FitchRatings

Massachusetts Water Resources Authority

New Issue Summary

Sale Date: Dec. 6, 2021

Series: $75,000,000 General Revenue Bonds (Green Bonds), Series 2021 B; $700,000,000 General Revenue Refunding Bonds (Taxable) (Green Bonds), Series 2021 C.

Purpose: Proceeds of the series 2021 B bonds will be used to repay a portion of the authority's outstanding commercial paper. Proceeds of the series 2021 C bonds will be used to refund portions of the authority's outstanding bonds.

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

The affirmation of the 'AA' Issuer Default Rating (IDR), and the 'AA+' and 'AA' ratings on the senior lien and subordinate lien bonds, respectively, reflect the authority's very strong purchaser credit quality, supported by its independent rate-raising ability and unlimited ability to reallocate costs. The authority and its purchasers benefit from very favorable demographics within the primary service area of the Massachusetts commonwealth.

The operating risk profile of the authority is very strong given a very low operating cost burden and a very low life cycle ratio. The authority's leverage, measured as net adjusted debt to adjusted funds available for debt service (FADS), has declined year over year (yoy) for the past five years, registering 9.0x in fiscal 2021. Leverage is expected to continue to trend lower over the next five years to around 7.8x by fiscal 2026, given the authority's capital program has transitioned from costly court-mandated projects to ongoing rehabilitation and water system redundancy.

Fitch Ratings makes a one-notch distinction between the senior and subordinate lien obligations given that the difference in the financial profile between the two liens is considered meaningful and acceleration in the general bond resolution is reserved for senior lien bondholders; subordinate bondholders are precluded from direct remedies until such time as there are no senior bondholders.

Key Rating Drivers

Revenue Defensibility: 'aa'; Very Strong Purchasers and Very Strong Revenue Defensibility: Very strong purchaser credit quality is evidenced by a Purchaser Credit Index (PCI) of 1. Revenues are derived from wholesale agreements that provide for full cost recovery. The authority retains independent legal ability to raise assessments without external approval.

Operating Risk: 'aa'; Very Low Operating Cost Burden: The authority's operating cost burden is very low. Capital costs are focused on system renewal and water system redundancy and no longer focused on court-mandated projects.

Financial Profile: 'aa'; Very Strong Financial Profile: The authority's financial profile is very strong, characterized by declining leverage and ample reserves. The authority's strategic refinancing and defeasance programs contribute to the continuous decline in leverage despite ongoing debt financing of capex.

FACT Tools

Ratings

Long-Term Issuer Default Rating	AA

New Issues

$75,000,000 General Revenue Bonds (Green Bonds), Series 2021 B	AA+
$700,000,000 General Revenue Refunding Bonds (Taxable) (Green Bonds), Series 2021 C	AA+

Outstanding Debt

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

Rating Outlook

Stable

Applicable Criteria

U.S. Water and Sewer Rating Criteria (March 2021)

Public Sector, Revenue-Supported Entities Rating Criteria (September 2021)

Related Research

Fitch Rates Massachusetts Water Resources Auth's General Rev, Ser 2021 B & C 'AA+'; Outlook Stable (November 2021)

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Rating Sensitivities

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 base and stress case scenario analysis.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

- Failure or interruption of the continued expected downward trend in leverage to below 9x over the next few years within Fitch's base and stress case scenario analysis.
- Deterioration of the credit quality of the largest purchasers of authority services could pressure the revenue defensibility assessment.
- The senior lien rating could converge at the subordinate lien level 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 two liens.

Credit Profile

MWRA provides wholesale water and wastewater services to communities located primarily in eastern Massachusetts. About three million people (or 44% of the population of the commonwealth) reside in the authority's service area. The largest of these is the city of Boston, through the Boston Water and Sewer Commission (BWSC; revenue bonds ‘AA+’/Stable), which contributes approximately 30% of MWRA's revenue derived from rates and charges. The service area 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 system 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.

Retail customers of the authority 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 register just over 300 mgd.

Coronavirus Considerations — Limited Impact

The authority's most recently available performance data does not indicate impairment from the coronavirus pandemic.

Revenue Defensibility

Revenue defensibility is very strong at 'aa', supported by the authority's independent rate-setting authority and ability to reallocate costs among purchasing entities to provide for full cost recovery. The assessment is also supported by the very strong purchaser credit quality, represented by a PCI of 1. The largest purchasing member communities include BWSC, Newton, Quincy and Cambridge, which make up more than 40% of authority revenues.

Authority revenues are derived from assessment on the 61 local communities included in the service area, which are required to pay for MWRA services as a general obligation. 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.

