May 2025 Rating Agency Review Report

Presented to the
Great Lakes Water Authority
Audit Committee June 6, 2025

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To Our Stakeholders:

In conjunction with an upcoming 2025 bond transaction, the Great Lakes Water Authority (GLWA) has met with each of three rating agencies and recently received the rating reports.

Key Takeaways:

Good news! As noted in Fitch's Press Release and New Issue Report for the sewer system, **GLWA received a positive bond rating action from Fitch on the Sewer System.** In advance of the 2025 bond transaction, Fitch Ratings upgraded GLWA's senior lien debt rating by **one notch from AA- to AA** and second lien debt rating from A+ to AA- with a stable outlook for the sewer system.

As noted in the Fitch Rating's Press Release and New Issue Report for the water system, Fitch Ratings also affirmed GLWA's senior lien debt rating of A+ and second lien debt rating of A with a stable outlook.

As noted in Moody's Press Release and Credit Opinion for both the water and sewer systems, Moody's Investors Service affirmed GLWA's senior lien debt rating of Aa3 and second lien debt rating of A1 with a stable outlook.

As noted in S&P's Research Updates for both the water and sewer systems, Standard & Poor Global Ratings affirmed GLWA's senior lien debt rating of AA- and second lien debt rating of A+ with a stable outlook.

The rating agency reports are included for more information.

Please do not hesitate to contact us at PublicFinance@glwater.org if you have questions, comments, or concerns.

Fitch Ratings

FitchRatings

RATING ACTION COMMENTARY

Fitch Rates Great Lakes Water Authority's Water Revs 'A+'/'A'; Outlook Stable

Thu 29 May, 2025 - 1:47 PM ET

Fitch Ratings - New York - 29 May 2025: Fitch Ratings has assigned the following ratings to the obligations issued by the Great Lakes Water Authority, MI (GLWA):

--Approximately $159.6 million water supply system revenue refunding senior lien bonds series 2025A, 'A+';

--Approximately $66.1 million water supply system revenue refunding second lien bonds series 2025B, 'A';

--Approximately $109.9 million water supply system revenue senior lien bonds series 2025C, 'A+';

--Approximately $109.6 million water supply system revenue second lien bonds series 2025D, 'A'.

The bonds are scheduled to sell via negotiation the week of June 16. Proceeds will be used to (i) refund certain bonds and pay costs of issuance, (ii) purchase certain bonds tendered and accepted for purchase by the authority, (iii) pay costs of capital improvements to the regional water system (the system) and (iv) pay certain issuance costs.

Fitch has also affirmed the ratings on the following GLWA bonds, including bonds previously issued by the city of Detroit (the city) and the Michigan Finance Authority, MI on behalf of the Detroit Water and Sewerage Department (DWSD) and assumed by GLWA (all pre-refunding):

--Approximately $1.6 billion senior lien water supply system revenue bonds at 'A+';

--Approximately $652 million second lien water supply system revenue bonds at 'A.'

Fitch has assessed the system's Standalone Credit Profile (SCP) at 'a'.

The Rating Outlook is Stable.

RATING ACTIONS

ENTITY / DEBT	RATING			PRIOR
Great Lakes Water Authority (MI) [Water]				
Great Lakes Water Authority (MI) /Water Revenues (2nd Lien)/2 LT	LT	A Rating Outlook Stable	Affirmed	A Rating Outlook Stable
Great Lakes Water Authority (MI) /Water Revenues/1 LT	LT	A+ Rating Outlook Stable	Affirmed	A+ Rating Outlook Stable

VIEW ADDITIONAL RATING DETAILS

The 'A+' and 'A' bond ratings on GLWA's senior and subordinate bonds, respectively, and the 'a' SCP consider the system's 'Strong' financial profile within the context of 'Very Strong' revenue defensibility and operating risk profiles, both assessed at 'aa'. Leverage, measured by Fitch as net adjusted debt to adjusted funds available for debt service (FADS), was 10.1x in fiscal 2024 (FYE June 30), declining slightly from 10.2x in fiscal years 2022 and 2023.

The system's leverage is anticipated to rise through fiscal 2029 as it implements a robust capital improvement plan (CIP) financed in part with additional annual debt issuances. Revenue requirements to fund the CIP are likely to be higher than historical requirements but are expected by Fitch to remain manageable overall. If the CIP is fully executed, leverage may reach about 11.9x in fiscal 2027, before falling to around 10.8x by fiscal 2029. Overall leverage should remain in line with the current rating.

The revenue defensibility assessment considers the authority's ability to reallocate any shortfalls from a nonperforming customer to its performing customers via a rate increase and the overall strength of such customers. While the credit quality of DWSD's water system is considered 'Midrange' by Fitch, other significant customers have stronger credit profiles, resulting in strong overall purchaser credit quality (PCQ). The operating risk profile considers the system's very low operating cost burden, coupled with its low but recently rising life cycle ratio.

The notching distinction between the senior and the second lien bonds reflects the meaningful protection afforded to senior debt given the sizable balance of subordinated obligations, the latter of which include the second lien bonds, state revolving fund loans and the long-term leases payable under the lease agreement between DWSD and the authority, as well as the absence of an automatic cross-default or acceleration between the liens.

SECURITY

Senior lien bonds are secured by a first lien on net revenues of the system. Second lien bonds are secured by net revenues after payment of the senior lien bonds.

KEY RATING DRIVERS

Revenue Defensibility - 'aa'

Strong PCQ, 'Very Strong' Revenue Source Characteristics

The authority has contract provisions that allow for full cost recovery and the unlimited reallocation of costs across users. Under the Water and Sewer Services Agreement (WSSA) in place with DWSD, the authority has the exclusive right to establish rates for the water service it provides. The authority has delegated to the city its right to establish rates with respect to services provided to city of Detroit customers.

Revenue defensibility is supported by purchasers that exhibit strong credit quality. The city of Detroit accounts for approximately 27% of fiscal 2024 operating revenues (inclusive of the local water system operating revenues). Other key wholesale customers include Southeastern Oakland County Water Authority (6%), Sterling Heights (4%), Shelby Township (3%), and Livonia (3%). Although the city's system exhibits 'Midrange' credit quality, the strong PCQ also incorporates the credit quality of suburban members listed above. The local water system is the portion of the system that provides service directly to the city's retail customers.

Operating Risk - 'aa'

Very Low Operating Cost Burden, Moderate Investment Needs

In fiscal 2024, the system's operating cost burden was considered very low at $2,641 per million gallons (mg), consistent with the operating risk assessment. The life cycle ratio was very low at 33% in fiscal 2024, reversing the increase seen in prior years. As calculated by Fitch, capex to depreciation, historically weak, has improved to a five-year average of 103% in fiscal 2024. Planned capital spending for the next five years should generally outpace historical depreciation, supporting a continued very low life cycle ratio.

The DWSD CIP is funded through the lease payments and debt issued by GLWA for local DWSD water projects. Planned CIP spending for 2025-2029 for the consolidated GLWA and DWSD water system approximates $1.6 billion. The CIP is anticipated to be primarily funded with debt, including State Revolving Fund proceeds.

Financial Profile - 'a'

Leverage to Increase Modestly; Neutral Liquidity

The system had moderate leverage of 10.1x as of fiscal 2024, which is in line with historical performance of between 9.8x and 10.7x since fiscal 2020. The liquidity profile is neutral to the overall assessment, with a Fitch-calculated liquidity cushion of 440 days and coverage of full obligations (COFO) of 1.7x. Fitch-calculated total debt service coverage was also 1.7x in fiscal 2024. Financial metrics reflect Fitch's approach with respect to the inclusion of DWSD financials.

The Fitch Analytical Stress Test (FAST) considers the potential trend of key ratios in a base case and stress case over a five-year period. The stress case is designed to impose capital costs 10% above expected base case levels and evaluate potential variability in projected key ratios. The FAST reflects Fitch's view of a reasonable scenario, which is generally informed by publicly available and/or management-provided information with respect to capex, user charges and rate of revenue and expenditure growth.

In the base case scenario, the leverage ratio is projected to increase to 11.6x in fiscal 2027 and then decrease to 10.4x through fiscal 2029. In the stress scenario, which is considered the rating case, the leverage ratio follows a similar trajectory, peaking at 11.9x in fiscal 2027 before declining to 10.8x over the next three years. Liquidity is expected to remain neutral to the assessment over the five-year horizon.

Asymmetric Additional Risk Considerations

No asymmetric additive considerations affected this rating determination.

RATING SENSITIVITIES

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

--Sustained leverage approaching 13.0x in Fitch's rating case scenario through the forward period, assuming stability in the revenue defensibility and operating risk assessments;

--Downward revisions to the system's overall PCQ;

--Material declines in liquidity that expose bondholders to the timing risk of the true-up;

--The senior lien rating could converge at the SCP assessment if there is a significant erosion of the financial cushion afforded to senior bondholders that results in a lack of meaningful difference in the probability of payment default between the liens.

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

--Sustained leverage below 11.0x in Fitch's rating case scenario, assuming stability in the current revenue defensibility and operating risk assessments.

PROFILE

GLWA provides wholesale water services to a population of approximately 3.8 million, or 38% of the state's population. In January 2016, the authority assumed operational control of Detroit's system assets (excluding its local distribution infrastructure) via a 40-year lease agreement (which automatically extends to coincide with outstanding bonds) and authorized GLWA the right to set and collect rates from the customers historically served by the city.

Separately, a security interest in the city's system-related revenues was granted under the Master Bond Ordinance, while the WSSA assigned the city the right to set and collect rates from its retail customers. The agreement required GLWA to assume all liabilities of the regional water and sewer systems, including outstanding indebtedness related to the respective systems.

System assets include five water treatment plants that can collectively treat around 1.7 billion gallons per day, an extensive conveyance system and many water storage reservoirs.

Water is supplied to the treatment plants via the Detroit River, Lake Huron and Lake St. Clair. Supply and capacity are robust and more than sufficient for the long-term anticipated needs of the service area.

GLWA financial metrics reported by Fitch and used in its historical analysis are based on financial statements that are adjusted as outlined below in "Summary of Financial Statement Analysis".

Updated U.S. Environmental Protection Agency (EPA) Regulations

The authority is addressing new regulations set forth by the U.S. EPA. The EPA's enhanced focus on lead and coper lines and per- and polyfluoroalkyl (PFAS) contaminants has led to the finalized Lead and Copper Rule Improvements (LCRI) along with specific testing requirements for PFAS.

Compliance with the LCRI is not expected to pose a challenge; as a wholesale provider, lead service lines (LSL) are not within GLWA's oversight. However, to date one of the authority's purchasers, DWSD, has secured over $100 million in American Rescue Plan Act funds for LSL replacement projects. Testing to date had not detected any PFAS contaminants above legislated levels.

SUMMARY OF FINANCIAL ADJUSTMENTS

In its analysis, Fitch adjusted GLWA's 'Statement of Revenues, Expenses and Changes in Net Position' to include information from DWSD's 'Statement of Revenues, Expenses and Changes in Net Position.' The adjustments are made to provide greater comparability of GLWA's financial position in accordance with the flow of funds under the bond ordinances and lease-related agreements.

Sources of Information

In addition to the sources of information identified in Fitch's applicable criteria specified below, this action was informed by data from DIVER by Solve.

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

ESG CONSIDERATIONS

The highest level of ESG credit relevance is a score of '3', unless otherwise disclosed in this section. A score of '3' means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. Fitch's ESG Relevance Scores are not inputs in the rating process; they are an observation on the relevance and materiality of ESG factors in the rating decision. For more information on Fitch's ESG Relevance Scores, visit https://www.fitchratings.com/topics/esg/products#esg-relevance-scores.

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APPLICABLE CRITERIA

U.S. Public Sector, Revenue-Supported Entities Rating Criteria (pub. 10 Jan 2025) (including rating assumption sensitivity)

U.S. Water and Sewer Rating Criteria (pub. 24 Feb 2025) (including rating assumption sensitivity)

ADDITIONAL DISCLOSURES

Dodd-Frank Rating Information Disclosure Form

Solicitation Status

Endorsement Policy

ENDORSEMENT STATUS

Great Lakes Water Authority (MI)	EU Endorsed, UK Endorsed

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Great Lakes Water Authority, Michigan [Water]

The 'A+' and 'A' bond ratings on GLWA's senior and subordinate bonds, respectively, and the 'a' SCP consider the system's 'Strong' financial profile within the context of 'Very Strong' revenue defensibility and operating risk profiles, both assessed at 'aa'. Leverage, measured by Fitch as net adjusted debt to adjusted funds available for debt service (FADS), was 10.1x in fiscal 2024 (FYE June 30), declining slightly from 10.2x in fiscal years 2022 and 2023.

The system's leverage is anticipated to rise through fiscal 2029 as it implements a robust capital improvement plan (CIP) financed in part with additional annual debt issuances. Revenue requirements to fund the CIP are likely to be higher than historical requirements but are expected by Fitch to remain manageable overall. If the CIP is fully executed, leverage may reach about 11.9x in fiscal 2027, before falling to around 10.8x by fiscal 2029. Overall leverage should remain in line with the current rating.

