FitchRatings

Public Finance
Water & Sewer
U.S.A.

Massachusetts Water Resources Authority

Massachusetts Water Resources Authority's 'AA+' general revenue bond rating and 'AA' subordinate general revenue bond rating and IDR reflect the authority's 'Very Strong' financial profile within the framework of 'Very Strong' revenue defensibility and a 'Very Strong' operating risk profile, both assessed at 'aa'. The authority's leverage, measured as net adjusted debt to adjusted funds available for debt service (FADS), was very low at 7.2x in fiscal 2023 (ended Dec. 31) and is projected to average 7.2x over Fitch Ratings' Analytical Stress Test (FAST) stress case. Leverage is expected to peak at about 7.7x in fiscal 2024, then gradually moderate to 6.8x through the remaining forward-look.

Capital spending has started to increase as the authority focuses on water pipeline replacement and water system redundancy. The 2024-2028 five-year capital spending block has risen to $1.8 billion in projects from the 2019-2023 block of $984 million. Fitch expects leverage to gradually increase but remain adequate for the financial profile and rating, supported by consistent FADS growth and strategic defeasance with amortization that generally outpaces debt issuance.

Fitch makes a one-notch distinction between the senior and subordinate lien obligations given the meaningful protection afforded to senior bondholders from the sizable balance of subordinate general revenue bonds and that acceleration in the general bond resolution is reserved for senior lien bondholders. Additionally, subordinate bondholders are precluded from direct remedies until such time as there are no senior bondholders.

Security

The parity general revenue bonds are payable from a first lien on the authority's net revenues, which are derived largely from wholesale rates and charges assessed on local government units. The subordinate lien bonds are payable from a second lien on net authority revenues and are subordinate only to the authority's lien securing its senior lien obligations.

Ratings

Long-Term IDR	AA

Rating Outlook

Long-Term IDR	Stable

New Issues

Massachusetts Water Resources Authority, Series 2024 B and C	AA+

Sale Date

Week of June 10 via negotiated sale

Outstanding Debt

General Revenue Bonds	AA+
General Revenue Bonds (Taxable)	AA+
General Revenue Bonds (Green Bonds)	AA+
General Revenue Refunding Bonds	AA+
General Revenue Refunding Bonds (Taxable) (Green Bonds)	AA+
General Revenue Refunding Bonds (Green Bonds)	AA+
Multi-Modal Subordinated General Revenue Bonds	AA
Multi-Modal Subordinated General Revenue Refunding Bonds	AA

Applicable Criteria

U.S. Public Sector, Revenue-Supported Entities Rating Criteria (January 2024)

U.S. Water and Sewer Rating Criteria (February 2024)

Related Research

Fitch Rates Massachusetts Water Resources Auth's General Rev, Ser 2024 B & C 'AA+'; Outlook Stable (May 2024)

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Key Rating Drivers

Revenue Defensibility - 'aa'

Very Strong Purchaser Credit Quality, Very Strong Revenue Source Characteristics

Revenue defensibility is supported by purchasers that exhibit very strong credit quality. The authority has contract provisions allowing for full cost recovery and unlimited reallocation of costs across users. Additionally, the authority retains independent legal ability to raise rates without external approval. The authority plans for additional annual rate revenue adjustments of 3.4% or less through fiscal 2029.

Operating Risk - 'aa'

Very Low Operating Cost Burden, Moderate Investment Needs

In fiscal 2023, the authority's operating cost burden was considered very low, at $2,731 per million gallons (mg), consistent with the operating risk assessment. The lifecycle ratio was elevated, at 48%, in fiscal 2023. Capex to depreciation is weaker, despite improving to a five-year average of 70% from fiscal 2019 to fiscal 2023.

Planned capital spending for the next five years should generally outpace historical depreciation, resulting in a stable to improving lifecycle ratio. Capex to deprecation is expected to average $273 million over the coming five years, while the five-year spending block grew to $1.8 billion through fiscal 2028. The authority plans to issue $2.2 billion in secured bonds from fiscal 2024 to fiscal 2029 to finance the five-year capital spending block and make $130 million in pay-as-you-go capex.

Financial Profile - 'aa'

Leverage to Remain Stable, Neutral Liquidity

The authority had very low leverage of 7.2x as of fiscal 2023. Leverage is expected to remain supportive of the current rating and range between 7.7x and 6.8x. The liquidity profile is neutral to the overall assessment, with 205 current days' cash on hand and 1.2x coverage of full obligations (COFO). Fitch-calculated total debt service coverage was 1.2x in fiscal 2023. Leverage has declined yoy from 9.8x in fiscal 2019. COFO over the past five years has been stable, ranging from just under 1.0x to 1.2x. Current days cash on hand has seen modest improvement, growing from 167 days in 2019 to more than 200 days in each fiscal year starting in 2021.