Rating History: IDR

Rating	Action	Outlook/ Watch	Date
AA	Affirmed	Stable	11/16/21
AA	Assigned	Stable	7/31/20

Rating History: Senior Lien

Rating	Action	Outlook/ Watch	Date
AA+	Affirmed	Stable	11/16/21
AA+	Revised	Stable	4/30/10
AA	Upgraded	Stable	3/8/05
AA-	Affirmed	Positive	12/11/03
AA-	Upgraded	Stable	6/7/00
A+	Upgrade	Stable	6/22/98
A	Assigned		9/14/92

Rating History: Subordinate Lien

Rating	Action	Outlook/ Watch	Date
AA	Affirmed	Stable	11/16/21
AA	Revised	Stable	4/30/10
AA-	Upgraded	Stable	3/8/05
A+	Affirmed	Positive	12/11/03
A+	Affirmed	Stable	12/11/02
A+	Affirmed		11/11/02
A+	Affirmed	Stable	8/8/02
A+	Upgraded		6/7/00
A	Assigned		6/8/99

Over the past five years through fiscal 2021, the authority raised rates on average a moderate 2.7% annually, while raising rates just 1% in fiscal 2021 to provide rate relief during the pandemic. Continuous conservative budgeting practices and cost containment measures allowed for a lower fiscal 2021 rate adjustment without compromising operations or financial performance.

The authority has adopted a 2.95% rate adjustment for fiscal 2022 and future annual rate adjustments are expected to return the historical norms of 3.5% or less. However, 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 increase by no more than 3.5% through fiscal 2026. Actual rate adjustments may be less, as MWRA has been prudently applying surplus revenues to level off near-term escalations in debt service costs.

No asymmetric rating factor considerations affect the revenue defensibility assessment.

Operating Risk

Operating risk is assessed as very strong at 'aa', supported by a very low operating cost burden in conjunction with low life cycle investment needs that are supported by adequate capital investment. The operating cost burden is very low, averaging about $2,700 per million gallons (mg) for the past five years and comfortably below the 'aa' assessment threshold of $6,500 mg. Operating costs are expected to increase based on inflationary costs and generally stable demand but will likely remain within the 'aa' assessment for the foreseeable future.

The spending for capital projects spanning fiscal years 2022–2026 is estimated at $1.7 billion and continues to shift focus towards renewal and replacement of system assets and water redundancy and away from regulatory compliance projects. The authority is in the early planning stages of a large-scale project to support system redundancy. The Tunnel Redundancy Project total costs are currently estimated at $1.5 billion with the bulk of the spending for the project ($980 million) starting around fiscal 2031.

Since 2003, the MWRA's board has adopted five-year spending caps for capital spending. The fiscal 2019-2023 cap of $984.8 million is up from the prior fiscal 2014-2018 cap of $791 million. Despite the uptick in expected spending, Fitch believes future capital costs will remain manageable given MWRA's vigilant 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. The plan was last updated in fiscal 2018 and totaled $5.75 billion, which includes $2.58 billion for water projects and $3.17 billion for sewer projects. About 69% of the water projects are focused 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 commercial paper notes. The authority's capital improvement plan remains sizable but is significantly below historical spending levels, which were driven by the cleanup of Boston Harbor in the 1990s and the completion of the majority of the combined sewer overflow (CSO) control plan in recent years.

With all court-mandated CSO projects substantially completed in 2015, the five-year average capex has reflected a slowdown in capital investment, with the five-year capex/depreciation averaging just 70%. This has resulted in an increase in the life cycle ratio to 45% as of fiscal 2021.

No asymmetric rating factor considerations affect the operating risks assessment.

Financial Profile

The financial profile is very strong, assessed at 'aa'. The authority's leverage continues its downward trend to 9.0x for fiscal 2021, down from 10.4x in fiscal 2017. The authority's 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 over $717 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 for fiscals 2018–2020, but concerns are mitigated given the favorable liquidity cushion of 211 days for fiscal 2021; COFO for fiscal 2021 registered at 1.1x.

Fitch notes the meaningful difference between Fitch-calculated debt service coverage (DSC) on the senior lien compared to the all-in DSC as support for the one-notch differential between the senior and subordinate liens. Historical Fitch-calculated DSC on senior lien obligations has averaged 1.9x since 2017, while all-in DSC has been generally sum-sufficient. The Fitch-calculated all-in DSC includes subordinate public debt and privately placed state revolving fund loans. Further supporting the meaningful difference in financial profile is that the authority's senior lien debt accounts for about 60% of its total debt outstanding.

