

## Massachusetts Water Resources Authority Retirement System; Water/Sewer

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**Table Of Contents**

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Rationale

Outlook

MWRA (Pension Fund Sponsor) Credit Quality

Pension Fund Background And Independence

Pension Fund Investments

# Massachusetts Water Resources Authority Retirement System; Water/Sewer

## Credit Profile

Massachusetts Wtr Res Auth Retirement Sys ICR

*Long Term Rating*

AAA/Stable

Affirmed

## Rationale

S&P Global Ratings affirmed its 'AAA' issuer credit rating (ICR), with a stable outlook, on Massachusetts Water Resources Authority Retirement System.

The ICR is supported by what we view as the following credit characteristics:

- The creditworthiness of the retirement system's sponsor, the Massachusetts Water Resources Authority (MWRA);
- The retirement system's independent nature from the MWRA;
- Very strong funded levels as of the most recent actuarial valuation date; and
- Annual pension contributions by MWRA in recent years at or above actuarially required levels.

The MWRA was created by enabling legislation in January 1985, and provides wholesale water and wastewater service to about 45% of Massachusetts' population in 61 communities, concentrated mostly in eastern Massachusetts and the greater Boston metropolitan statistical area (MSA). We rate MWRA's senior-lien water revenue bonds 'AA+' with a stable outlook based on our view of the authority's large and diverse service base that serves the Boston MSA, rate-setting autonomy and strong collection rate, sound underlying member credit quality, generally good financial performance, low-risk interest rate swap portfolio, manageable capital improvement program, and adequate bond provisions.

The MWRA Retirement System is a single-employer system effective since 1985 as a contributory, defined-benefit plan, and participation is mandatory for all of MWRA's eligible permanent full-time employees. We believe the retirement system's governing statutes and memorandum of understanding with the MWRA provide a good degree of independence. State law requires annual contributions to the system to be actuarially based, but the retirement system board sets the plan actuarial assumptions. The retirement board has five members.

The most recent MWRA retirement system actuarial valuation was conducted as of Jan. 1, 2018, and on a generally accepted accounting principle basis shows a plan fiduciary net position as a percent of total liability of 96.2%, a level which we consider very strong. The actuarial funded ratio using the plan's asset smoothing assumptions declined slightly to 95.0% from 96.5%, levels we also consider strong. MWRA has contributed its full actuarial annually determined contribution (ADC) at or above 100% of ADC every year since the retirement plan's inception, funding 100% of ADC in fiscal 2017 and 148% in fiscal 2016. Management anticipates funding 100% of ADC in future years.

Key actuarial assumptions include a 7.5% actuarial rate of return and full amortization of unfunded liabilities by 2026. Other key actuarial assumptions include an asset smoothing that adjusts for the difference between actual investment returns and the actuarially expected rate of return over a five-year period, but not allowed to differ from the market value of assets by more than 10%. The plan's actual rate of return on pension assets was 15.02% in calendar 2017, and its five-year average rate of return calculated in its 2018 actuarial valuation (through Dec. 31, 2017) was 8.1%. However, the system reports a preliminary negative rate of return for calendar 2018 of 3.3%, which might improve very slightly as final real estate and private equity results are tabulated, but will likely remain a loss for the year. The preliminary five-year average return through 2018 is only 4.6%, below the assumed rate of return.

The next actuarial report as of Jan. 1, 2019, is expected to be released in April and may incorporate a lower rate of return assumption based on recent experience. The investment loss in 2018, combined with a potentially lower return assumption, could lead to a possibly lower funded ratio when the fiscal 2018 comprehensive annual financial report is released this summer, but we expect that MWRA would still fully meet any resulting upwardly revised ADC in accordance with its scheduled full amortization of unfunded liabilities by 2026. We expect that while the funded ratio may dip, it would still remain relatively strong due to its already high funded status.

Other actuarial assumptions include various yearly salary increases ranging from 4.00%-5.75% depending on years of service, inflation at 3.00% per year, and cost-of-living adjustments (COLAs) limited to 3.00% on the first \$13,000 of benefits, or \$390. The 2018 valuation used a 2016 actuarial experience study. We believe that investment policies and diversification of investment risk by single issuer, credit, and geographic location is appropriate for the system.

