital Outlay	858,305	1,984,317	5,849,231	6,033,980	14,725,833
Subtotal Capital Uses	1,006,189	1,984,317	7,956,974	6,172,269	17,119,749
DWSD Shortfall	-	-	-	1,132,254	1,132,254
Total Uses	1,006,189	1,984,317	7,956,974	7,304,523	18,252,003
Increase (Decrease) in Reserve	\$ 108,885,892	\$ 44,755,383	\$ 42,052,206	\$ 14,367,390	\$ 210,060,871
Net Position, beginning of year	66,834,234	175,720,126	220,475,509	262,527,715	
Net Position, end of year	\$ 175,720,126	\$ 220,475,509	\$ 262,527,715	\$ 276,895,105	
Cash Balance	\$ 175,901,463	\$ 220,818,636	\$ 264,713,314	\$ 278,288,750	

¹ This represents activity for FY 2017 and previous fiscal years.

Table 3 – Water Improvement & Extension Fund Uses Detail provides a listing of the specific categories and/or projects that were funded by I&E funds for FY 2017, FY 2018, FY 2019, and FY 2020 through April 30, 2020 by type of expense.

Water System - Use of Funds

	FY 2017	FY 2018	FY 2019	FY 2020 (thru April)	Cumulative Total
Capital Outlay	\$ 858,305	\$ 1,984,317	\$ 5,849,231	\$ 6,033,980	\$ 14,725,833
Machinery & Equipment	584,918	170,843	2,599,084	519,116	3,873,960
CIP Project 314001 - Security Improvements			910,972	2,432,581	3,343,553
Site Improvements		1,253,835	1,945,596		3,199,431
Capital Outlay: In Progress				2,435,776	2,435,776
Vehicles		507,007	143,393	450,065	1,100,465
Leasehold Improvements	71,150	37,631	233,677	25,511	367,969
Building		15,000	16,509	170,932	202,441
Vehicle	133,287				133,287
Furniture	68,950				68,950
Contractual Services			\$ 2,107,743	\$ 138,289	\$ 2,246,032
Project 170502 - Water Main Assessment			1,094,429	138,289	1,232,718
Condition Assessment			1,009,064		1,009,064
Contract 1803703 - Building Assessment			4,250		4,250
Supplies and Other Expenses	\$ 147,884				\$ 147,884
Leasehold Improvements	147,884				147,884
Grand Total	\$ 1,006,189	\$ 1,984,317	\$ 7,956,974	\$ 6,172,269	\$ 17,119,749

All amounts are unaudited unless otherwise noted.

GLWA Audit Committee July 17, 2020

Table 4 – Water Improvement & Extension Fund Asset Categories provides a cumulative recap of the above for FY 2017, FY 2018, FY 2019, and FY 2020 through April 30, 2020. The CIP largely includes security improvements to facilities. Based on the nature of capital items directly funded by I&E, the second highest category is machinery and equipment.

Water System - Use of Funds

	Total FY 2017 to FY 2020 (thru April)	% of Total
CIP	4,576,271	26.73%
Machinery & Equipment	3,873,960	22.63%
Site Improvements	3,199,431	18.69%
Capital Outlay: In Progress	2,435,776	14.23%
Vehicles	1,233,752	7.21%
Condition Assessment	1,013,314	5.92%
Leasehold Improvements	515,853	3.01%
Building	202,441	1.18%
Furniture	68,950	0.40%
Grand Total	\$ 17,119,749	100%

Table 5 – Sewer Improvement & Extension Fund below summarizes the year-over-year sources and uses of monies within the Sewer Improvement and Extension fund as reported in the Combining Statements of the GLWA Comprehensive Annual Financial Reports. Both tables reflect a steady increase of funds for use in the CIP.

This table also compares the fund Net Position to the ending cash balance. Due to the nature of activity in this fund, most of the variance between Net Position and Cash Balance is outstanding accounts payable at yearend.