The revenue defensibility assessment considers the authority's ability to reallocate any shortfalls from a nonperforming customer to its performing customers via a rate increase and the overall strength of such customers. While the credit quality of Detroit Water and Sewerage Department's (DWSD's) water system is considered 'Midrange' by Fitch, other significant customers have stronger credit profiles, resulting in strong overall purchaser credit quality (PCQ). The operating risk profile considers the system's very low operating cost burden, coupled with its low but recently rising life cycle ratio.

The notching distinction between the senior and the second lien bonds reflects the meaningful protection afforded to senior debt given the sizable balance of subordinated obligations, the latter of which include the second lien bonds, state revolving fund loans and the long-term leases payable under the lease agreement between DWSD and the authority, as well as the absence of an automatic cross-default or acceleration between the liens.

Security

Senior lien bonds are secured by a first lien on net revenues of the system. Second lien bonds are secured by net revenues after payment of the senior lien bonds.

Assessments

Standalone Credit Profile	a

Outlooks

Standalone Credit Profile	Stable

New Issues

$159,620,000 Water Supply System Revenue Refunding Senior Lien Bonds, Series 2025A	A+
$66,125,000 Water Supply System Revenue Refunding Second Lien Bonds, Series 2025B	A
$109,855,000 Water Supply System Revenue Senior Lien Bonds, Series 2025C	A+
$109,590,000 Water Supply System Revenue Second Lien Bonds, Series 2025D	A

Sale Date

The bonds are expected to sell via negotiation the week of June 16, 2025.

Outstanding Debt

Issuer Ratings Information

Applicable Criteria

U.S. Water and Sewer Rating Criteria (February 2025)

Related Research

Fitch Rates Great Lakes Water Authority's Water Revs 'A+'/'A'; Outlook Stable (May 2025)

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Key Rating Drivers

Revenue Defensibility - 'aa'

Strong PCQ, 'Very Strong' Revenue Source Characteristics

The authority has contract provisions that allow for full cost recovery and the unlimited reallocation of costs across users. Under the Water and Sewer Services Agreement (WSSA) in place with DWSD, the authority has the exclusive right to establish rates for the water service it provides. The authority has delegated to the city its right to establish rates with respect to services provided to city of Detroit customers.

Revenue defensibility is supported by purchasers that exhibit strong credit quality. The city of Detroit accounts for approximately 27% of fiscal 2024 operating revenues (inclusive of the local water system operating revenues). Other key wholesale customers include Southeastern Oakland County Water Authority (6%), Sterling Heights (4%), Shelby Township (3%), and Livonia (3%). Although the city's system exhibits 'Midrange' credit quality, the strong PCQ also incorporates the credit quality of suburban members listed above. The local water system is the portion of the system that provides service directly to the city's retail customers.

Operating Risk - 'aa'

Very Low Operating Cost Burden, Moderate Investment Needs

In fiscal 2024, the system's operating cost burden was considered very low at $2,641 per million gallons (mg), consistent with the operating risk assessment. The life cycle ratio was very low at 33% in fiscal 2024, reversing the increase seen in prior years. As calculated by Fitch, capex to depreciation, historically weak, has improved to a five-year average of 103% in fiscal 2024. Planned capital spending for the next five years should generally outpace historical depreciation, supporting a continued very low life cycle ratio.

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Financial Profile - 'a'

Leverage to Increase Modestly; Neutral Liquidity

The system had moderate leverage of 10.1x as of fiscal 2024, which is in line with historical performance of between 9.8x and 10.7x since fiscal 2020. The liquidity profile is neutral to the overall assessment, with a Fitch-calculated liquidity cushion of 440 days and coverage of full obligations (COFO) of 1.7x. Fitch-calculated total debt service coverage was also 1.7x in fiscal 2024. Financial metrics reflect Fitch's approach with respect to the inclusion of DWSD financials.

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Asymmetric Additional Risk Considerations

No asymmetric additive considerations affected this rating determination.

Sensitivities

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

- Sustained leverage approaching 13.0x in Fitch's rating case scenario through the forward period, assuming stability in the revenue defensibility and operating risk assessments.
- Downward revisions to the system's overall PCQ.
- Material declines in liquidity that expose bondholders to the timing risk of the true-up.

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Profile

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Compliance with the LCRI is not expected to pose a challenge; as a wholesale provider, lead service lines (LSL) are not within GLWA's oversight. However, to date one of the authority's purchasers, DWSD, has secured over $100 million in American Rescue Plan Act funds for LSL replacement projects. Testing to date had not detected any PFAS contaminants above legislated levels.

Revenue Defensibility

Revenue Source Characteristics

Revenue source characteristics reflect the strength of legal agreements between the city and the authority's regional municipal customers and the ability to reallocate costs should the need arise. Any bad debt expense from a wholesale customer is charged to other wholesale customers. These charges are generally levied prospectively but may also be accomplished via a true-up. Most wholesale contracts last 30 years with an automatic 10-year renewal and a five-year notice requirement for termination. There is no meaningful, feasible alternate supply in the region to which the purchasers could look to replace the authority’s supply.

Rate Flexibility

GLWA has very strong rate flexibility; no external approval is required to adjust rates. The wholesale agreements for the majority of the authority's regional water municipal customers are based on a 60% fixed service charge component and a 40% commodity charge, which are reviewed and adjusted annually. Rates for customers within the city of Detroit are currently established by the city, and there is no external approval required to establish these rates. Further, should the city fail to perform its duties or meet its obligations under the WSSA, the authority may terminate the agency relationship and adjust rates as deemed necessary.

Purchaser Credit Quality

Detroit comprised about 27% of authority operating revenues in fiscal 2024. Other large municipal customers include the Southeast Oakland County Water Authority (6%), North Oakland County Water Authority (5%) and Sterling Heights (4%).

The PCQ reflects a Purchaser Credit Index (PCI) score approaching 2.5, which continues to include a midrange assessment for the city of Detroit system. The PCI also includes the city of Livonia, Southeast Oakland County Water

Authority, Sterling Heights and Shelby Township. Fitch made an additional assumption that 5% of revenues from other suburban wholesale customers are assessed as very strong.

Asymmetric Factor Considerations

No asymmetric factor considerations affected the revenue defensibility assessment.

Operating Risk

Operating Cost Burden

The system's operating cost burden is very low, approximating $2,641 per mg in fiscal 2024, incrementally increasing from fiscal 2020 when it measured about $2,371 per mg. System operating costs are anticipated to rise over time, reflecting in part recent inflationary pressures with respect to chemicals and power. However, given the economies of scale, Fitch expects the operating cost burden to remain very low over the long term, supporting the overall operating risk assessment.

The system's pension obligations and associated expenses should continue to trend downward. Detroit's General Retirement System Plan was frozen in 2014. Under an agreement between GLWA and DWSD, payments to fund the pension liability were made over the nine years ended June 30, 2023. Remaining payments will reflect updated actuarial valuations and are anticipated to be $1.1 million annually through 2034.

Capital Planning and Management

The authority began depreciating infrastructure when system assets were conveyed from the city to GLWA. In fiscal 2024, the life cycle ratio was 33%, increasing from 25% in 2020. The current life cycle ratio fell slightly in fiscal 2024 and should remain relatively stable given annual capital investment forecasted at over $200 million the next few years. Capex to depreciation averaged 103% over the past five fiscal years.

More recently, capital investment has increased, with fiscal 2024 capex of $180.7 million, or 135% of annual depreciation. The system's capital plan for the near to intermediate term is robust and anticipated to support a continued very low life cycle ratio.

The Regional Water System draws its water from the largest freshwater source in North America, the Great Lakes system, with Lake Huron to the north, the Detroit River to the south and Lake St. Clair to the east. With access to nearly 2 billion gallons of high quality source water and with three separate intakes, the authority has highly reliable and more than sufficient source water for current and projected demand.

The major components of the Regional Water System include five treatment plants (1,720 mgd capacity), an extensive distribution system consisting of over 816 miles of transmission mains throughout the service area, 19 booster pumping stations and 32 water storage reservoirs (14 at the water treatment plants and 18 booster stations) located throughout the Regional Water System. Water flow and pressure throughout the Regional Water System are monitored and controlled by a systems control center housed in the authority's central services facility.

Asymmetric Factor Considerations

No asymmetric factor considerations affected the operating risk assessment.

Financial Profile and FAST Analysis

The system's overall financial profile is strong and is assessed at 'a'. The system's leverage ratio finished 2024 at about 10.1x, generally in line with results since 2020. Senior and all-in debt service coverage finished at 2.0x and 1.7x, respectively, in fiscal 2024. Liquidity has remained very robust, with a Fitch-calculated liquidity cushion averaging 592 days over the past five years. COFO has been above 1.7x since 2020. Historical calculations reflect Fitch's adjustments to include information from DWSD's water system audit, including revenues, expenditures and unrestricted cash.

FAST

The FAST base case assumptions used by Fitch include the authority's latest forecasts and projected capex. The authority seeks to maintain debt service coverage of between 1.2x and 1.3x over the five-year horizon. However, the increasing capital plan and higher capital execution rate result in increasing leverage in the FAST, with the base case peaking in fiscal 2027 at 11.6x and the stress (rating) case peaking at 11.9x in the same year. This leverage remains consistent with the financial profile and current ratings. The liquidity profile is expected to remain neutral to the assessment, with COFO of at least 1.2x and sound days cash annually.

Summary of Financial Adjustments

In its analysis, Fitch adjusted GLWA's 'Statement of Revenues, Expenses and Changes in Net Position' to include information from DWSD's 'Statement of Revenues, Expenses and Changes in Net Position.' The adjustments are made to provide greater comparability of GLWA's financial position in accordance with the flow of funds under the bond ordinances and lease-related agreements.

Asymmetric Additive Risk Considerations

No asymmetric additive risk considerations affected this credit determination.

ESG Considerations

The highest level of ESG credit relevance is a score of '3', unless otherwise disclosed in this section. A score of '3' means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. Fitch's ESG Relevance Scores are not inputs in the rating process; they are an observation on the relevance and materiality of ESG factors in the rating decision. For more information on Fitch's ESG Relevance Scores, visit https://www.fitchratings.com/topics/esg/products#esg-relevance-scores.

Financial Summary

(Audited Fiscal Years Ended June 30)	2020	2021	2022	2023	2024
Operating Risk					
Operating Cost Burden					
Operating Cost Burden ($/mg)	2,371	2,327	2,341	2,568	2,641
Capital Planning and Management					
Life Cycle Ratio (%)	25	28	32	35	33
Annual CapEx/Depreciation (%)	51	88	109	133	135
5—Year Average Capex/Depreciation (%)	32	46	62	84	103
Financial Profile ($000, unless otherwise indicated)					
Current Unrestricted Cash/Investments	463,296	415,754	294,240	299,227	302,705
Current Restricted Cash/Invest (Available Liquidity)	17,264	6,612	7,187	6,313	3,029
Current Cash Available	480,560	422,366	301,426	305,540	305,734
Noncurrent Unrestricted Cash/Investments	-	-	-	-	-
Noncurrent Restricted Cash/Invest (Available Liquidity)	-	-	-	-	-
Available Cash	480,560	422,366	301,426	305,540	305,734
Current Restricted Cash/Invest (Debt Service or Debt Service Reserve)	39,621	50,347	61,146	116,640	161,199
Noncurrent Restricted Cash/Invest (Debt Service or Debt Service Reserve)	11,100	11,171	5,094		
Funds Restricted for Debt Service	50,721	61,518	66,240	116,640	161,199
Total Debt	3,026,901	2,965,961	2,917,015	3,163,488	3,239,328
Capitalized Fixed Charges	-	-	-	-	-
Adjusted Net Pension Liability	64,601	63,388	26,501	26,353	15,378
Available Cash	480,560	422,366	301,426	305,540	305,734
Funds Restricted for Debt Service	50,721	61,518	66,240	116,640	161,199
Net Adjusted Debt	2,560,221	2,545,465	2,575,849	2,767,661	2,787,773
Total Operating Revs	449,087	456,421	462,181	505,668	502,138
Purchased Water/Sewer Services	-	-	-	-	-
Other Operating Expenses	206,337	213,307	213,715	257,607	253,611
EBITDA	242,750	243,114	248,466	248,061	248,526
Investment Income/(Loss)	10,485	4,215	-2,361	16,724	27,287
Non—Operating Revenues from Taxes	-	-	-	-	-
Other Cash Revenues/(Expenses)	2,186	-177	389	526	-2,286
BAB Subsidy	-	-	-	-	-
Capital Contributions	-	-	-	-	-
Funds Available for Debt Service	255,422	247,152	246,493	265,312	273,528
Fixed Services Expense	-	-	-	-	-
Net Transfers In/(Out)	-	-	-	-	-
Pension Expense	7,221	8,075	4,988	-7,444	2,403
Adjusted Funds Available for Debt Service	262,642	255,228	251,482	257,869	275,931
Net Adjusted Debt/Adjusted Funds Available for Debt Service (x)	**9.8**	**10.0**	**10.2**	**10.7**	**10.1**
Funds Available for Debt Service	255,422	247,152	246,493	265,312	273,528
Fixed Services Expense	-	-	-	-	-
Net Transfers In/(Out)	-	-	-	-	-
Adjusted FADS for Coverage of Full Obligations	255,422	247,152	246,493	265,312	273,528

Financial Summary

(Audited Fiscal Years Ended June 30)	2020	2021	2022	2023	2024
Total Annual Debt Service	145,633	134,265	135,962	147,131	159,998
Fixed Services Expense	-	-	-	-	-
Adjusted Debt Service (Includes Fixed Services Expense)	145,633	134,265	135,962	147,131	159,998
Coverage of Full Obligations (x)	1.75	1.84	1.81	1.80	1.71
Coverage of Full Obligations Excluding Connection Fees (x)	1.75	1.84	1.81	1.80	1.71
Current Days Cash on Hand	850	723	515	433	440
Liquidity Cushion Ratio (Days)	850	723	515	433	440
All—In Debt Service Coverage (x)	1.75	1.84	1.81	1.80	1.71

Notes: Fitch may have reclassified certain financial statement items for analytical purposes. N.A. - Not Available.
Sources: Fitch Ratings, Fitch Solutions, Great Lakes Water Authority (MI)

SOLICITATION & PARTICIPATION STATUS

For information on the solicitation status of the ratings included within this report, please refer to the solicitation status shown in the relevant entity's summary page of the Fitch Ratings website.