Members of the retirement system become fully vested after 10 years of employment. Retirement system benefits consist of an annuity and a pension, which are two distinct funds within the system's financial structure. The number of employees within the system has been relatively stable--there were 1,100 active members in the retirement system as of Jan. 1, 2018, compared with 1,091 in 2013. The ratio of active to non-active participants was slightly better than typical for a retirement system at 1.60.

The MWRA Retirement System is eligible to be rated above the sovereign because we believe the retirement system can maintain better credit characteristics than the U.S. in a stress scenario. Under our criteria "Ratings Above The Sovereign: Corporate And Government Ratings—Methodology And Assumptions" (published Nov. 19, 2013, on RatingsDirect), MWRA and the MWRA Retirement System are considered to have moderate sensitivity to country risk. Investments owned by the MWRA Retirement System and contributions from MWRA, derived from locally imposed water fees, are the sole source of security on the bonds; the institutional framework in the U.S. is predictable, with significant state and local autonomy, and flexibility is demonstrated by high pension funded ratios, as well as independent investment management.

(For more information on MWRA's general water and sewer revenue bonds, see the rationale published April 20, 2018, on RatingsDirect.)

## Outlook

The stable outlook on the retirement system reflects the very strong funded level of the MWRA Retirement System both on an actuarial and market funded basis, a history of annual contributions from MWRA (as pension fund sponsor) that have been at or above the actuarially determined level, and the legal obligation of MWRA to fund the full annual actuarially determined contribution. Our rating anticipates that the funded ratio will remain very strong during our two-year outlook horizon. Our pension fund criteria also limits a pension fund rating to no more than one full category above the rating on the pension fund sponsor. To the extent that we lowered the bond rating on MWRA's revenue bonds to 'A+' or lower, we could also lower the rating or revise the outlook on the MWRA Retirement System.

## MWRA (Pension Fund Sponsor) Credit Quality

The MWRA's senior-lien revenue bonds have an underlying senior-lien bond rating of 'AA+' with a stable outlook.

The MWRA revenue bond rating reflects what we view as:

- A large and diverse service base that serves the Boston metropolitan statistical area (MSA);
- Rate-setting autonomy combined with a historical 100% collection rate, rates and charges considered general obligations of the served communities, and a state aid intercept mechanism;
- Revenue stream that largely depends on the Boston Water and Sewer Commission (revenue bonds rated 'AA+/Stable'), which adds fiscal stability;
- Generally good financial performance when considering unrestricted liquidity and coverage of total debt service costs with annual net operating revenues;
- Low-risk swap portfolio given the counterparty diversification and the wide gap between the rating on MWRA's bonds and the 'BBB+' trigger that would cause an additional credit event;
- Manageable capital improvement program given the size of the system; and
- Adequate bond provisions following modifications to the general bond resolution, including a senior-lien debt service coverage ratio of 1.2x.

The MWRA's operations are primarily funded with rates and charges received from communities within the service area. These are assessed to the local governments annually and payable in 10 equal monthly installments to the MWRA (excluding January and July).

MWRA financial operations have remained at least adequate, in our view. At the end of fiscal 2017 (June 30), net revenues provided strong 1.7x coverage on the senior-lien bonds. When including subordinate-lien and other fixed-charge obligations (which includes capital leases and obligations paid to the Massachusetts Clean Water Trust), net revenues still provided 1.1x coverage, which we consider good. At fiscal year-end 2017, the authority's unrestricted current cash and investments were \$101 million, or a strong 131 days' operating expenses.

For full information please see our MWRA rationale published Aug. 20, 2018.

## **Pension Fund Background And Independence**

The MWRA Retirement System, effective July 1, 1985, is a contributory, defined-benefit plan, and participation is mandatory for all of the MWRA's eligible permanent full-time employees. Chapter 32 of Massachusetts General Laws, which establish benefits, contribution requirements, and an accounting and funds structure for the fund, ultimately governs the retirement system. The independent five-member retirement system board consists of one ex-officio individual (the secretary of the MWRA), one MWRA appointee (with a three-year term), two members who are elected by MWRA employees (each with three-year terms), and a fifth member (with a three-year term) who is elected by the four other board members and who cannot be an employee, retiree, or government unit official. Board members serve staggered terms.