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 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 7.7x in fiscal 2024, then decrease to 6.5x through fiscal 2028. In the stress scenario, which is considered the rating case, the leverage ratio is expected to increase to 7.7x in fiscal 2024, then decline to 6.8x through fiscal 2028. The liquidity profile is expected to remain neutral to the assessment over the five-year horizon.

Sensitivities

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

- A sustained trend in leverage that exceeds 9.0x in Fitch's rating case scenario analysis;
- Deterioration of the credit quality of the authority's largest purchasers that pressures the revenue defensibility assessment;
- The senior lien rating could converge at the subordinate lien level if there is significant erosion in the financial cushion afforded to senior bondholders that results in a lack of meaningful difference in the probability of payment default between the two liens.

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

- Continued favorable trend of leverage that more closely approximates 6.0x on a sustained basis within Fitch's rating case scenario analysis.

Profile

MWRA provides wholesale water and wastewater services to communities located primarily in eastern Massachusetts. About 3 million people (or 44% of the population of the commonwealth) reside in the authority's service area. The largest community within the service area is the City of Boston, which is served through the Boston Water and Sewer Commission (BWSC; revenue bonds rated AA+/Stable). BWSC contributes approximately 30% of MWRA's revenue derived from rates and charges. The City of Boston generally is economically diverse, and wealth levels tend to be above the national average.

The authority's ample water supply is drawn primarily from the Quabbin and Wachusetts reservoirs and the Ware River. Under present operating rules, the authority's water sources can supply a safe yield of approximately 300 million gallons daily (mgd), which has not been exceeded since 1989. Demand continues to decline due to improvements in water efficiency and increased conservation efforts, making current supply more than sufficient to meet demand through at least 2060.

The authority operates two relatively new water treatment plants with a combined treatment capacity of 428 mgd, which is more than sufficient capacity to meet the average demand of less than 200 mgd.

The authority’s retail customers collect and convey wastewater to MWRA, which provides transport and treatment at its two wastewater treatment facilities for combined average daily flow treatment capacity of 365 mgd. Average daily flows for the past five years registered just over 300 mgd.

MWRA Response to Updated Federal Regulations

The authority is addressing new regulations set forth by the EPA. The EPA's enhanced focus on lead and copper lines and per- and polyfluoroalkyl substances (PFAS) has led to the introduction of the Lead and Copper Rule Revisions (LCRR) and proposed Lead and Copper Rule Improvements, along with specific testing for PFAS contaminants. The MWRA is addressing the LCRR, ensuring compliance through lead testing and adhering to copper standards.

With the LCRR's update in December 2021 and a compliance deadline of October 2024, the MWRA has initiated a review of corrosion control practices. In districts with high lead levels local bodies are required to undertake educational programs and replace lead service lines.

Anticipating further rule updates by October 2024 which may call for a 10-year timeline to replace all lead service lines, the MWRA is working with its advisory board to modify its loan program to assist local bodies with this potential requirement. Based on current and historical sampling results, the authority will easily meet the EPA's final maximum contaminant levels for the six PFAS compounds regulated by the ruling.

Revenue Defensibility

Revenue Source Characteristics

Revenue source characteristics are very strong, reflecting the authority's independent rate-setting authority and ability to reallocate costs among purchasing entities to provide for full cost recovery.

Authority revenues are derived from an assessment on the 61 local communities included within its service area; assessments for MWRA services are a general obligation of each community. Furthermore, rate-setting is not subject to any limitations, including the state's Proposition 2 1/2. These protections, coupled with the authority's ability (pursuant to its enabling act) to utilize a local aid intercept to recover amounts unpaid by one of its member communities (excluding revenues of BWSC and other special-purpose local bodies), provide significant revenue protection.

Rate Flexibility

The authority adopted a 2.4% rate adjustment for fiscal 2024, lower than the 2.8% and 2.95% adjustments adopted in fiscal 2023 and 2022, respectively. Planned rate adjustments are expected to range from 3.3% to 3.4% from fiscal 2025 through fiscal 2029. Although the planned adjustments are higher than historical increases, MWRA’s long-term rate forecasts continue to trend below prior estimates. Combined rates originally were projected to climb by as much as 5.2% annually by 2021, but are now estimated to rise by no more than 3.4% annually through fiscal 2029. Actual rate adjustments may be less, as MWRA applies surplus revenues to level off near-term escalations in debt service costs.

Purchaser Credit Quality

The revenue defensibility assessment also takes into account the very strong purchaser credit quality, represented by a Purchaser Credit Index of 1. The largest purchasing member communities include BWSC, Newton, Quincy and Cambridge, which together make up more than 40% of authority revenues. Fitch assesses the credit quality of BWSC, Newton and Cambridge as very strong, while Quincy is considered strong.