For information on the participation status in the rating process of an issuer listed in this report, please refer to the most recent rating action commentary for the relevant issuer, available on the Fitch Ratings website.

FitchRatings

RATING ACTION COMMENTARY

Fitch Rates Great Lakes Water Authority's Sewage Revs 'AA' and 'AA-'; Outlook Stable

Thu 29 May, 2025 - 2:05 PM ET

Fitch Ratings - New York - 29 May 2025: Fitch Ratings has assigned the following ratings to the obligations issued by the Great Lakes Water Authority (GLWA):

--Approximately $46.7 million Sewage Disposal System Revenue Refunding Senior Lien Bonds Series 2025A 'AA';

--Approximately $258.2 million Sewage Disposal System Revenue Refunding Second Lien Bonds Series 2025B 'AA-';

--Approximately $47.7 million Sewage Disposal System Revenue Second Lien Bonds Series 2025C 'AA-'.

The bonds are scheduled to price the week of June 16 through negotiation. Proceeds will be used to fund sewer system capital improvements, to refund and/or tender certain system revenue bonds and pay costs of issuance.

Additionally, Fitch has upgraded the ratings on the following GLWA obligations, including bonds previously issued by the city of Detroit (the city) and the Michigan Finance Authority on behalf of the Detroit Water and Sewerage Department (DWSD) and assumed by GLWA:

--Approximately $1.7 billion sewage disposal system revenue senior lien bonds to 'AA' from 'AA-'(pre-refunding);

--Approximately $746.2 million sewage disposal system revenue second lien bonds to 'AA-' from 'A+' (pre-refunding).

Fitch has assessed GLWA sewer system's Standalone Credit Profile (SCP) at 'aa-'.

The Rating Outlook is Stable.

RATING ACTIONS

ENTITY / DEBT	RATING			PRIOR
Great Lakes Water Authority (MI) [Sewer]				
Great Lakes Water Authority (MI) /Sewer Revenues (2nd Lien)/2 LT	LT	AA- Rating Outlook Stable	Upgrade	A+ Rating Outlook Positive
Great Lakes Water Authority (MI) /Sewer Revenues/1 LT	LT	AA Rating Outlook Stable	Upgrade	AA- Rating Outlook Positive

VIEW ADDITIONAL RATING DETAILS

The upgrade of the senior sewer revenue bonds to 'AA' and second lien bonds to 'AA-', along with the 'aa-' SCP assessment, reflects the system's 'Very Strong' financial profile, characterized by leverage anticipated to remain below 10.0x through and beyond fiscal 2029. System leverage, measured as net adjusted debt to adjusted funds available for debt service (FADS), was very low at 8.2x in fiscal 2024 (FYE June 30) and is expected to peak at 9.1x in fiscal 2028 in Fitch's Analytical Stress Test (FAST) rating case.

The upgrade also reflects the financial profile within the framework of 'Very Strong' revenue defensibility and 'Very Strong' operating risk profile, both assessed at 'aa'. Although peak leverage indicates modest headroom at the current ratings, Fitch expects management will implement rate adjustments and manage capital spending to maintain leverage consistent with the ratings and SCP.

Fitch recognizes the still challenging economic environment and credit fundamentals for DWSD. However, GLWA has managed through its initial 10 years of operations within its

'4% promise', keeping rate adjustments at or below this level in part due to cost management. Although Fitch anticipates overall rate increases to remain manageable, the removal of this constraint provides additional flexibility to ensure the financial profile remains consistent with the rating.

Additionally, while planned capital spending continues to increase, the absence of consent orders or other regulatory mandates and potential for substantial grant funding also supports financial flexibility. These grants, which if fully realized, would further reduce leverage and increase headroom at the current rating.

The distinction between the senior and the second lien bonds reflects the meaningful protection afforded to senior debt, given the sizable balance of subordinated obligations, which include the second lien bonds, state revolving fund loans, and long-term leases payable under the lease agreement between GLWA and DWSD. It also reflects the absence of an automatic cross-default or acceleration between the liens.

SECURITY

The senior lien bonds are secured by a first lien on net revenues of the system. The second lien bonds are secured by net revenues after payment of the senior lien bonds.

KEY RATING DRIVERS

Revenue Defensibility - 'aa'

Strong Purchaser Credit Quality (PCQ), Very Strong Revenue Source Characteristics

Revenue defensibility is supported by purchasers that exhibit strong credit quality. The authority has contract provisions that allow for full cost recovery and the unlimited reallocation of costs across users. Under the water and sewer services agreements (WSSAs) in place with the local system, the authority has the exclusive right to establish rates for the sewer services it provides. The authority has delegated to the city its right to establish rates regarding services provided to city of Detroit customers.

DWSD was approximately 50% of the system's operating revenues (inclusive of the local system operating revenues) in fiscal 2024. Other large customers include the Oakland-Macomb Interceptor Drainage District (12%), Wayne County's Rouge Valley (9.0%), and Oakland County's George Kuhn Drainage District (8%). Although the Detroit service area characteristics remain weak, the authority's large suburban members support the overall strong PCQ.

Operating Risk - 'aa'

Very Low Operating Cost Burden, Moderate Investment Needs

In fiscal 2024, the system's operating cost burden was considered very low at $3,402 per million gallons (mg), consistent with the operating risk assessment. The life cycle ratio was low at 36% in fiscal 2024. As calculated by Fitch, capex to depreciation has been weak though improving, averaging 55% over the last five fiscal years from 2020 to 2024. Planned capital spending for the next five years should generally outpace historical depreciation, supporting a continued low life cycle ratio.

GLWA's revenues fund the DWSD's capital improvement plan (CIP) through the lease payments, and debt issued by GLWA for local DWSD projects. The consolidated GLWA and DWSD CIP for fiscal 2025-2029 approximates $1.8 billion, compared to the previously planned $1.3 billion for fiscal 2024 through 2028 period. Increases are largely driven by DWSD projects, which focus on the maintenance and improvement of the local system infrastructure.

GLWA's planned spending focuses primarily on the water resource recovery facility, which accounts for about 40% of planned spending, other areas of spending include collection and outfalls, combined sewer overflow facilities and flood mitigation projects.

Financial Profile - 'aa'

Modestly Increasing Leverage Remains Supportive of Ratings, Liquidity Neutral

The system had very low leverage of 8.2x as of fiscal 2024, reflecting declining net adjusted debt and generally stable FADS. This continues the downward trend since fiscal 2018 when leverage measured 10.3x. The liquidity profile, also reflecting Fitch's approach, is neutral to the overall assessment with current days cash on hand of 311 and coverage of full obligations (COFO) of 1.7x. Fitch-calculated total debt service coverage was 1.7x in fiscal 2024. Financial metrics reflect Fitch's approach regarding the inclusion of DWSD financials.

The FAST considers the potential trend of key ratios in a base case and stress scenario over a five-year period. The stress scenario is designed to impose capital costs 10% above expected base case levels and evaluate potential variability in projected key ratios. The FAST reflects Fitch's view of a reasonable scenario, which is generally informed by publicly available and/or management provided information regarding capital expenditures, user charges and rate of revenue and expenditure growth.

Fitch adjusted the authority provided CIP funding sources, limiting the recognition of future grant revenue given potential uncertainty in this funding source and utilized additional pay go funding.

In the base case scenario, the leverage ratio is expected to increase to 8.7x in fiscal 2028, then decline to 8.2x through fiscal 2029. In the stress scenario, which is considered the rating case, the leverage ratio is projected to increase to 9.1x in fiscal 2028, then decrease to 8.7x through fiscal 2029. Fitch reviewed an additional scenario that assumes the majority of grants are realized. This results in a further decline in leverage, peaking at 8.4x in the rating case. The liquidity profile is expected to remain neutral to the assessment over the five-year horizon.

Asymmetric Additional Risk Considerations

No asymmetric additive considerations affected this rating determination.

RATING SENSITIVITIES

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

--Sustained leverage exceeding 10.0x in Fitch's rating case, in the context of the current revenue defensibility and operating risk assessments;

--Weakening of DWSD credit fundamentals, leading to a downward revision of the revenue defensibility assessment, raising the leverage hurdle at the current rating;

--Material declines in liquidity that expose bondholders to timing risk of the true-up;

--The senior lien rating could converge at the SCP assessment if there is a significant erosion of the financial cushion afforded to senior bondholders that results in a lack of meaningful difference in the probability of payment default between the liens.

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

--Leverage sustained below 8.0x in Fitch's rating case, assuming stability in the current revenue defensibility and operating risk assessments.

PROFILE

GLWA provides wholesale sewer services to approximately 2.8 million customers, about 28% of the state population. In January 2016, the authority assumed operational control of

Detroit's system assets (excluding its local collection infrastructure) via a 40-year lease agreement (which automatically extends to coincide with outstanding bonds) and authorized GLWA to set and collect rates from customers historically served by the city.

Separately, a security interest in the city's system-related revenues was granted under the master bond ordinance (MBO), while the WSSA assigned the city the right to set and collect rates from its retail customers. The agreement required GLWA to assume all liabilities of the DWSD's regional water and sewer systems, including outstanding indebtedness related to the respective systems.

System assets include a wastewater treatment plant (the water resource recovery facility, or WRRF), which is one of the largest single-site facilities in the U.S., with capacity of 1,700 mg per day. The treatment plant can accommodate dry-weather flows without further mediation but also operates eight combined sewer overflow retention treatment basins to accommodate wet-weather flows. Wholesale customers retain ownership in collection system infrastructure, which conveys flows and ultimately discharges the flows into GLWA's interceptors.

GLWA financial metrics reported by Fitch and used in its historical analysis are based on financial statements that are adjusted as outlined below in "Summary of Financial Statement Analysis".

SUMMARY OF FINANCIAL ADJUSTMENTS

In its analysis, Fitch adjusted GLWA's "Statement of Revenues, Expenses and Changes in Net Position" to include information from DWSD's "Statement of Revenues, Expenses and Changes in Net Position." Fitch also adjusted GLWA's balance sheet to include DWSD's unrestricted cash. The adjustments were made to provide greater comparability of GLWA's financial position in accordance with the flow of funds under the bond ordinances and lease-related agreements.

Sources of Information

In addition to the sources of information identified in Fitch's applicable criteria specified below, this action was informed by data from DIVER by Solve.

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

ESG CONSIDERATIONS

The highest level of ESG credit relevance is a score of '3', unless otherwise disclosed in this section. A score of '3' means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. Fitch's ESG Relevance Scores are not inputs in the rating process; they are an observation on the relevance and materiality of ESG factors in the rating decision. For more information on Fitch's ESG Relevance Scores, visit https://www.fitchratings.com/topics/esg/products#esg-relevance-scores.

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PARTICIPATION STATUS

The rated entity (and/or its agents) or, in the case of structured finance, one or more of the transaction parties participated in the rating process except that the following issuer(s), if any, did not participate in the rating process, or provide additional information, beyond the issuer's available public disclosure.