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 tight expenditure controls.

Fitch Analytical Stress Test (FAST)

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. The authority's current expense budget informed Fitch's base case for fiscal 2022, along with management's planned capital spending and debt financing. Fitch made reasonable assumptions regarding revenue growth from fiscal 2023 to 2026 based on anticipated rate adjustments. Expense growth assumptions for fiscal years 2023 to 2026 are commensurable with expense growth from the authority's budgeted fiscal 2021 to budgeted fiscal 2022 figures.

Leverage in the FAST base case declines yoy, falling to 7.8x by fiscal 2026, with the stress case reflecting a similar trend of leverage to 8.1x by fiscal 2026. Fitch expects leverage to continue this downward trend past the fiscal 2026 forward look based on the expectation that annual capital spending does not increase materially.

ESG Considerations

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of '3'. This 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. For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

Financial Summary

($000, Audited Years Ended June 30)	2017	2018	2019	2020	2021
Operating Risks					
Operating Cost Burden					
Operating Cost Burden ($/mg)	**2,778**	**2,494**	**2,542**	**2,865**	**2,790**
Capital Planning and Management					
Life Cycle Ratio (%)	**39**	**41**	**42**	**44**	**45**
CapEx/Depreciation (%)	63	73	72	72	71
Five-Year Avg Capital Expenditures/Depreciation (%)	60	58	63	65	70
Financial Profile ($000)					
Current Unrestricted Cash/Investments	61,872	63,866	66,471	70,858	74,674
Current Restricted Cash/Invest (Available Liquidity)	69,884	72,996	73,170	83,811	94,007
Current Cash Available	**131,756**	**136,862**	**139,641**	**154,669**	**168,681**
Noncurrent Restricted Cash/Invest (Available Liquidity)	67,924	67,932	72,519	75,067	72,104
Available Cash	**199,680**	**204,794**	**212,160**	**229,736**	**240,785**
Noncurrent Restricted Cash/Invest (Debt Service or Debt Service Reserve)	449,972	477,698	501,366	505,505	502,977
Funds Restricted for Debt Service	**449,972**	**477,698**	**501,366**	**505,505**	**502,977**
Total Debt	5,658,719	5,520,452	5,478,827	5,235,335	5,137,471
Adjusted Net Pension Liability	146,551	128,439	195,901	162,244	141,477
Available Cash	199,680	204,794	212,160	229,736	240,785
Funds Restricted for Debt Service	449,972	477,698	501,366	505,505	502,977
Net Adjusted Debt	**5,155,618**	**4,966,399**	**4,961,202**	**4,662,338**	**4,535,186**
Total Operating Revs	716,776	738,304	755,336	778,326	786,119
Other Operating Expenses	286,269	277,857	305,110	293,627	291,370
EBITDA	**430,507**	**460,447**	**450,226**	**484,699**	**494,749**
Investment Income/(Loss)	3,124	3,995	27,210	17,645	(2,658)
FADS	**433,631**	**464,442**	**477,436**	**502,344**	**492,091**
Pension Expense	19,153	12,408	30,146	15,347	12,437
Adjusted FADS	**452,784**	**476,850**	**507,582**	**517,691**	**504,528**
Net Adjusted Debt to Adjusted FADS (x)	11.4	10.4	9.8	9.0	9.0
FADS	433,631	464,442	477,436	502,344	492,091
Adjusted FADS for COFO	**433,631**	**464,442**	**477,436**	**502,344**	**492,091**
Total Annual Debt Service (automatic calculation)	434,965	498,985	507,249	507,781	433,974
Adjusted Debt Service (incl. fixed services expense)	**434,965**	**498,985**	**507,249**	**507,781**	**433,974**
Coverage of Full Obligations (COFO) (x)	**1.00**	**0.93**	**0.94**	**0.99**	**1.13**
COFO exc. connection Fees (x)	**1.00**	**0.93**	**0.94**	**0.99**	**1.13**
Current Days Cash on Hand	**168**	**180**	**167**	**192**	**211**
Liquidity Cushion Ratio (days)	**168**	**180**	**167**	**192**	**211**
All-in DSC (x)	1.00	0.93	0.94	0.99	1.13

N.A. – Not available. Note: Fitch may have reclassified certain financial statement items for analytical purposes.
Source: Fitch Ratings, Fitch Solutions, Massachusetts Water Resources Authority (MA).

The ratings above were solicited and assigned or maintained at the request of the rated entity/issuer or a related third party. Any exceptions follow below.