Sewer Improvement & Extension Fund	FY 2017	FY 2018	FY 2019	FY 2020 (thru April 30)	Cumulative Total
Sources					
Revenue Requirement Transfer	\$ -	\$ 22,698,100	\$ 14,028,400	\$ 19,096,200	\$ 55,822,700
DWSD Loan Repayment	-	-	10,471,597	15,701,430	81,995,727
Cumulative Optimization	-	-	8,519,300	-	34,692,327
Transfers from Insurance Proceeds, Sale of Property	-	8,136,115	2,771,520	-	19,426,935
Unrealized Market Value Adjustment	(191,099)	-	633,168	(88,883)	11,260,821
Total Sources	<u>(191,099)</u>	<u>30,834,215</u>	<u>36,423,985</u>	<u>34,708,746</u>	<u>101,775,848</u>
Uses					
Contractual Services	-	-	21,000	1,470,853	1,491,853
Capital Outlay	19,110,580	4,740,820	10,889,201	3,578,818	38,319,419
Subtotal Capital Uses	<u>19,110,580</u>	<u>4,740,820</u>	<u>10,910,201</u>	<u>5,049,671</u>	<u>39,811,272</u>
DWSD Shortfall	49,600,000	-	-	10,748,519	60,348,519
Total Uses	<u>68,710,580</u>	<u>4,740,820</u>	<u>10,910,201</u>	<u>15,798,190</u>	<u>100,159,791</u>
Increase (Decrease) in Reserve	\$ (68,901,679)	\$ 26,093,395	\$ 25,513,784	\$ 18,910,556	\$ 1,616,057
Net Position, beginning of year	111,739,293	42,837,614	68,931,009	94,444,793	
Net Position, end of year	<u><u>\$ 42,837,614</u></u>	<u><u>\$ 68,931,009</u></u>	<u><u>\$ 94,444,793</u></u>	<u><u>\$ 113,355,350</u></u>	
Cash Balance	<u><u>\$ 43,351,603</u></u>	<u><u>\$ 62,452,793</u></u>	<u><u>\$ 96,701,199</u></u>	<u><u>\$ 124,074,954</u></u>	

Table 6 – Sewer Improvement & Extension Fund Uses Detail provides a listing of the specific categories and/or projects that were funded by I&E funds for FY 2017, FY 2018, FY 2019, and FY 2020 through April 30, 2020 by type of expense.

Sewer System - Use of Funds

	FY 2017	FY 2018	FY 2019	FY 2020 (thru April)	Cumulative Total
Capital Outlay	\$ 19,110,580	\$ 4,740,820	\$ 10,889,200	\$ 3,697,719	\$ 38,438,319
Fire Remediation	17,005,860	2,227,852	193,871		19,427,582
Machinery & Equipment	1,061,867	2,140,758	6,529,549	1,689,628	11,421,802
CIP Project 216007 - WRRF DTE 3rd Feed			2,405,283	129,827	2,535,110
Vehicle	919,937	364,562	269,001	450,065	2,003,564
Capital Outlay: In Progress				1,164,602	1,164,602
Building			667,788	736	668,524
Site Improvements			442,585	9,905	452,490
Leasehold Improvements	69,212	7,648	278,198		355,059
Contract CS-272 - Capital Program Management				252,957	252,957
CIP Project 314001 - Security Improvements			102,924		102,924
Furniture	53,705				53,705
Contractual Services			\$ 21,000	\$ 1,351,952	\$ 1,372,952
Contract CS-299 - CSO Facility Needs Assessment				1,351,952	1,351,952
Contract 1803703 - Building Assessment			21,000		21,000
Total Use of Funds	\$ 19,110,580	\$ 4,740,820	\$ 10,910,200	\$ 5,049,671	\$ 39,811,271

Table 7 – Sewer Improvement & Extension Fund Asset Categories provides a recap of the above for FY 2017, FY 2018, FY 2019, and FY 2020 through April 30, 2020 on a cumulative basis. The largest category of expense was remediation and related improvements from a fire event in March 2016. Based on the nature of capital items directly funded by I&E, the second highest category is machinery and equipment.

Sewer System - Use of Funds

	Total FY 2017 to FY 2020 (thru April)	% of Total
Fire Remediation	\$ 19,427,582	48.8%
Machinery & Equipment	11,421,802	28.7%
CIP	2,890,991	7.3%
Vehicle	2,003,564	5.0%
Condition Assessment	1,372,952	3.4%
Capital Outlay In Progress	1,164,602	2.9%
Building	668,524	1.7%
Site Improvements	452,490	1.1%
Leasehold Improvements	355,059	0.9%
Furniture	53,705	0.1%
Grand Total	\$ 39,811,271	100.0%

Look-Ahead Forecast

GLWA's strategic plans include a strategic asset management program, a capital improvement plan with a ten-year forecast and an overall ten-year financial plan. As it relates to the I&E Funds, the target balance is no less than \$90 million in each system to ensure reliable funding while strategically evaluating the best timing for new debt issuances.

Table 8 - Water Improvement & Extension Fund Projections highlights that over the ten-year forecast, the water system financial plan provides for \$1.593 billion in capital improvements. Just over 55% of the improvements are expected to be funded with debt while 45% would be funded with I&E Funds. Variances from that plan would be driven by changes in the capital spending pace, opportunities to leverage low-cost state revolving fund dollars, and unforeseeable events.