APPLICABLE CRITERIA

U.S. Public Sector, Revenue-Supported Entities Rating Criteria (pub. 10 Jan 2025) (including rating assumption sensitivity)

U.S. Water and Sewer Rating Criteria (pub. 24 Feb 2025) (including rating assumption sensitivity)

ADDITIONAL DISCLOSURES

Dodd-Frank Rating Information Disclosure Form

Solicitation Status

Endorsement Policy

ENDORSEMENT STATUS

Great Lakes Water Authority (MI)	EU Endorsed, UK Endorsed

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The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Fitch also provides information on best-case rating upgrade scenarios and worst-case rating downgrade scenarios (defined as the 99th percentile of rating transitions, measured in each direction) for international credit ratings, based on historical performance. A simple average across asset classes presents best-case upgrades of 4 notches and worst-case downgrades of 8 notches at the 99th percentile. For more details on sector-specific best- and worst-case scenario credit ratings, please see Best- and Worst-Case Measures under the Rating Performance page on Fitch's website.

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SOLICITATION STATUS

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FitchRatings

Public Finance
Water & Sewer
United States

Great Lakes Water Authority, Michigan [Sewer]

The upgrade of the senior sewer revenue bonds to 'AA' and second lien bonds to 'AA-', along with the 'aa-' SCP assessment, reflects the Great Lakes Water Authority (GLWA or the authority) sewer system's (the system) 'Very Strong' financial profile, characterized by leverage anticipated to remain below 10.0x through and beyond fiscal 2029. System leverage, measured as net adjusted debt to adjusted funds available for debt service (FADS), was very low at 8.2x in fiscal 2024 (FYE June 30) and is expected to peak at 9.1x in fiscal 2028 in Fitch's Analytical Stress Test (FAST) rating case.

The upgrade also reflects the financial profile within the framework of 'Very Strong' revenue defensibility and 'Very Strong' operating risk profile, both assessed at 'aa'. Although peak leverage indicates modest headroom at the current ratings, Fitch expects management will implement rate adjustments and manage capital spending to maintain leverage consistent with the ratings and SCP.

Fitch recognizes the still-challenging economic environment and credit fundamentals for Detroit Water and Sewerage Department (DWSD). However, GLWA has managed through its initial 10 years of operations within its 4% promise, keeping rate adjustments at or below this level in part due to cost management. Although Fitch anticipates overall rate increases remaining manageable, the removal of this constraint provides additional flexibility to ensure the financial profile remains consistent with the rating.

Additionally, while planned capital spending continues to increase, the absence of consent orders or other regulatory mandates and potential for substantial grant funding also support financial flexibility. These grants, if fully realized, would further reduce leverage and increase headroom at the current rating.

The distinction between the senior and the second lien bonds reflects the meaningful protection afforded to senior debt, given the sizable balance of subordinated obligations, which include the second lien bonds, state revolving fund loans, and long-term leases payable under the lease agreement between GLWA and DWSD. It also reflects the absence of an automatic cross-default or acceleration between the liens.

Security

The senior lien bonds are secured by a first lien on net revenues of the system. The second lien bonds are secured by net revenues after payment of the senior lien bonds.

Assessment

Standalone Credit Profile	aa–

Outlooks

Standalone Credit Profile	Stable

New Issues

$46,700,000 Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2025A	AA
$258,200,000 Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2025B	AA—
$47,700,000 Sewage Disposal System Revenue Second Lien Bonds, Series 2025C	AA—

Sale Date

Week of June 19.

Outstanding Debt

Issuer Ratings Information

Applicable Criteria

U.S. Public Sector, Revenue-Supported Entities Rating Criteria (January 2025)

U.S. Water and Sewer Rating Criteria (February 2025)

Related Research

Fitch Rates Great Lakes Water Authority's Sewage Revs 'AA' and 'AA-'; Outlook Stable (May 2025)

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Key Rating Drivers

Revenue Defensibility - 'aa'

Strong Purchaser Credit Quality (PCQ), Very Strong Revenue Source Characteristics

Revenue defensibility is supported by purchasers that exhibit strong credit quality. The authority has contract provisions that allow for full cost recovery and the unlimited reallocation of costs across users. Under the water and sewer services agreements (WSSAs) in place with the local system, the authority has the exclusive right to establish rates for the sewer services it provides. The authority has delegated to the city its right to establish rates regarding services provided to city of Detroit customers.

DWSD was approximately 50% of the system's operating revenues (inclusive of the local system operating revenues) in fiscal 2024. Other large customers include the Oakland-Macomb Interceptor Drainage District (12%), Wayne County's Rouge Valley (9.0%), and Oakland County's George Kuhn Drainage District (8%). Although the Detroit service area characteristics remain weak, the authority's large suburban members support the overall strong PCQ.

Operating Risk - 'aa'

Very Low Operating Cost Burden, Moderate Investment Needs

In fiscal 2024, the system's operating cost burden was considered very low at $3,402 per million gallons (mg), consistent with the operating risk assessment. The life cycle ratio was low at 36% in fiscal 2024. As calculated by Fitch, capex to depreciation has been weak though improving, averaging 55% over the last five fiscal years from 2020 to 2024. Planned capital spending for the next five years should generally outpace historical depreciation, supporting a continued low life cycle ratio.

GLWA's revenues fund the DWSD's capital improvement plan (CIP) through the lease payments, and debt issued by GLWA for local DWSD projects. The consolidated GLWA and DWSD CIP for fiscal 2025-2029 approximates $1.8 billion, compared to the previously planned $1.3 billion for fiscal 2024 through 2028 period. Increases are largely driven by DWSD projects, which focus on the maintenance and improvement of the local system infrastructure.

GLWA's planned spending focuses primarily on the water resource recovery facility, which accounts for about 40% of planned spending; other areas of spending include collection and outfalls, combined sewer overflow facilities and flood mitigation projects.

Financial Profile - 'aa'

Modestly Increasing Leverage Remains Supportive of Ratings, Liquidity Neutral

The system had very low leverage of 8.2x as of fiscal 2024, reflecting declining net adjusted debt and generally stable FADS. This continues the downward trend since fiscal 2018 when leverage measured 10.3x. The liquidity profile, also reflecting Fitch's approach, is neutral to the overall assessment with current days cash on hand of 311 and coverage of full obligations (COFO) of 1.7x. Fitch-calculated total debt service coverage was 1.7x in fiscal 2024. Financial metrics reflect Fitch's approach regarding the inclusion of DWSD financials.

The FAST considers the potential trend of key ratios in a base case and stress scenario over a five-year period. The stress scenario is designed to impose capital costs 10% above expected base case levels and evaluate potential variability in projected key ratios. The FAST reflects Fitch's view of a reasonable scenario, which is generally informed by publicly available and/or management provided information regarding capital expenditures, user charges and rate of revenue and expenditure growth.

Fitch adjusted the authority-provided CIP funding sources, limiting the recognition of future grant revenue given potential uncertainty in this funding source and utilized additional pay-go funding.

In the base case scenario, the leverage ratio is expected to increase to 8.7x in fiscal 2028, then decline to 8.2x through fiscal 2029. In the stress scenario, which is considered the rating case, the leverage ratio is projected to increase to 9.1x in fiscal 2028, then decrease to 8.7x through fiscal 2029. Fitch reviewed an additional scenario that assumes the majority of grants are realized. This results in a further decline in leverage, peaking at 8.4x in the rating case. The liquidity profile is expected to remain neutral to the assessment over the five-year horizon.

Asymmetric Additional Risk Considerations

No asymmetric additive considerations affected this rating determination.

Sensitivities

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

- Sustained leverage exceeding 10.0x in Fitch's rating case, in the context of the current revenue defensibility and operating risk assessments;
- Weakening of DWSD credit fundamentals, leading to a downward revision of the revenue defensibility assessment, raising the leverage hurdle at the current rating;
- Material declines in liquidity that expose bondholders to timing risk of the true-up;
- The senior lien rating could converge at the SCP assessment if there is a significant erosion of the financial cushion afforded to senior bondholders that results in a lack of meaningful difference in the probability of payment default between the liens.

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

- Leverage sustained below 8.0x in Fitch's rating case, assuming stability in the current revenue defensibility and operating risk assessments.

Profile

GLWA provides wholesale sewer services to approximately 2.8 million customers, about 28% of the state population. In January 2016, the authority assumed operational control of Detroit's system assets (excluding its local collection infrastructure) via a 40-year lease agreement (which automatically extends to coincide with outstanding bonds) and authorized GLWA to set and collect rates from customers historically served by the city.

Separately, a security interest in the city's system-related revenues was granted under the master bond ordinance (MBO), while the WSSA assigned the city the right to set and collect rates from its retail customers. The agreement required GLWA to assume all liabilities of the DWSD's regional water and sewer systems, including outstanding indebtedness related to the respective systems.

System assets include a wastewater treatment plant (the water resource recovery facility, or WRRF), which is one of the largest single-site facilities in the U.S., with capacity of 1,700 mg per day. The treatment plant can accommodate dry-weather flows without further mediation but also operates eight combined sewer overflow retention treatment basins to accommodate wet-weather flows. Wholesale customers retain ownership in collection system infrastructure, which conveys flows and ultimately discharges the flows into GLWA's interceptors.

GLWA financial metrics reported by Fitch and used in its historical analysis are based on financial statements that are adjusted as outlined below in "Summary of Financial Statement Analysis".

Revenue Defensibility

Revenue Source Characteristics

Revenue source characteristics reflect the strength of legal agreements between the city and the authority's regional municipal customers and the ability to reallocate costs should the need arise.

Any bad-debt expense from a wholesale customer is charged to other wholesale customers. These charges are generally done prospectively but may also be accomplished via a true-up. Most wholesale contracts last 30 years with an automatic 10-year renewal and a five-year notice requirement for termination. There is no meaningful alternate treatment option in the region to which the purchasers could look to replace the authority's services.

Rate Flexibility

Rates are set by the authority's board and are not subject to external approval. The wholesale agreements for the majority of the authority's regional sewer customers are based on a 100% fixed-service charge component, which is reviewed and adjusted annually.

The city currently establishes rates for customers within the city of Detroit, and no external approval is required to establish these rates. Should the city fail to perform its duties or meet its obligations under the WSSA, the authority may terminate the agency relationship and adjust rates as deemed necessary.

Affordability metrics of the underlying customers vary based on local income statistics, resulting in affordability pressure for Detroit, but the other wholesale customers exhibit more rate flexibility, given higher income levels.

Purchaser Credit Quality

The PCQ is considered strong, reflecting the midrange credit quality of DWSD sewer operations and Fitch's assessment of the large suburban customers, including Oakland-Macomb Interceptor Drainage District, Wayne County's Rouge Valley and Oakland County's George Kuhn Drainage District.

The PCQ reflects a Purchaser Credit Index (PCI) score of 2.3. The PCI continues to include a midrange assessment for the city's sewer system. The PCI also includes the drainage districts noted above, along with Oakland County's Evergreen Farmington District. Although Fitch does not publicly rate these entities, it assesses them as very strong. Together, these four entities comprise approximately 80% of total system revenues.

Asymmetric Factor Considerations

No asymmetric risk considerations affected the revenue defensibility assessment.

Operating Risk

Operating Cost Burden

The operating cost burden was just $3,402 per mg in fiscal 2024, which Fitch considers very low. The cost burden has averaged less than $3,300 over the past five years, which comfortably supports the operating risk assessment. System costs are forecast to increase modestly over time, even in the face of continuing cost pressures. Fitch expects the operating cost burden to remain very low over the near to intermediate term, supporting the overall operating risk assessment.

The system's pension obligations and associated expenses should continue to trend downward. Detroit's General Retirement System Plan was frozen in 2014. Under an agreement between GLWA and DWSD, payments to fund the pension liability were made over the nine years ended June 30, 2023. Remaining payments will reflect updated actuarial valuations.

Capital Planning and Management

The authority began depreciating infrastructure when system assets were conveyed from the city to GLWA. The system's life cycle ratio is low at 36%, increasing from 24% over the past five years as capex has lagged depreciation. Capex to depreciation has averaged 57% over the past five years; current planned capital spending should support a continued low life cycle ratio.

The authority is responsible for its own capital funding as well as those of DWSD via the lease payment and its borrowing on behalf of DWSD. Approximately $1.1 billion in debt is expected to be issued through fiscal 2029, including amounts borrowed through Michigan's state revolving fund. The remainder of the almost $1.9 billion of capital is expected to be sourced from pay-go and grants.

Spending outlined in the authority's plan is allocated to the maintenance of the WRRF (40%), collection system improvements (30%), combined system overflow mitigation (12%) and flood mitigation projects (14%). The DWSD system is focused on maintenance and improvement of the existing collection system infrastructure.

Asymmetric Factor Considerations

No asymmetric risk considerations affected the operating risk assessment.

Financial Profile and FAST Analysis

The system's financial profile is very strong and assessed at 'aa'. As noted, leverage has been on a generally downward trend for the last several years and measured 8.2x in fiscal 2024. Fitch's calculated debt service coverage was 2.2x and 1.7x, respectively, for senior lien and total debt. Liquidity has remained sound over the past five years; the liquidity cushion most recently finished at 311 days. The system's sound COFO of around 1.7x and cash balances result in a liquidity profile that is considered neutral to the financial profile assessment. Historical calculations reflect Fitch's adjustments to include information from DWSD's sewer system audit, including revenues, expenditures and unrestricted cash.