Boston Water and Sewer Commission

BWSC, which will account for about 29.9% of the authority's fiscal year 2024 rates and charges, buys water from the authority and uses its system to transport wastewater. Governance of BWSC is provided by a separate, independent board of commissioners appointed by the city's mayor. BWSC provides water distribution and sewer collection service to the residents of the City of Boston, providing essential services to a diverse and stable customer base.

In fiscal 2023 the commission served a population of approximately 692,000 residents and approximately 90,000 accounts, while it recently added a stormwater charge, increasing accounts by 8,000. No revenue or usage concentration exists among BWSC's customer base, the vast majority of which is residential. Although it lacks taxing power, BWSC self-funds through user fees and charges, which are set independently and must cover operational costs, debt service, reserves, repairs and legal obligations. BWSC has secured its revenues against its outstanding bonds and prioritizes bond debt service and operational expenses over the authority's charges. Authority assessments for water and wastewater services are a significant portion of BWSC's expenses and are anticipated to be 55.6% in 2024.

Asymmetric Factor Considerations

No asymmetric rating factor considerations affect the revenue defensibility assessment.

Operating Risk

Operating Cost Burden

The authority's operating cost burden is very low, averaging about $2,700 per mg for the past five years. Operating costs are expected to increase based on inflationary costs and generally stable demand, but should continue supporting the assessment for the foreseeable future. The metric can vary according to the weather, but remains favorable for the assessment.

Capital Planning and Management

The authority has established a capital spending cap to create an amount not-to-exceed over a five-year period. The spending cap was initiated in 2003. The fifth and most recent capital improvement plan (CIP) cap adopted runs from 2024 to 2028 and totals $1.8 billion. Asset protection accounts for the largest share of the cap, at 63.9% ($1.2 billion), and the authority's water redundancy for 20% ($365.8 million).

The lifecycle ratio has trended up and now registers 48%. However, planned increases to capital spending in the coming years are expected to average $336 million, which should reverse the trend. Despite what appears to be a weakening trend in capital investment, the authority routinely has an outside party assess its capital assets and the most recent report, from October 2023, states that assets are in good condition and finds that levels of investment under the current spending cap are appropriate to maintain assets in good operating order.

The 2024-2028 CIP includes $166.2 million to cover the initial costs of a redundancy tunnel, with the authority in the early planning stages. Total costs of the Metro Tunnel Project are currently estimated at $1.8 billion, with the bulk of the spending ($1.1 billion) starting around fiscal 2034; as such, the current five-year spending cap does not represent peak planned spending on the project.

The 2024-2028 cap continues a trend of increased capital investment. Past caps totaled $984.8 million (2019-2023) and $791 million (2014-2018). Despite the uptick in expected spending with the current spending cap, Fitch believes future capital costs will remain manageable given MWRA's project oversight and its board's self-imposed spending cap for capital projects.

MWRA maintains a 40-year master plan for the system that is updated every five years and will be updated again in 2024. The current plan dates from fiscal 2018 and totals $5.75 billion, which includes $2.58 billion for water projects and $3.17 billion for sewer projects. About 69% of the water projects focus on water redundancy, with remaining projects related to ongoing asset protection and rehabilitation; over 90% of wastewater projects are related to ongoing asset protection and rehabilitation.

Funding for capital needs will continue to come almost entirely from long-term borrowings, including revenue bonds, state revolving fund loans and CP notes. The authority's capital improvement plan remains sizable, but spending is significantly below historical levels, costs having been driven up by the cleanup of Boston Harbor in the 1990s and by completion of the majority of the combined sewer overflow (CSO) in recent years.

Asymmetric Factor Considerations

No asymmetric rating factor considerations affect the operating risks assessment.

Financial Profile and FAST Analysis

The financial profile is very strong and reflects the authority's continued downward leverage trend, to 7.2x for fiscal 2023 from 9.8x in fiscal 2019. Continuous declining leverage is supported by the strategic defeasance of outstanding debt obligations from budget surplus and refinancing opportunities. Since fiscal 2006 the authority has defeased bonds with a total of $828 million in debt service. The liquidity profile is considered neutral to the assessment. The authority's coverage of full obligations (COFO) was just under 1.0x in fiscals 2019 and 2020, but concerns are mitigated by the favorable liquidity cushion of 205 days for fiscal 2023; COFO for fiscal 2023 registered at 1.2x.

Fitch notes the meaningful difference between the Fitch-calculated debt service coverage (DSC) on the senior lien and the all-in DSC as support for the one-notch differential between the senior and subordinate liens. Fitch-calculated DSC on senior lien obligations has averaged 2.0x since 2018, while all-in DSC has generally been sum-sufficient. The Fitch-calculated all-in DSC includes subordinate public debt and privately placed state revolving fund loans.