GLWA Wholesale System Capital Improvement Program Financing Plan (\$ millions)

Line No.	Fiscal Year Ended June 30,												
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total	
Financing Requirements													
1	Budgeted Capital Outlay	10.1	17.9	13.8	5.4	5.5	4.7	4.8	4.9	5.0	5.1	5.2	82.4
2	Major Capital Improvement Program (a)	83.8	110.7	134.9	151.4	159.6	144.9	151.0	157.9	154.1	131.7	130.5	1,510.6
3	Total Financing Requirements	94.0	128.6	148.7	156.8	165.1	149.6	155.8	162.8	159.1	136.8	135.7	1,593.0
Application of Financing Sources													
20	I&E Funds - Budgeted Capital Outlay	10.1	17.9	13.8	5.4	5.5	4.7	4.8	4.9	5.0	5.1	5.2	82.4
21	I&E Funding of Debt Eligible Projects	50.0	75.0	85.0	55.0	42.5	45.0	47.5	52.5	55.0	60.0	62.5	630.0
22	Project Expenditures from Construction Funds	33.8	35.7	49.9	96.4	117.1	99.9	103.5	105.4	99.1	71.7	68.0	880.6
23	Total Financing Sources Applied	94.0	128.6	148.7	156.8	165.1	149.6	155.8	162.8	159.1	136.8	135.7	1,593.0

Table 9 - Water Improvement & Extension Fund Capital Funding Year-end Projections shows that presently, GLWA is materially above the \$90 million target for I&E year-end cash balance. The financial plan encompasses spending down the existing I&E Funds. The last market transaction for water system bonds was in 2016 in the amount of \$226 million. The next new money market bond transaction is projected for FY 2023 for an estimated amount of \$220 million.

Line No.	Fiscal Year Ended June 30,												
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total	
Financing Sources Available for Future Requirements													
24	Improvement & Extension Funds (g)	236.2	172.8	116.2	93.5	91.7	91.5	90.7	91.0	90.9	92.3	92.5	92.5
25	Construction Bond Funds (h)	72.5	50.0	17.1	146.7	49.4	133.6	50.0	147.0	52.6	118.0	51.3	51.3
26	Financing Sources Available for Future Req'ts	308.7	222.8	133.3	240.1	141.1	225.1	140.7	238.0	143.5	210.2	143.8	143.8

Table 10 - Sewer Improvement & Extension Capital Funding Projections highlights that over the ten-year forecast, the sewer system financial plan provides for \$1.549 billion in capital improvements. Slightly over 33% of the improvements are expected to be funded with debt while 67% would be funded with I&E Funds. Variances from that plan would be driven by changes in the capital spending pace, opportunities to leverage low-cost state revolving fund dollars, and unforeseeable events.

Line No.	Fiscal Year Ended June 30,												
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total	
Financing Requirements													
1	Budgeted Capital Outlay	20.1	20.5	15.8	9.8	10.4	14.8	15.1	15.4	15.7	16.0	16.3	169.8
2	Major Capital Improvement Program (a)	94.8	83.0	84.6	105.6	152.4	129.0	134.3	135.6	137.5	154.7	167.2	1,378.7
3	Total Financing Requirements	114.9	103.5	100.4	115.4	162.8	143.7	149.4	151.0	153.2	170.7	183.5	1,548.5
Financing Sources													
Application of Financing Sources													
20	I&E Funds - Budgeted Capital Outlay	20.1	20.5	15.8	9.8	10.4	14.8	15.1	15.4	15.7	16.0	16.3	169.8
21	I&E Funding of Debt Eligible Projects	25.0	50.0	35.0	55.0	70.0	85.0	85.0	92.5	105.0	125.0	125.0	852.5
22	Project Expenditures from Construction Funds	69.8	33.0	49.6	50.6	82.4	44.0	49.3	43.1	32.5	29.7	42.2	526.2
23	Total Financing Sources Applied	114.9	103.5	100.4	115.4	162.8	143.7	149.4	151.0	153.2	170.7	183.5	1,548.5

Table 11 - Sewer Improvement & Extension Fund Capital Funding Year-end Projections shows that presently, GLWA is within the \$90 million target for I&E year-end cash balance. The last market transaction for water system bonds was in 2014 as the predecessor entity (DWSD) in the amount of \$150 million. The next new money market bond transaction is projected for FY 2023 for an estimated amount of \$150 million.

Line No.	Fiscal Year Ended June 30,												
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total	
Financing Sources Available for Future Requirements													
24	Improvement & Extension Funds (g)	94.5	88.9	96.0	92.7	89.8	90.9	90.7	91.2	90.1	89.0	90.1	90.1
25	Construction Bond Funds (h)	53.4	54.2	20.2	133.9	52.9	99.0	50.8	83.6	52.2	93.8	52.7	52.7
26	Financing Sources Available for Future Req'ts	148.0	143.1	116.2	226.6	142.6	189.9	141.5	174.9	142.3	182.8	142.7	142.7