Fitch Analytical Stress Test (FAST)

The FAST base case assumptions used by Fitch were informed by the authority's latest forecasts and projected capex. Revenue growth, including assumptions for growth with respect to DSWD, ranges from 4%-5% annually through fiscal 2029. Expenditure increases are projected to remain low, less than 4% annually on average.

The expansion of the capital plan plus the authority's higher-planned execution rate, which increased to 100% from 75% at Fitch's review of the system in 2022, are expected to be supported by these higher revenues. Thus, leverage over the next five years is expected to average about 8.5x in Fitch's base case and 8.8x in the rating case Leverage through fiscal 2029 is expected to peak at 8.7x in the base case, and 9.1x in the stress case.

An additional scenario assumes the receipt of almost $140 million in grants, in addition to the $20.9 million in the above scenario. Under this scenario, leverage trends lower, averaging 8.1x in the base case and 8.4x in the stress case. The realization of this level of grants provides further protection relative the potential for increases in capital costs above those anticipated by the authority. The liquidity profile is expected to remain neutral to the assessment with COFO of at least 1.3x and sound days cash annually.

Summary of Financial Adjustments

In its analysis, Fitch adjusted GLWA's "Statement of Revenues, Expenses and Changes in Net Position" to include information from DWSD's "Statement of Revenues, Expenses and Changes in Net Position." Fitch also adjusted GLWA's balance sheet to include DWSD's unrestricted cash. The adjustments were made to provide greater comparability of GLWA's financial position in accordance with the flow of funds under the bond ordinances and lease-related agreements.

Asymmetric Additive Risk Considerations

No asymmetric additive risk considerations affected this rating.

ESG Considerations

The highest level of ESG credit relevance is a score of '3', unless otherwise disclosed in this section. A score of '3' means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. Fitch's ESG Relevance Scores are not inputs in the rating process; they are an observation on the relevance and materiality of ESG factors in the rating decision. For more information on Fitch's ESG Relevance Scores, visit https://www.fitchratings.com/topics/esg/products#esg-relevance-scores.

Financial Summary

(Audited Fiscal Years Ended June 30)	2020	2021	2022	2023	2024
Operating Risk					
Operating Cost Burden					
Operating Cost Burden ($/mg)	2,966	3,636	2,804	3,543	3,402
Capital Planning and Management					
Life Cycle Ratio (%)	24	27	26	33	36
Annual CapEx/Depreciation (%)	50	54	44	55	84
5—Year Average Capex/Depreciation (%)	35	43	46	50	57
Financial Profile ($000, unless otherwise indicated)					
Current Unrestricted Cash/Investments	330,873	358,755	348,601	365,321	427,713
Current Restricted Cash/Invest (Available Liquidity)	21,078	25,397	22,271	10,887	6,418
Current Cash Available	351,950	384,152	370,871	376,208	434,131
Noncurrent Unrestricted Cash/Investments					
Noncurrent Restricted Cash/Invest (Available Liquidity)					
Available Cash	351,950	384,152	370,871	376,208	434,131
Current Restricted Cash/Invest (Debt Service or Debt Service Reserve)	92,049	91,791	102,973	141,857	202,082
Noncurrent Restricted Cash/Invest (Debt Service or Debt Service Reserve)	21,813	12,444	21,374	12,790	
Funds Restricted for Debt Service	113,863	104,235	124,347	154,647	202,082
Total Debt	3,651,203	3,544,442	3,411,201	3,512,437	3,460,978
Capitalized Fixed Charges					
Adjusted Net Pension Liability	115,616	113,444	47,428	47,164	27,522
Available Cash	351,950	384,152	370,871	376,208	434,131
Funds Restricted for Debt Service	113,863	104,235	124,347	154,647	202,082
Net Adjusted Debt	3,301,005	3,169,499	2,963,410	3,028,746	2,852,287
Total Operating Revs	798,331	807,544	833,832	814,151	809,201
Purchased Water/Sewer Services					
Other Operating Expenses	469,162	491,238	479,394	480,535	510,194
EBITDA	329,169	316,306	354,438	333,616	299,007
Investment Income/(Loss)	8,960	2,825	-3,023	20,877	34,566
Non—Operating Revenues from Taxes					
Other Cash Revenues/(Expenses)	366	-299	-235	1,226	8,997
BAB Subsidy					
Capital Contributions	11,920	-		2,176	-
Funds Available for Debt Service	350,415	318,832	351,180	357,895	342,570
Fixed Services Expense					
Net Transfers In/(Out)		-	-	-	-
Pension Expense	12,923	14,453	8,927	-13,322	4,300
Adjusted Funds Available for Debt Service	363,337	333,285	360,107	344,574	346,871
Net Adjusted Debt/Adjusted Funds Available for Debt Service (x)	**9.1**	**9.5**	**8.2**	**8.8**	**8.2**
Funds Available for Debt Service	350,415	318,832	351,180	357,895	342,570
Fixed Services Expense					
Net Transfers In/(Out)		-	-	-	-
Adjusted FADS for Coverage of Full Obligations	350,415	318,832	351,180	357,895	342,570

Financial Summary

(Audited Fiscal Years Ended June 30)	2020	2021	2022	2023	2024
Total Annual Debt Service	229,535	203,294	207,113	210,486	202,328
Fixed Services Expense					
Adjusted Debt Service (Includes Fixed Services Expense)	229,535	203,294	207,113	210,486	202,328
Coverage of Full Obligations (x)	1.53	1.57	1.70	1.70	1.69
Coverage of Full Obligations Excluding Connection Fees (x)	1.47	1.57	1.70	1.69	1.69
Current Days Cash on Hand	274	285	282	286	311
Liquidity Cushion Ratio (Days)	274	285	282	286	311
All—In Debt Service Coverage (x)	1.53	1.57	1.70	1.70	1.69

Notes: Fitch may have reclassified certain financial statement items for analytical purposes. N.A. - Not Available.
Sources: Fitch Ratings, Fitch Solutions, Great Lakes Water Authority (MI)

SOLICITATION & PARTICIPATION STATUS

For information on the solicitation status of the ratings included within this report, please refer to the solicitation status shown in the relevant entity's summary page of the Fitch Ratings website.

For information on the participation status in the rating process of an issuer listed in this report, please refer to the most recent rating action commentary for the relevant issuer, available on the Fitch Ratings website.

Moody's Ratings

MOODY'S
RATINGS

Rating Action: Moody's Ratings affirms existing ratings and assigns Aa3 senior & A1 second lien to Great Lakes Water Authority, MI's water revenue and sewer revenue bonds; outlook stable

29 May 2025

New York, May 29, 2025 -- Moody's Ratings (Moody's) has affirmed the Aa3 rating on the Great Lakes Water Authority, MI Sewer Enterprise's and Great Lakes Water Authority, MI Water Enterprise's outstanding senior lien bonds and the A1 on its outstanding second lien bonds and taken other rating actions as shown below. The authority had about $2.7 billion of water and $3.1 billion of sewer net debt outstanding at the end of fiscal 2024 (year-end June 30). The outlook is stable.

The rating actions are as follows:

Affirmations:

- Senior lien bonds: Aa3

- Second lien bonds: A1

New rating assignments:

- Water Supply System Revenue Refunding Senior Lien Bonds, Series 2025A with a proposed par amount of $159.6 million: Aa3

- Water Supply System Revenue Senior Lien Bonds, Series 2025C with a proposed par amount of $109.9 million: Aa3

- Water Supply System Revenue Refunding Second Lien Bonds, Series 2025B with a proposed par amount of $66.1 million: A1

- Water Supply System Revenue Second Lien Bonds, Series 2025D with a proposed par amount of $109.6 million: A1

- Sewage Disposal System Revenue Refunding Senior Lien Bonds, Series 2025A with a proposed par amount of $46.9 million: Aa3

- Sewage Disposal System Revenue Refunding Second Lien Bonds, Series 2025B with a proposed par amount of $258.2 million: A1

- Sewage Disposal System Revenue Second Lien Bonds, Series 2025C with a proposed par amount of $47.7 million: A1

RATINGS RATIONALE

The Aa3 senior lien water revenue and Aa3 senior lien sewer revenue ratings reflects the authority's established track record of strong management and prudent long-term forecasting, solid operating performance, independent ability to raise rates and serviceable debt service coverage. Total coverage will likely remain between 1.2x and 1.3x for the water system and between 1.3x and 1.4x for the sewer system. The system's liquidity overall will likely remain very strong around 500 days.

The systems are very large and regionally important, serving the bulk of the Detroit metro area and over a third of the state's population. A large share of revenue for each system is generated by customers in the City of Detroit, which has undergone economic and fiscal improvement over the last five years. Leverage will remain elevated given significant capital needs including reducing combined sewer overflow (CSO) and enhancing transmission and storage. The systems will also likely need to build greater resilience to extreme wet-weather events. The authority does not have any consent decrees or mandated capital plans, however. Outstanding revenue bonds enjoy sound legal protections. The authority's debt service reserve requirement was set to $0 in 2024.

The A1 second lien ratings reflects a subordinate claim on pledged net revenue.

RATING OUTLOOK

The outlook is stable because the authority will maintain solid coverage and liquidity metrics given its strong management, stable operations and improving service area.

FACTORS THAT COULD LEAD TO AN UPGRADE OF THE RATINGS

- Steady improvement in asset condition while lowering debt-to-revenue ratio closer to 4x

- Sustained trend of a debt service coverage ratio closer to 1.5x while maintaining around 500 days cash on hand

FACTORS THAT COULD LEAD TO A DOWNGRADE OF THE RATINGS

- Days cash on hand closer to 400 days or if debt service coverage is likely to remain materially below 1.2x

- Material growth in debt-to-revenue ratio above 6x or deterioration of asset conditions

PROFILE

The Great Lakes Water Authority (GLWA) is the regional wholesale provider of water and sewer services to southeast Michigan. The water enterprise treats water from Lake Huron, Lake St. Clair and the Detroit River and distributes treated water to a service area population of about 3.8 million. The sewer enterprise collects, treats and disposes of wastewater produced by a service area population of about 2.8 million. GLWA is an incorporated municipal authority, established in 2016, operating under the guidance of a six-member board, consisting of one appointee each of the counties of Macomb, Oakland, and Wayne, two appointees of the Mayor of Detroit and one of the Governor of Michigan.

METHODOLOGY

The principal methodology used in these ratings was US Municipal Utility Revenue Debt published in March 2024 and available at https://ratings.moodys.com/rmc-documents/416489. Alternatively, please see the Rating Methodologies page on https://ratings.moodys.com for a copy of this methodology.

REGULATORY DISCLOSURES

For further specification of Moody's key rating assumptions and sensitivity analysis, see the sections Methodology Assumptions and Sensitivity to Assumptions in the disclosure form. Moody's Rating Symbols and Definitions can be found on https://ratings.moodys.com/rating-definitions.

For any affected securities or rated entities receiving direct credit support/credit substitution from another entity or entities subject to a credit rating action (the supporting entity), and whose ratings may change as a result of a credit rating action as to the supporting entity, the associated regulatory disclosures will relate to the supporting entity. Exceptions to this approach may be applicable in certain jurisdictions.

For ratings issued on a program, series, category/class of debt or security, certain regulatory disclosures applicable to each rating of a subsequently issued bond or note of the same series, category/class of debt, or security, or pursuant to a program for which the ratings are derived exclusively from existing ratings, in accordance with Moody's rating practices, can be found in the most recent Credit Rating Announcement related to the same class of Credit Rating.

For provisional ratings, the Credit Rating Announcement provides certain regulatory disclosures in relation to the provisional rating assigned, and in relation to a definitive rating that may be assigned subsequent to the final issuance of the debt, in each case where the transaction structure and terms have not changed prior to the assignment of the definitive rating in a manner that would have affected the rating.

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Regulatory disclosures contained in this press release apply to the credit rating and, if applicable, the related rating outlook or rating review.

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CREDIT OPINION
30 May 2025

Send Your Feedback

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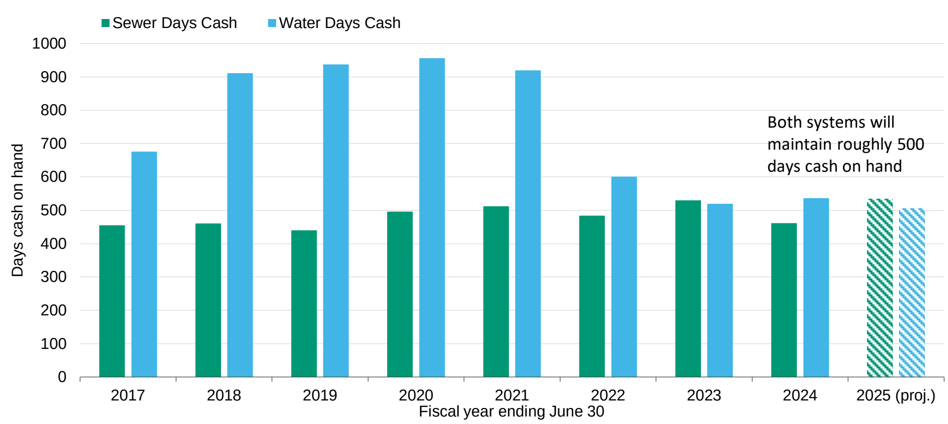
Great Lakes Water Authority, MI

Update to analysis

Summary

The Great Lakes Water Authority's (GLWA) water and sewer enterprises (both senior liens rated Aa3 stable; both subordinate liens rated A1 stable) have solid credit profiles, bolstered by a sizable scale of operations and very large service areas. GLWA has effectively balanced its hefty capital needs with an affordable rate structure and stable operating performance. Building greater resilience to extreme wet-weather events will likely be an ongoing challenge and leverage will remain above-average for both systems. While debt service coverage will narrow somewhat, days cash on hand will remain strong for both systems even after water funds are spent on capital projects (exhibit 1).