Management forecasts point to continued stable financial margins based on the authority's conservative budgeting practices. DSC is expected to remain near historical norms and generate surpluses that the authority expects to use to defease future debt maturities. MWRA's positive variances are driven by conservative budgeting estimates (particularly with regard to variable interest rate costs) and expenditure controls.

Fitch Analytical Stress Test

The FAST considers the potential trend of key ratios in a base case and a stress case, with the stress case designed to impose capital costs 10% above expected levels and evaluate potential variability in projected key ratios. Fitch's base case was informed by the authority's fiscal 2024 Current Expense Budget, about 10% pay-as-you-go funding and planned debt financing, which include recent draws on state revolving loans. Revenue growth from 2025 to 2028 is assumed at the five- year CAGR of 2.4% and expense growth was assumed to align with revenue growth.

Leverage in the FAST base case declines yoy, to 6.6x by fiscal 2028, with the stress case reflecting a similar trend, with leverage declining to 6.8x over the same period. The liquidity profile is expected to remain neutral to the assessment, with annual COFO of at least 1.1x and sound days cash on hand.

Asymmetric Additive Risk Considerations

No asymmetric additive risk considerations affected this rating 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)	2019	2020	2021	2022	2023
Operating risk					
Operating cost burden					
Operating cost burden ($/mg)	2,542	2,865	2,790	2,648	2,731
Capital planning and management					
Lifecycle ratio (%)	42	44	45	46	48
Annual capex/depreciation (%)	72	72	71	65	72
Five-year average capex/depreciation (%)	63	65	70	71	70
Financial profile ($000, unless otherwise indicated)					
Current unrestricted cash/investments	66,471	70,858	74,674	77,457	84,334
Current restricted cash/invest (available liquidity)	73,170	83,811	94,007	85,531	91,048
Current cash available	139,641	154,669	168,681	162,988	175,382
Noncurrent unrestricted cash/investments					
Noncurrent restricted cash/invest (available liquidity)	72,519	75,067	72,104	71,393	65,752
Available cash	212,160	229,736	240,785	234,381	241,134
Current restricted cash/invest (debt service or debt service reserve)					
Noncurrent restricted cash/invest (debt service or debt service reserve)	501,366	505,505	502,977	513,420	529,721
Funds restricted for debt service	501,366	505,505	502,977	513,420	529,721
Total debt	5,478,827	5,235,335	5,137,471	4,851,088	4,664,653
Capitalized fixed charges					
Adjusted net pension liability	195,901	162,244	141,477	100,140	235,106
Available cash	212,160	229,736	240,785	234,381	241,134
Funds restricted for debt service	501,366	505,505	502,977	513,420	529,721
Net adjusted debt	4,961,202	4,662,338	4,535,186	4,203,427	4,128,904
Total operating revs	755,336	778,326	786,119	811,854	836,955
Purchased water/sewer services	—	—	—	—	—
Other operating expenses	305,110	293,627	291,370	281,292	312,971
EBITDA	450,226	484,699	494,749	530,562	523,984
Investment income/(loss)	27,210	17,645	(2,658)	(22,743)	19,313
Non-operating revenues from taxes	—	—	—	—	—
Other cash revenues/(expenses)	—	—	—	—	—
Bab subsidy	—	—	—	—	—
Capital contributions	—	—	—	—	—
Funds available for debt service	477,436	502,344	492,091	507,819	543,297
Fixed services expense	—	—	—	—	—
Net transfers in/(out)	—	—	—	—	—
Pension expense	30,146	15,347	12,437	6,700	33,781
Adjusted funds available for debt service	507,582	517,691	504,528	514,519	577,078
Net adjusted debt/adjusted funds available for debt service (x)	**9.8**	**9.0**	**9.0**	**8.2**	**7.2**
Funds available for debt service	477,436	502,344	492,091	507,819	543,297
Fixed services expense	—	—	—	—	—
Net transfers in/(out)	—	—	—	—	—
Adjusted FADS for coverage of full obligations	477,436	502,344	492,091	507,819	543,297
Total annual debt service	507,249	507,781	433,974	414,459	454,903
Fixed services expense	—	—	—	—	—
Adjusted debt service (includes fixed services expense)	507,249	507,781	433,974	414,459	454,903

(Audited fiscal years ended June 30)	2019	2020	2021	2022	2023
Coverage of full obligations (x)	0.9	1.0	1.1	1.2	1.2
Coverage of full obligations excluding connection fees (x)	0.9	1.0	1.1	1.2	1.2
Current days cash on hand	167	192	211	211	205
Liquidity cushion ratio (days)	167	192	211	211	205
All-in debt service coverage (x)	0.9	1.0	1.1	1.2	1.2

Notes: Fitch may have reclassified certain financial statement items for analytical purposes.
Source: Fitch Ratings, Fitch Solutions, Massachusetts Water Resources Authority

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.