Under a 1997 memorandum of understanding between the retirement system and the MWRA, the retirement system is recognized as separate and distinct from the MWRA, with separate and distinct assets, liabilities, and fiduciary obligations. The memorandum explicitly outlines the retirement system's responsibilities and segregated functions. The MWRA Retirement System has three permanent staff members, and relies on advisors and independent investment fund managers to accomplish much of its responsibilities. At the end of fiscal 2017, the retirement system had 35 independent fund managers (including investments managed by the state of Massachusetts), four securities fraud monitoring consultants, the Segal Group as independent actuaries, an independent auditor, a legal advisor, and NEPC LLC as pension consultant. The retirement system board meets monthly and reviews investment performance and asset allocation targets annually. The board has an extensive written investment policy that its consultants use to monitor investment manager performance and compliance, which it typically updates on a two-year cycle. Although the retirement system is independent, the MWRA provides employer contributions. The MWRA has always contributed an amount equal or greater than its annual legal requirements since its inception in 1985. In fiscal 2017, it contributed 100% of its ADC.

The Commonwealth's Public Employee Retirement Administration Commission (PERAC) provides additional oversight and guidance to the retirement system. The legally required contributions to fund the system are determined by the actuary and the retirement system board, with additional approval by PERAC. According to existing laws, contributions made to the retirement system by the MWRA shall cease to be funds of the MWRA, and must be used exclusively for the purposes of the retirement system. Contributions to the retirement system are considered operating costs of MWRA.

## **Pension Fund Investments**

The system has a policy to limit single credit risk to no more than 5% of the portfolio's market value, except of U.S. government securities. It currently diversifies fixed income credit risk by investing all fixed income securities through pooled bond funds. As of Dec. 31, 2018, the largest single investment was \$39.6 million (7.8% of a total portfolio of \$508.9 million) with a Loomis Sayles bond fund, followed by 6.4% in an S&P 500 Index Fund, and 6.2% in a Rhumblin TIPS fund. While the system monitors geographic risk in its real estate portfolio and exposure to foreign currency, it does not have currently a formal geographic concentration policy.

The MWRA Retirement System's current investment allocation targets are: 21% U.S. equities, with a range of from 10%-30% (actual 22.5% at June 30, 2017); 19% non-U.S. equities with a 10%-25% range (21%); 22% domestic bonds with a range of 15%-40% (31%); 15% global asset allocation with a range of 5%-25% (16%); 10% private equity with a range of 0%-12% (7%); 5% hedge funds/absolute return with a 0%-12% range (4%); 8% real estate with a 0%-10% range (8%); and 0% cash (2%).

The retirement system has no debt or debt guaranties, but has entered into capital call agreements in connection with various private equity and real estate investments. These agreements commit the system to providing investment capital on a periodic basis. These typically require \$1 million-\$5 million at a time, which we believe to be modest in relation to the \$508.9 million of total investments assets held by the system at Dec. 31, 2018.

**Massachusetts Water Resources Authority Retirement System Schedule of Funding Progress**

	--Actuarial valuation as of Jan. 1--			
	2018	2017	2016	2015
Market value of assets (\$000)	529,819	465,602	444,584	441,821
Actuarial value of assets (\$000)	523,135	493,403	465,381	435,841
Actuarial accrued liability (\$000)	550,844	511,406	473,334	443,487
Unfunded actuarial accrued liability (\$000)	27,709	18,003	7,953	7,646
Actuarial funded ratio (%)	95.0	96.5	98.3	98.3
Plan fiduciary net position (\$000)	529,819	465,602	444,584	441,821
Plan fiduciary net position as % of total liability	96.2	91.0	93.9	99.6
Covered payroll (\$000)	92,975	89,755	89,169	88,646
Unfunded actuarial accrued liability as % of covered payroll	29.8	20.1	8.9	8.6
Assumed rate of return (%)	7.50	7.50	7.75	7.75
Market rate of return (%)	15.0	5.8	(0.2)	4.4
Active participants (no.)	1,100	1,095	1,090	1,091
Non-active participants (no.)	688	641	571	503
Ratio of active/non-active participants	1.60	1.71	1.91	2.17

Source: Massachusetts Water Resources Authority retirement system fiscal 2017 comprehensive annual financial report.

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