Exhibit 1
Days cash on hand will remain very strong for both systems



Figures shown on a GAAP-basis. Revenue and O&M include GLWA wholesale operations and Detroit Water Sewer Department (DWSD_ local retail operations.
Source: Moody's Ratings

Credit strengths

» Very large utility systems, providing essential water and wastewater services to a substantial portion of the state's population

» Commitment to annual revenue enhancements to support strong liquidity and ongoing capital investments

» Track record of strong budget management and good transparency

Credit challenges

» Debt service coverage trails higher-rated large utilities

» High leverage will persist given outstanding capital needs and plans to issue additional debt

» Increasing occurrence of extreme wet weather events placing strain on stormwater and sewer treatment capacity in certain segments of the system

Rating outlook

The outlook is stable because the authority will maintain solid coverage and liquidity metrics given its strong management, stable operations and improving service area.

Factors that could lead to an upgrade

» Steady improvement in asset condition while lowering debt-to-revenue ratio closer to 4x

» Sustained trend of a debt service coverage ratio closer to 1.5x while maintaining around 500 days cash on hand

Factors that could lead to a downgrade

» Days cash on hand closer to 400 days or if debt service coverage is likely to remain materially below 1.2x

» Material growth in debt-to-revenue ratio above 6x or deterioration of asset conditions

Key indicators

Exhibit 2

Great Lakes Water Authority, MI Water Ent.					
System Characteristics					
Asset Condition (Net Fixed Assets / Annual Depreciation)	21 years				
System Size - O&M (in $000s)	$205,814				
Service Area Wealth: MFI % of US median	96%				
Legal Provisions					
Rate Covenant (x)	1.20				
Debt Service Reserve Requirement	No DSRF (Baa and Below)				
Management					
Rate Management	Aa				
Regulatory Compliance and Capital Planning	Aa				
Financial Strength					
	2020	2021	2022	2023	2024
Operating Revenue ($000)	$419,479	$411,583	$426,889	$472,607	$476,740
System Size - O&M ($000)	$177,515	$169,792	$178,539	$210,351	$205,814
Net Revenues ($000)	$241,964	$241,791	$248,351	$266,473	$270,926
Outstanding Revenue Debt ($000)	$2,301,253	$2,403,127	$2,361,794	$2,612,746	$2,664,047
Annual Debt Service ($000)	$172,869	$179,214	$176,589	$192,801	$205,677
Annual Debt Service Coverage (x)	1.4x	1.3x	1.4x	1.4x	1.3x
Cash on Hand	953 days	894 days	602 days	519 days	537 days
Debt to Operating Revenues (x)	5.5x	5.8x	5.5x	5.5x	5.6x

Figures shown on a GAAP-basis. Revenue and O&M include GLWA wholesale operations and DWSD local retail operations.
Source: Moody's Ratings

Exhibit 3

Great Lakes Water Authority, MI Sewer Enterprise					
System Characteristics					
Asset Condition (Net Fixed Assets / Annual Depreciation)	18 years				
System Size - O&M (in $000s)	$278,380				
Service Area Wealth: MFI % of US median	96%				
Legal Provisions					
Rate Covenant (x)	1.20				
Debt Service Reserve Requirement	No DSRF (Baa and Below)				
Management					
Rate Management	Aa				
Regulatory Compliance and Capital Planning	Aa				
Financial Strength					
	2020	2021	2022	2023	2024
Operating Revenue ($000)	$562,231	$559,812	$607,690	$604,439	$599,788
System Size - O&M ($000)	$245,873	$261,816	$262,941	$279,197	$278,380
Net Revenues ($000)	$316,358	$297,996	$344,749	$325,242	$321,408
Net Funded Debt ($000)	$3,039,222	$2,875,070	$2,755,512	$2,876,460	$3,110,617
Annual Debt Service ($000)	$245,783	$230,163	$235,848	$242,859	$261,129
Annual Debt Service Coverage (x)	1.3x	1.3x	1.5x	1.3x	1.2x
Cash on Hand	491 days	500 days	484 days	478 days	561 days
Debt to Operating Revenues (x)	5.4x	5.1x	4.5x	4.8x	5.2x

Figures shown on a GAAP-basis. Revenue and O&M include GLWA wholesale operations and DWSD local retail operations.
Source: Moody's Ratings

Profile

The Great Lakes Water Authority (GLWA) is the regional wholesale provider of water and sewer services to southeast Michigan (Aa1 stable). The water enterprise treats water from Lake Huron, Lake St. Clair and the Detroit River and distributes treated water to a service area population of about 3.8 million. The sewer enterprise collects, treats and disposes of wastewater produced by a service area population of about 2.8 million.

GLWA is an incorporated municipal authority, established in 2016, operating under the guidance of a six-member board, consisting of one appointee each of the counties of Macomb, Oakland and Wayne, two appointees of the Mayor of Detroit and one of the Governor of Michigan.

Detailed credit considerations

Service area and system characteristics: very large service area in southeast Michigan

The systems will continue to benefit from large service areas with broad and diverse customer bases. The regional water supply system covers roughly 1,700 square miles in southeast Michigan, providing treated water to 115 communities and roughly 40% of the state's population. Water usage, like in many systems, have fallen somewhat over the past several years because of conservation efforts and the region's stagnant population. The sewer system is a little smaller; covering 953 square miles and providing wastewater services to about a third of the state's population across 79 communities.

GLWA's pledged revenue is derived from both GLWA wholesale operations and Detroit Water and Sewerage Department (DWSD) local retail operations. The bulk of water and sewer revenue comes from wholesale contracts with suburban communities. Wholesale contracts generate roughly three-quarters of water revenue and a little under half of sewer revenue. Detroit residents and businesses are retail customers of DWSD, which manages the local system. The revenue generated within the City of Detroit is assigned to GLWA and is deposited directly with the bond trustee.

Debt service coverage and liquidity: serviceable coverage, likely to narrow a little in the water system

Coverage will narrow a little in the water system because of rising costs and planned borrowing. The authority projects the water system's total debt service coverage to sit between 1.2x and 1.3x through 2030 and the sewer system to remain between 1.3x and 1.4x. The authority also plans to pick up revenue growth starting in fiscal 2026. While the systems were historically bound by a 4% revenue growth limit, revenue from wholesale water and sewer charges are forecast to grow by about 6% annually through fiscal 2030.

The overall coverage is adequate despite being a little low compared to sector medians authority because of management's close monitoring of revenue targets, the stability of its wholesale charges and its ability to set rates. Most revenue in both systems comes from fixed monthly wholesale charges (roughly 60% in the water system and 100% in the sewer system), which enhances revenue reliability and dependability.

Liquidity

Liquidity is strong for both systems and will remain so even after planned spending for capital investments in the water system. Management plans to maintain roughly 500 days cash on hand and slowly grow to 600 days over the next decade. The two systems also have significant restricted cash assets held for budget stabilization and capital.

Debt and legal covenants: sustained revenue growth will keep high debt burden level

Leverage metrics will likely remain stable because GLWA has control over its rates and it plans to finance a portion its CIP with cash. The systems have a variety of capital needs, including reducing combined sewer overflow (CSO) and enhancing transmission and storage. Favorably, the systems are not operating under any federal or state consent decrees.

The systems will also likely need to build greater resilience to extreme wet-weather events over the long-term. The CIP for fiscal 2026 through 2030 includes about $1.3 billion of water projects and $1.4 billion of sewer projects.

Legal security

Water and sewer revenue bonds are backed by the net revenue of the respective systems. Legal provisions are solid and are the same for both systems. The rate covenant requires projected net revenue coverage of debt service equal to 120% for senior lien bonds, 110% for second lien bonds and 100% for any subordinate lien debt. Per the master bond ordinance, projected net revenue includes the revenue of the respective systems plus any estimated revenue increase from approved rate increases.

The money collected from regional wholesale and local retail customer payments are deposited to a lockbox, which is administered by a third-party trustee. Operations and maintenance (O&M) expenses are defined as cash transfers made to GLWA's and DWSD's respective O&M funds. The revenue and O&M expenses related to GLWA are reported in its segregated business funds while the revenue and expenses of DWSD are accounted for in Detroit's water and sewer funds, respectively. The bifurcated accounting requires adjustments from reported figures to assess rate covenant coverage under the master bond ordinance.

The authority is allowed to reduce or eliminate its reserve requirement if the senior lien is rated Aa3/AA- by two or more rating agencies. The bonds that are being issued will not include a debt service reserve fund (DSRF). GLWA reduced the reserve requirement for the outstanding bonds to $0 upon the issuance of the 2024 bonds.

Debt structure

All of GLWA's water revenue debt and most of its sewer bonds are fixed rate. The sewer system has one series of variable rate debt: its Series 2006D bonds. The bonds are floating rate notes, are fully callable and make up a little less than 10% of sewer debt. The bonds do not have any demand risk. Interest rates are reset quarterly based upon a formula using a three-month Term SOFR rate.

The water system held a little under half of total GLWA debt at the end of fiscal 2024, with roughly $1.65 billion of senior lien bonds, $670 million of second lien water revenue bonds and $241 million of junior lien state revolving fund (SRF) loans. The remainder is held by the sewer system, inclusive of $1.7 billion of senior lien bonds, $762 million of second lien sewer revenue bonds and $337 million junior lien state revolving fund (SRF) loans. The debt service schedule is front-loaded and the bulk of both system's debt matures over the next 15 years.

Debt-related derivatives

The GLWA is not party to any derivative agreements.

Pensions and OPEB

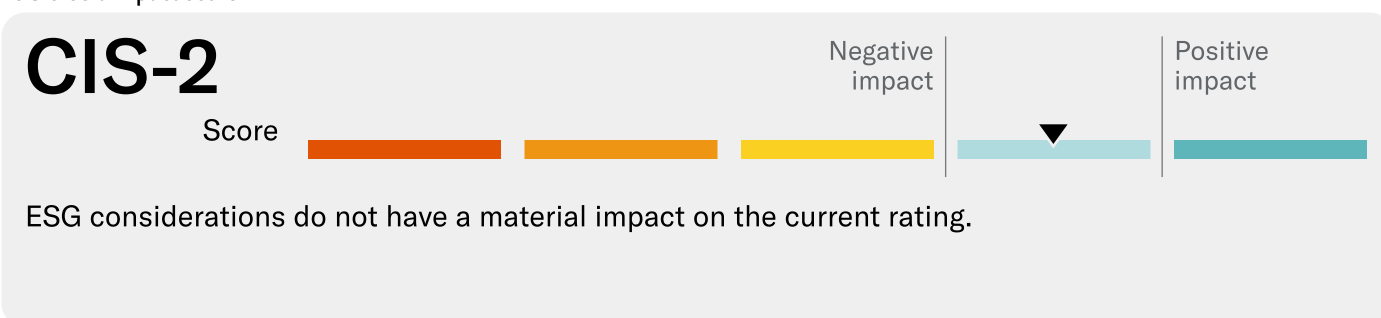
GLWA employees are participants in a defined contribution benefit plan. There are some former DWSD employees who were hired by GLWA that qualify for accrued pension benefits from the City of Detroit's frozen defined benefit General Retirement System (GRS). GLWA's payments to GRS are based on the actuarial needs of the plan and sized to amortize any unfunded liability associated with GLWA's agreed upon share that is still remaining. GLWA also makes a payment to Detroit for its allocable share of the city's financial recovery bonds, which were issued to satisfy claims relating to the city's pension obligation certificates and OPEB. GLWA established a new defined-contribution retiree healthcare savings plan, resulting in no potential unfunded liability.

Before fiscal 2024, pursuant to the City of Detroit's bankruptcy plan of adjustment, GLWA contributed annually to GRS to accelerate amortization of the GRS unfunded liability associated with GLWA's agreed share, which was based on the liability determined to be associated with the regional system before GLWA began operations.

