S&P Global Ratings

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Summary:

Great Lakes Water Authority, Michigan; Water/Sewer

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Summary:

Great Lakes Water Authority, Michigan; Water/Sewer

Credit Profile

US\$348.395 mil swg disposal sys rev rfdg bnds sr ln bnds ser 2024A due 07/01/2033

Long Term Rating AA-/Stable New

US\$40.485 mil swg disposal sys rev rfdg bnds 2nd ln bnds ser 2024B due 07/01/2035

Long Term Rating A+/Stable New

Credit Highlights

- S&P Global Ratings assigned its 'AA-' rating to the Great Lakes Water Authority (GLWA), Mich.'s series 2024A (senior-lien) and 'A+' rating to GLWA's series 2024B (second-lien) sewage disposal system revenue refunding 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 bonds.
- · The outlook is stable.

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 1x 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.

In conjunction with the series 2024 issuances, GLWA is eliminating the debt service reserve requirement on its outstanding and future bonds because two credit rating agencies rate GLWA's senior-lien bonds no lower than 'AA-' or the equivalent; this change has no impact on the rating. The reserves originally funded with bond proceeds are being contributed to the escrow related to the 2024 refinancing.

Credit overview

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 retail customer class, whose relationship with the city and its water and sewer
 department (DWSD) is governed by a number of 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 either they aren't implemented as forecast
 or other positive variances aren't achieved.
- 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 just 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 Polyfluoroalkyl Substances (PFAS) regulation that could affect discharge requirements. One positive recent outcome related to

environmental risks is that GLWA was released from 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 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.

We would also expect management to continue its collaborative efforts with both member partners and DWSD to minimize environmental, social, and governance 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 starts to have meaningful positive effects on its economic fundamentals and utility collection rates, then the rating could be improved. We also would consider an upgrade if GLWA meaningfully outperforms historical financial trends and funds its CIP generally as planned, and the improvements are sustainable over a long-term horizon.

Credit Detail

A number of 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, and, in turn, Detroit sets retail rates in a fashion that meets GLWA's revenue requirement.
- Explicit language that requires all revenue collected by Detroit be held in segregated accounts in trust and remitted within five days of receipt to a trustee-held pledged revenue account under the Master Bond Ordinance.
- A services agreement between GLWA and Detroit that holds the city to performance and administrative standards to maintain its agency relationship with GLWA for rate-setting and revenue collection.
- · Requirements that both GLWA and Detroit retail 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 to develop a plan for DWSD to cure any budget shortfalls. If there are any, 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.

Related Research

• Through The ESG Lens 3.0: The Intersection Of ESG Credit Factors And U.S. Public Finance Credit Factors, March 2, 2022

Ratings Detail (As Of May 14, 2024)			
Great Lakes Wtr Auth swg disp sys rev bnds ser 2001-SRF1 due 10/01/2024			
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2001-SRF2 due 10/01/2024			
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2002-SR	F3 due 10/01/2024		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2003-SR	F1 due 10/01/2025		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2003-SR	F2 due 04/01/2025		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2004-SR	F1 due 10/01/2024		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2004-SR	F3 due 04/01/2025		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2007-SR	F1 due 10/01/2029		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2009-SR	F1 due 04/01/2030		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2010-SR	RF1 due 04/01/2031		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2012-SR	F1 due 10/01/2034		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2015A-S	SRF due 04/01/2036		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2015B-S	SRF due 10/01/2035		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2015D-SRF due 10/01/2035			
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2016-SA	W due 10/01/2038		
Long Term Rating	A+/Stable	Affirmed	

Ratings Detail (As Of May 14, 2024) (cont.)			
Great Lakes Wtr Auth swg disp sys rev bnds ser 2016-SRF1 due 04/01/2038			
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2016-SR	F2 due 04/01/2039		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2017-SRF1 due 10/01/2038			
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2018-SR	F1 due 10/01/2042		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg disp sys rev bnds ser 2018-SR	F2 due 10/01/2039		
Long Term Rating	A+/Stable	Affirmed	
Great Lakes Wtr Auth swg (wrap of insured) (MBIA, National & ASSURED GTY) (SEC MKT)			
Unenhanced Rating	A+(SPUR)/Stable	Affirmed	
Great Lakes Wtr Auth swg (AGM)			
Unenhanced Rating	A+(SPUR)/Stable	Affirmed	
Great Lakes Wtr Auth swg (Sr lien)			
Long Term Rating	AA-/Stable	Affirmed	
Great Lakes Wtr Auth swg (Sr lien) (AGM)			
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed	
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Unenhanced Rating	A+(SPUR)/Stable	Affirmed	
Great Lakes Wtr Auth swg (2nd lien) (MBIA) (National)			
Unenhanced Rating	A+(SPUR)/Stable	Affirmed	
Great Lakes Wtr Auth swr (wrap of insured) (FGIC) (ASS	URED GTY - SEC MKT)		
Unenhanced Rating	A+(SPUR)/Stable	Affirmed	

Ratings Detail (As Of May 14, 2024) (cont.)

Michigan Finance Authority, Michigan Great Lakes Water Authority, Michigan Michigan Fin Auth (Great Lakes Wtr Auth) swg disposal (AGM) **Unenhanced Rating** A+(SPUR)/Stable Affirmed Michigan Fin Auth (Great Lakes Wtr Auth) swg disposal (BAM) A+(SPUR)/Stable Affirmed **Unenhanced Rating** Michigan Fin Auth (Great Lakes Wtr Auth) swg (BAM) (SECMKT) **Unenhanced Rating** A+(SPUR)/Stable Affirmed Michigan Fin Auth (Great Lakes Wtr Auth) swg (National) Affirmed Unenhanced Rating A+(SPUR)/Stable Michigan Fin Auth (Great Lakes Wtr Auth) WTRSWR AA-/Stable Affirmed Long Term Rating Michigan Fin Auth (Great Lakes Wtr Auth) WTRSWR AA-/Stable Affirmed Long Term Rating Michigan Fin Auth (Great Lakes Wtr Auth) WTRSWR Long Term Rating AA-/Stable Affirmed Michigan Fin Auth (Great Lakes Wtr Auth) WTRSWR Unenhanced Rating AA-(SPUR)/Stable Affirmed Michigan Fin Auth (Great Lakes Wtr Auth) WTRSWR A+/Stable Affirmed Long Term Rating

Many issues are enhanced by bond insurance.

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