ESG considerations

Great Lakes Water Authority, MI Sewer Enterprise's ESG credit impact score is CIS-2

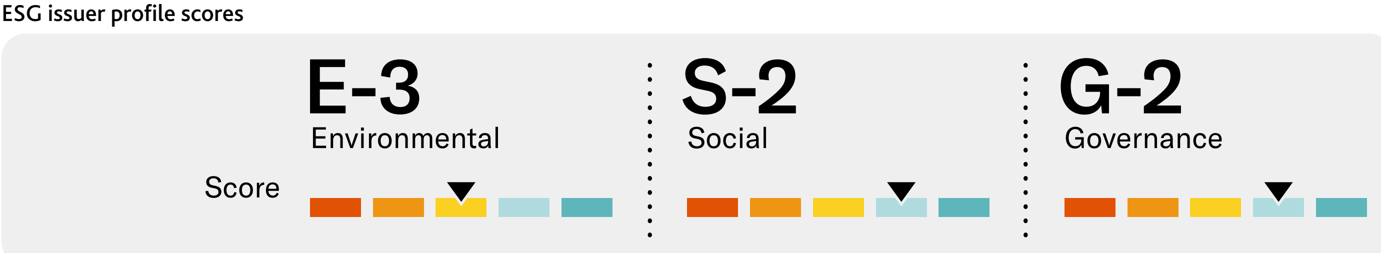
Exhibit 4
ESG credit impact score



Source: Moody's Ratings

The authority's ESG Credit Impact Score of **CIS-2** indicates that ESG considerations have a neutral-to-low impact on its credit rating, reflecting moderately negative exposure to environmental risks and neutral-to-low exposure to social and governance risks.

Exhibit 5
ESG issuer profile scores



Source: Moody's Ratings

Environmental

The authority's E Issuer Profile Score is **E-3** reflecting moderately negative exposure to physical climate and water management risks and neutral-to-low exposure to carbon transition, natural capital, and waste and pollution risks. Climate change and extreme weather are likely to impact the authority's future operations, particularly on the sewer system. For example, major wet weather events, like those that occurred during the summer of 2021, can overwhelm the system's ability to store and process infiltration. The water system benefits from access to a vast amount of fresh water and the sewer system includes one of the largest single-site wastewater treatment plants in the world. Both systems are subject to extensive regulation pursuant to the federal Clean Water Act, the Clean Air Act, the Michigan Natural Resources and Environmental Protection Act and various administrative rules and regulations. The authority is in material compliance with all existing permits relating to the operation of the regional water and sewer systems.

Social

The authority's Issuer Profile Score is **S-2**, reflecting moderately negative exposure to responsible production risks because of ongoing product quality risks and neutral-to-low exposure to most social risks including customer relations, demographic and social trends, health and safety and human capital. Population in the Detroit MSA grew a little over 2% between 2010 and 2020. The system's sizable service area and customer base provides a high level of diversity, balancing social challenges in portions of the customer base, such as high poverty areas in the City of Detroit. GLWA provides payment and conservation assistance to low-income retail customers through its Water Residential Assistance Program, which helps to avoid delinquencies and support revenue stability.

Governance

The authority's governance Issuer Profile Score is **G-2**, reflecting positive exposure from strong management credibility and compliance and reporting, a moderately negative organizational structure given its heavy exposure to the City of Detroit, and neutral-to-low exposure to financial strategy and board structure risks. GLWA was created in the aftermath of the Detroit bankruptcy. It obtained possession and control of the city's water supply and sewage disposal systems via regional system leases (effective January 1, 2016) for an initial 40-year term (which automatically extends to coincide with the final maturity of outstanding bonds) and replaced the city as the obligor on all outstanding debt obligations related to the systems, pursuant to bondholder consent. Pursuant to the lease, the City of Detroit has irrevocably assigned its right, title and interest in all revenue of the sewer and water enterprises to GLWA. The lease will automatically extend to correspond with scheduled repayment of newly issued revenue debt. All revenues of both systems were assigned to GLWA. GLWA is governed by a six-member board. The board has full authority to set service charges on municipal customers. Rates charged to retail customers in the City of Detroit are established by the city's Board of Water Commissioners pursuant to an agency agreement with GLWA. The lease agreement grants the GLWA board the ability to override the city's authority of retail rates and collections should the city not make adjustments sufficient to meet annual revenue requirements. All wholesale customers retain responsibility for levying local charges sufficient to cover costs charged by GLWA. Pursuant to the memorandum of understanding between GLWA and DWSD, GLWA assumes an annual increase of not more than 4% in the revenue requirements through fiscal 2025. GLWA has demonstrated strong budget management since its inception, enhancing operational efficiencies and regional cooperation. Each year GLWA conducts an extensive study of both its wholesale service charges and allocated annual revenue requirement to retail customers, with the purpose of adjusting revenue to reflect the cost of operations, depreciation expense and return on the rate base. Additionally, since the water system capacity exceeds demands, management is adjusting components of its water treatment plants to ensure that the installed capacity aligns well with system demands. This allows the water system to reduce capital costs while preserving the ability to meet wholesale customers' expectations.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Rating methodology and scorecard factors

Exhibit 6

Great Lakes Water Authority, MI Water Enterprise

Rating Factors	Input	Weight	Score
System Characteristics (30%)			
Asset Condition (Years of Annual Depreciation)	21	10%	A
System Size (O&M in Millions of Dollars)	$205,814	7.5%	Aaa
Service Area Wealth (Median Family Income as % of US)	96%	12.5%	Aa
Financial Strength (40%)			
Annual Debt Service Coverage (x)	1.3	15%	A
Days Cash on Hand	537	15%	Aaa
Debt to Operating Revenue (x)	5.6	10%	A
Management (20%)			
Rate Management	Aa	10%	Aa
Regulatory Compliance and Capital Planning	Aa	10%	Aa
Legal Provisions (10%)			
Rate Covenant (x)	1.2	5%	A
Debt Service Reserve Requirement	Baa	5%	Baa
Notching Factors	Score		Up/Down
Scorecard-Indicated Outcome			Aa3
Assigned Rating			Aa3

Data is based on most recent fiscal year available. Figures shown on a GAAP-basis. Revenue and O&M include GLWA wholesale operations and DWSD local retail operations.
Source: Moody's Rating

Exhibit 7

Great Lakes Water Authority, MI Sewer Enterprise

Rating Factors	Input	Weight	Score
System Characteristics (30%)			
Asset Condition (Years of Annual Depreciation)	18	10%	A
System Size (O&M in Millions of Dollars)	$278,380	7.5%	Aaa
Service Area Wealth (Median Family Income as % of US)	96%	12.5%	Aa
Financial Strength (40%)			
Annual Debt Service Coverage (x)	1.23	15%	Baa
Days Cash on Hand	561	15%	Aaa
Debt to Operating Revenue (x)	5.2	10%	A
Management (20%)			
Rate Management	Aa	10%	Aa
Regulatory Compliance and Capital Planning	Aa	10%	Aa
Legal Provisions (10%)			
Rate Covenant (x)	1.2	5%	A
Debt Service Reserve Requirement	Baa	5%	Baa
Notching Factors	Score		Up/Down
No Notching Factors Applied	N/A		N/A
Scorecard-Indicated Outcome			Aa3
Assigned Rating			Aa3

Data is based on most recent fiscal year available. Figures shown on a GAAP-basis. Revenue and O&M include GLWA wholesale operations and DWSD local retail operations.
Source: Moody's Rating

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CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

S&P Global Ratings

Research Update:

Great Lakes Water Authority, MI Series 2025A&C Bonds Assigned 'AA-' Rating, Series 2025B&D Bonds Assigned 'A+' Rating

May 30, 2025

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Overview

- S&P Global Ratings assigned its 'AA-' rating to the Great Lakes Water Authority (GLWA), Mich.'s series 2025A water supply system revenue refunding senior-lien bonds and 2025C water supply system revenue senior-lien bonds.
- S&P Global Ratings also assigned its 'A+' rating to the GLWA's series 2025B water supply system revenue refunding second-lien bonds and 2025D water supply system revenue second-lien bonds.
- At the same time, S&P Global Ratings affirmed its 'AA-' rating on the GLWA's existing senior-lien bonds and its 'A+' rating on GLWA's second-lien and junior-lien bonds.
- The outlook is stable.

Rationale

Security

The bonds are secured by a statutory lien on pledged assets of the system, pursuant to both the bond ordinance and Michigan Act 94 of 1933 (as amended), and prioritized by the lien status. Pledged assets include net revenue of GLWA's water supply system, along with investments credited to the water system and earnings on those investments. The net revenue pledge is constituted from gross revenue of the Detroit Water and Sewer Board (DWSD) retail and GLWA regional wholesale systems, which cover both systems' operating and maintenance (O&M) expenses. A rate covenant stipulates that the GLWA board set rates to produce at least 1.2x coverage of senior-lien debt, 1.1x for second-lien bonds, and 1.0x for junior-lien bonds. The ability to issue additional bonds exists if net revenue for the previous fiscal year, or net revenue adjusted by approved rate increases and system expansion for the current or next fiscal year, produces coverage of maximum annual debt service (MADS; including the proposed bonds) of at least those levels indicated in the rate covenant for the particular liens.

Because about 75% of the water supply system's revenues are related to wholesale system operations, and GLWA's operational model is one that is a regional provider for a large geographic footprint, we apply our wholesale utility criteria.

Credit highlights

- GLWA's water system has a large service base, complex service delivery considerations, and significant strategic coordination requirements between GLWA's management and both its retail customer class in Detroit and wholesale contractual customers. Management's successful navigation of these factors continues to provide key credit support.
- GLWA serves the city of Detroit's retail customer class, whose relationship with the city and its water and sewer department (DWSD) is governed by several foundational agreements and other documents stemming from GLWA's incorporation. These agreements serve as additional support for the rating because they provide a basis for codification of financial and operational practices for DWSD while GLWA retains ultimate rights for rate-setting, billing, and collecting revenue from the retail class customers.
- Sophisticated financial and capital planning, combined with a wholesale rate structure that has a 60% fixed-cost recovery component, helps add predictability to GLWA's future financial performance, in our view.
- To meet GLWA's financial forecasts, management will rely on continued rate adjustments for both its retail and wholesale customer classes, which could cause downside financial risks if they aren't implemented as forecast or if other positive variances aren't achieved.
- Our view of GLWA's historical and projected financial performance is supportive of the rating level, with debt service coverage that hovers around 1.2x and unrestricted liquidity, including consideration of restricted funds available for various operating purposes, at about $277 million at the fiscal year ending June 30, 2024.
- Revenue from Detroit retail customers only represents about 25% of revenue collected within the GLWA water trust, and there are significant social risks to consider given the economic disparities within the city. GLWA and DWSD will need to continue active management of delinquent accounts in Detroit (DWSD's collection rate for its 248,000 active retail accounts is reported by management to be 84%). Both GLWA and DWSD management will need to continue balancing implementation of its assistance programs while also achieving higher collection rates within Detroit.
- GLWA and DWSD are party to litigation, some of which could cause material financial impacts, depending on the outcome. As these suits resolve, we would incorporate any material financial effects into our analysis.

Environmental, social, and governance

Minimizing governance risk lies primarily in maintaining collaboration with both suburban wholesale customers and DWSD management. All these efforts require considerable staff resources, but these efforts also are credit-supportive as long as GLWA is able to continue providing its services without significant customer discord that disrupts revenue collections. Litigation with Highland Park has been ongoing for decades but has recently been resolved with financial assistance for improvements to Highland Park's utility system coming from the State of Michigan.

Many procedures involving DWSD regarding capital and budget planning, management of budget variances, sharing of services to gain efficiencies, and reporting requirements are built into key documents to which GLWA and Detroit are party. The "One Water Partnership" between GLWA and its suburban wholesale customers generally facilitates information sharing, capital project coordination, and technical assistance.

GLWA has significant social risks to manage given the wide diversity in economic and demographic bases served by the utility. We consider social risks credit neutral, but both GLWA and DWSD management will need to continue balancing implementation of its assistance programs while also achieving higher collection rates within Detroit. GLWA's Water Residential Assistance Program (WRAP) is designed to both provide bill assistance and household water audits to all qualified residents within GLWA's service territory. DWSD management also has a dedicated shut-off program implemented by an outside contractor. In 2022, DWSD also launched a lifeline program for residents in Detroit that is funded by WRAP and other state grants and federal resources, such as the Low-Income Water Assistance Program (LIWAP). WRAP is supported from revenue generated from water and sewer rates.

We view environmental risks to be credit neutral, with the most acute risk being lead service line removal, and GLWA continues to stay vigilant with monitoring and remediation of per- and polyfluoroalkyl substances (PFAS). GLWA maintains an active and dynamic corrosion control program that, in our view, is supportive of ongoing regulatory compliance. We believe lead and copper rule implementation will directly affect DWSD operations and capital requirements, but could also affect GLWA's operations if corrosion control measures need to be substantially modified. Management has represented that PFAS is currently undetectable in its drinking water, but GLWA has a monitoring program to identify point sources of the substances. GLWA's five water treatment plants provide significant excess capacity of 1,720 million gallons per day (mgd), which typically provides about 60% headroom compared with maximum daily usage.

Outlook

The stable outlook reflects our expectation that GLWA will continue its steady financial performance while funding all its needed capital projects and adjusting its budget if economic headwinds or inflationary pressures are having meaningful budget impacts. Because the authority's capital improvement plan (CIP) is not currently regulatory-driven, we believe that flexibility to shift capital spend targets and/or revenue requirements due to economic or inflationary pressures will help minimize downside risks to meeting or outperforming near-term projected financial projections. A debt service schedule that generally allows for layered additional debt service without cost spikes is additionally supportive of the stable outlook.

We would also expect management to continue its collaborative efforts with both member partners and DWSD to minimize environmental, social, and governance (ESG) risks that could have a negative influence on credit quality.

Downside scenario

The rating or outlook could be affected if future financial performance falls below historical trends. Significant deferral of capital projects, while providing cash flow flexibility, could also lead to downside pressure on the rating or outlook if the deferrals weaken GLWA's asset renewal and replacement efforts.

Upside scenario

If economic recovery in Detroit continues and has meaningful positive effects on its economic fundamentals and utility collection rates, then we could raise the rating. We also would consider raising the rating if GLWA meaningfully outperforms historical financial trends, funds its CIP generally as planned, and these improvements are sustainable over a long-term horizon.

Credit Opinion

Several key provisions in the lease agreement, service agreement, and memorandum of understanding (MOU) between GLWA and Detroit support the ability of the GLWA regional system to help make the net revenue originating from Detroit's local system more predictable, despite various economic and collection risks:

- GLWA sets revenue requirements for DWSD that are related to the costs for providing services. In turn, Detroit sets retail rates in a fashion that meets GLWA's revenue requirement.
- Explicit language requires all revenue collected by Detroit be deposited directly into the trustee-held pledged revenue account under the master bond ordinance.
- A services agreement between GLWA and Detroit holds the city to performance and administrative standards toward maintaining its agency relationship with GLWA for rate-setting and revenue collection.
- Both GLWA and Detroit retail are required to maintain a biennial budget and a five-year CIP.
- DWSD is required to submit periodic budget and operational reporting requirements to GLWA and discuss these results at a reconciliation committee, which is also the initial mechanism for developing a plan for DWSD to cure any budget shortfalls. If any shortfalls are identified, then the MOU between the two entities describes a workout mechanism to recover the budget shortfalls over a period no longer than the next three fiscal years.

Ratings List	
New Issue Ratings	
US$109.59 mil wtr supp sys rev 2nd lien bnds ser 2025D dtd 06/30/2025 due 07/01/2055	
Long Term Rating	A+/Stable
US$109.855 mil wtr supp sys rev sr lien bnds ser 2025C dtd 06/30/2025 due 07/01/2055	
Long Term Rating	AA-/Stable
US$159.62 mil wtr supp sys rev rfdg sr lien bnds ser 2025A dtd 06/30/2025 due 07/01/2038	
Long Term Rating	AA-/Stable
US$66.125 mil wtr supp sys rev rfdg 2nd lien bnds ser 2025B dtd 06/30/2025 due 07/01/2036	
Long Term Rating	A+/Stable
Ratings Affirmed	
Water & Sewer	
Great Lakes Wtr Auth, MI Water System	AA-/Stable
Great Lakes Wtr Auth, MI Water System 2nd Lien	A+/Stable
Great Lakes Wtr Auth, MI Wholesale Water System 3rd Lien	A+/Stable

The ratings appearing below the new issues represent an aggregation of debt issues (ASID) associated with related maturities. The maturities similarly reflect our opinion about the creditworthiness of the U.S. Public Finance obligor's legal pledge for payment of the financial obligation. Nevertheless, these maturities may have different credit ratings than the rating presented next to the ASID depending on whether or not additional legal pledge(s) support the specific maturity's payment obligation, such as credit enhancement, as a result of defeasance, or other factors.

Research Update:

Great Lakes Water Authority, MI Series 2025A Bonds Assigned 'AA-' Rating, Series 2025B&C Bonds Assigned 'A+' Rating

May 30, 2025

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Overview

- S&P Global Ratings assigned its 'AA-' rating to the Great Lakes Water Authority (GLWA), Mich.'s series 2025A sewage disposal system revenue refunding senior-lien bonds and its 'A+' rating to the GLWA's series 2025B sewage disposal system revenue refunding second-lien bonds and 2025C sewage disposal system revenue second-lien bonds.
- At the same time, S&P Global Ratings affirmed its 'AA-' rating on GLWA's existing senior-lien bonds and its 'A+' rating on GLWA's second-lien and junior-lien bonds.
- The outlook is stable.

Rationale

Security

The bonds are secured by a statutory lien on pledged assets of the system, pursuant to both the bond ordinance and Michigan Act 94 of 1933 (as amended), and prioritized by the lien status. Pledged assets include net revenue of GLWA's sewage disposal system, along with investments credited to the sewer system and earnings on those investments. The net revenue pledge is constituted from gross revenue of the Detroit Water and Sewer Board (DWSD) retail and GLWA regional wholesale systems, which cover both systems' operating and maintenance (O&M) expenses. A rate covenant stipulates that the GLWA board set rates to produce at least 1.2x coverage of senior-lien debt, 1.1x for second-lien bonds, and 1.0x for junior-lien bonds. The ability to issue additional bonds exists if net revenue for the previous fiscal year, or net revenue adjusted by approved rate increases and system expansion for the current or next fiscal year, produces coverage of maximum annual debt service (MADS; including the proposed bonds) of at least those levels indicated in the rate covenant for the particular liens.

Because about 50% of the sewage disposal system's revenues are related to suburban wholesale system operations, and GLWA's operational model is one that is a regional provider for a large geographic footprint, we apply our wholesale utility criteria.

Credit highlights

- GLWA's sewer system has a large service base, complex service delivery considerations, and significant strategic coordination requirements between GLWA's management and both its retail customer class in Detroit and wholesale contractual customers. Management's successful navigation of these factors continues to provide key credit support.
- GLWA serves the city of Detroit's retail customer class, whose relationship with the city and its water and sewer department (DWSD) is governed by several foundational agreements and other documents stemming from GLWA's incorporation. These agreements serve as additional support for the rating because they provide a basis for codification of financial and operational practices for DWSD while GLWA retains ultimate rights for rate-setting, billing and collecting revenue from the retail class customers.
- Sophisticated financial and capital planning, combined with a wholesale rate structure that has a 100% fixed-cost recovery component, helps add predictability to GLWA's future financial performance, in our view.
- To meet GLWA's financial forecasts, management will rely on continued rate adjustments for both its retail and wholesale customer classes, which could cause downside financial risks if they aren't implemented as forecast or if other positive variances aren't achieved.
- Our view of GLWA's historical and projected financial performance is supportive of the rating level, with debt service coverage that hovers around 1.2x and unrestricted liquidity, including consideration of restricted funds available for various operating purposes, at about $342 million at the fiscal year ending June 30, 2024.
- Revenue from Detroit retail customers represents about 50% of revenue collected within the GLWA sewer trust and there are significant social risks to consider given the economic disparities within the city. GLWA and DWSD will need to continue active management of delinquent accounts in Detroit (DWSD's collection rate for its 248,000 active retail accounts is reported by management to be 87%). Both GLWA and DWSD management will need to continue balancing implementation of its assistance programs while also achieving higher collection rates within Detroit.
- GLWA and DWSD are party to litigation, some of which could cause material financial impacts, depending on the outcome. As these suits resolve, we would incorporate any material financial effects into our analysis.

Environmental, social, and governance

Minimizing governance risk lies primarily in maintaining collaboration with both suburban wholesale customers and DWSD management. All these efforts require considerable staff resources, but they also are credit-supportive as long as GLWA is able to continue providing its services without significant customer discord that disrupts revenue collections. Litigation with Highland Park has been ongoing for decades but has recently been resolved with financial assistance for improvements to Highland Park's utility system coming from the State of Michigan.

Many procedures involving DWSD regarding capital and budget planning, management of budget variances, sharing of services to gain efficiencies, and reporting requirements are built into key documents to which GLWA and Detroit are party. The “One Water Partnership” between GLWA and its suburban wholesale customers generally facilitates information sharing, capital project coordination, and technical assistance.

GLWA has significant social risks to manage given the wide diversity in economic and demographic bases served by the utility. We consider social risks credit neutral, but both GLWA and DWSD management will need to continue balancing implementation of its assistance programs while also achieving higher collection rates within Detroit. GLWA's Water Residential Assistance Program (WRAP) is designed to both provide bill assistance and household water audits to all qualified residents within GLWA's service territory. DWSD management also has a dedicated shut-off program implemented by an outside contractor. In 2022, DWSD also launched a lifeline program for residents in Detroit that is funded by WRAP and other state grants and federal resources such as the Low-Income Water Assistance Program (LIWAP). WRAP is supported from revenue generated from water and sewer rates.

We view environmental risks to be credit neutral, with the most acute potential risk being exposure to per- and polyfluoroalkyl Substances (PFAS) regulation that could affect discharge requirements. However, GLWA remains active in testing and works with regional partners to develop innovative strategies for monitoring and mitigation. GLWA also is no longer under an administrative consent order with the Michigan Department of Environment, Great Lakes, and Energy for monitoring of sewer treatment facility operations and biosolids handling; the order had been in place prior to Detroit's bankruptcy. Also of note is that GLWA maintains a strong record of discharge permit and combined sewer overflow compliance.

Outlook

The stable outlook reflects our expectation that GLWA will continue its steady financial performance while funding all its needed capital projects and adjusting its budget if economic headwinds or inflationary pressures have meaningful budget impacts. Because the authority's capital improvement plan (CIP) is not currently regulatory-driven, we believe that flexibility to shift capital spend targets and/or revenue requirements due to economic or inflationary pressures will help minimize downside risks to meeting or outperforming near-term projected financial projections. A debt service schedule that generally allows for layered additional debt service without cost spikes is additionally supportive of the stable outlook.

We would also expect management to continue its collaborative efforts with both member partners and DWSD to minimize environmental, social, and governance (ESG) risks that could have a negative influence on credit quality.

Downside scenario

The rating or outlook could be affected if future financial performance falls below historical trends. Significant deferral of capital projects, while providing cash flow flexibility, could also lead to downside pressure on the rating or outlook if the deferrals weaken GLWA's asset renewal and replacement efforts.

Upside scenario

If economic recovery in Detroit continues and has meaningful positive effects on its economic fundamentals and utility collection rates, then we could raise the rating. We also would consider raising the rating if GLWA meaningfully outperforms historical financial trends and funds its CIP generally as planned, and these improvements are sustainable over a long-term horizon.

Credit Opinion

Several key provisions in the lease agreement, service agreement, and memorandum of understanding (MOU) between GLWA and Detroit support the ability of the GLWA regional system to help make the net revenue originating from Detroit's local system more predictable, despite various economic and collection risks:

- GLWA sets revenue requirements for DWSD that are related to the costs for providing services. In turn, Detroit sets retail rates in a fashion that meets GLWA's revenue requirement.
- Explicit language requires all revenue collected by Detroit be deposited directly to a trustee-held pledged revenue account under the master bond ordinance.
- A services agreement between GLWA and Detroit holds the city to performance and administrative standards toward maintaining its agency relationship with GLWA for rate-setting and revenue collection.
- Both GLWA and Detroit retail are required to maintain a biennial budget and a five-year CIP.
- DWSD is required to submit periodic budget and operational reporting requirements to GLWA and discuss these results at a reconciliation committee, which is also the initial mechanism for developing a plan for DWSD to cure any budget shortfalls. If any shortfalls are identified, then the MOU between the two entities describes a workout mechanism to recover the budget shortfalls over a period no longer than the next three fiscal years.

Ratings List	
New Issue Ratings	
US$259.4 mil swg disp sys rev rfdg 2nd lien bnds ser 2025B dtd 06/30/2025 due 07/01/2039	
Long Term Rating	A+/Stable
US$48.115 mil swg disp sys rev 2nd lien bnds ser 2025C dtd 06/30/2025 due 07/01/2055	
Long Term Rating	A+/Stable
US$53.765 mil swg disp sys rev rfdg sr lien bnds ser 2025A dtd 06/30/2025 due 07/01/2040	
Long Term Rating	AA-/Stable
Ratings Affirmed	
Water & Sewer	
Great Lakes Wtr Auth, MI Sewer System	AA-/Stable
Great Lakes Wtr Auth, MI Sewer System 2nd Lien	A+/Stable
Great Lakes Wtr Auth, MI Sewer System 3rd Lien	A+/Stable

The ratings appearing below the new issues represent an aggregation of debt issues (ASID) associated with related maturities. The maturities similarly reflect our opinion about the creditworthiness of the U.S. Public Finance obligor's legal pledge for payment of the financial obligation. Nevertheless, these maturities may have different credit ratings than the rating presented next to the ASID depending on whether or not additional legal pledge(s) support the specific maturity's payment obligation, such as credit enhancement, as a result of defeasance, or other factors.