

Summary:

**Massachusetts Water Resources
Authority; Joint Criteria; Water/Sewer**

Primary Credit Analyst:

Erin Boeke Burke, New York + 1 (212) 438 1515; Erin.Boeke-Burke@spglobal.com

Secondary Contact:

Theodore A Chapman, Dallas (1) 214-871-1401; theodore.chapman@spglobal.com

Table Of Contents

Rationale

Outlook

Summary:

Massachusetts Water Resources Authority; Joint Criteria; Water/Sewer

Credit Profile

US\$125.0 mil gen rev bnds ser 2019B due 08/01/2044

Long Term Rating AA+/Stable New

US\$41.0 mil gen rev rfdg bnds (green bnds) ser 2019C due 08/01/2044

Long Term Rating AA+/Stable New

Massachusetts Wtr Resources Auth gen rev bnds

Long Term Rating AA+/Stable Affirmed

Rationale

S&P Global Ratings has assigned its 'AA+' rating to the Massachusetts Water Resources Authority's (MWRA) series 2019B general revenue bonds and 2019C general revenue refunding bonds, which will be designated as green bonds. We have also affirmed various ratings on numerous series of general revenue and refunding bonds issued by the authority, including our:

- 'AA+' long-term rating and underlying rating (SPUR) on various series of MWRA's senior-lien debt;
- 'AA' long-term rating and SPUR on various series of MWRA's subordinate-lien debt;
- 'AAA' long-term rating on various series of subordinate-lien debt jointly secured by MWRA and a letter of credit provider; and
- 'A-1+' and 'A-1' short-term ratings on various series of subordinate-lien debt where the ratings are based on the short-term rating on the counterparty providing liquidity support.

The outlook is stable.

MWRA also has outstanding direct-purchase bonds issued in 2012, 2014, and 2018 with counterparties including Citibank N.A. (series 2012E), Wells Fargo Municipal Capital Strategies LLC (series 2012G), Bank of America Preferred Funding Corp. (series 2014A and B), TD Bank N.A. (2018A), and US Bank (series 2018D). We have also affirmed our 'AA' ratings on the 2012 and 2014 direct-purchase bonds, except for the series 2012G, which we do not rate. The security on all of MWRA's direct-purchase bonds is a subordinate-lien net revenue pledge.

While we do not consider the existence of the direct-purchase bonds as introducing additional contingent liquidity risk at this time, our view on several provisions of these agreements is as follows:

- If an unsuccessful remarketing occurs, there is a term-out period (either three or five years, again depending on the agreement) for any unremarketed bonds still outstanding. The term-out period starts at least six months after the date of any unsuccessful remarketing, which, in our view, provides an adequate period to achieve market access and

refund the unremarketed bonds, if the authority believes it financially necessary to do this to avoid large debt service cost increases.

- A mandatory tender provision exists in all the supplemental indentures for any bonds outstanding on the agreement expiration date. It is our understanding that the timing of these agreement expirations is part of MWRA's larger variable-rate and counterparty management strategy. Management has ongoing experience in renewing and extending liquidity and credit agreements, and expiring credit, liquidity, or direct-purchase agreements at any one time represents no more than 30% (in 2018) of the notional value of MWRA's total variable-rate portfolio in any given year. We expect the authority to continue managing the expiration of its various liquidity, credit, and direct-purchase agreements to avoid liquidity calls due to agreement expiration, as it has in the past.
- Occurrence of various events of default could lead to acceleration of direct-purchase bonds. While a payment default on the related refunding bonds, parity bonds, or other MWRA debt could cause an immediate or seven-day acceleration under all the purchase agreements, we view this acceleration risk as credit risk already incorporated into our long-term credit rating. However, acceleration caused by a covenant default (which includes various reporting and other requirements pursuant to the purchase agreements or related transaction documents), only occurs after an uncured period of 180 days. We believe that if acceleration occurs due to a covenant default, this 180-day period would be adequate for MWRA to achieve market access and refund the bonds subject to acceleration, or achieve some other resolution to avoid acceleration.
- If the rating on MWRA's 2012E bonds falls below 'A-', the Citibank agreement allows for a 180-day cure period, similar to the other agreements. Since the rating on these bonds is more than two notches above the rating trigger, we do not consider the debt an immediate contingent liability under our contingent liability criteria.

The outlook on the bonds is stable, except for when joint criteria has been applied to the issue's long-term rating, in which case the outlook is not meaningful.

The ratings reflect our opinion of the authority's:

- 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 (GOs) 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+/Positive'), 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 (CIP) given the size of the system; and
- Adequate bond provisions following modifications to the general bond resolution, including a senior-lien debt service coverage (DSC) ratio of 1.2x.

MWRA also has a \$100 million revolving credit agreement with Bank of America N.A. that management has indicated it uses as a commercial paper program. We mention this agreement separately from the authority's other

direct-purchase agreements because of the existence of several events of default provisions that we view as permissive. These include various material adverse clauses, no cure periods for covenant defaults, and cross-default provisions. An additional event of default is a downgrade below 'A-' or equivalent. If any of these events are triggered, there could be significant, downward pressure on the rating if MWRA does not maintain its market access to make full and timely payment on any accelerated amounts due under this agreement. The existence of these provisions is not currently having an effect on the rating since we view the likelihood of these nonpayment events of default occurring to be equal to the likelihood of a two-notch downgrade, which would still not result in a rating below the rating trigger on this agreement.

A senior-lien net revenue pledge secures the senior-lien bonds and a subordinate-lien net revenue pledge secures the subordinate-lien bonds. The authority pledges all revenues--defined as all income, revenues, receipts, and other funds derived by the authority from its ownership and operation of the systems, combined with any existing rights to receive the same in the future, other than certain grant receipts and other funds--as security for the bonds. A debt service reserve requirement for senior bonds is 50% of maximum annual debt service (MADS). A covenant to set rates such that net revenues are at least equal to 1.2x annual senior-lien debt service and subordinate-lien bonds equal to 1.1x.

MWRA is a regional, wholesale water and sewer services provider for about 45% of Massachusetts' population (about 3 million), including Boston and its MSA. The authority has statutory authority to serve 62 communities and currently serves 61. The Boston Water and Sewer Commission makes up about 30% of the authority's overall rates and charges revenue, which, in our view, lends stability to the rating on MWRA bonds, given the 'AA+/Positive' rating on the commission's bonds.

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 MWRA (excluding January and July). Assessments are essentially based on proportional flow or use and can be changed as needed through board approval. Assessments are a GO of each local body and are also subject to a state aid intercept mechanism (for those communities that receive local aid). Since 2015, combined water and sewer rates have risen from 3% to 4% annually, and management projects that annual rate increases through 2024 will be within this range. Management reports that average water and sewer utility bills within the wholesale service area for a household using 7,500 gallons per month are currently about \$142, or for a household using 5,000 gallons per month, \$96.

Financial operations have remained at least adequate, in our view. At the end of fiscal 2018 (June 30), net revenues provided all in DSC (including senior-lien, subordinate-lien, and other fixed-charge obligations and capital leases and obligations paid to the Massachusetts Clean Water Trust) of 1.1x, a level we consider good. Net revenues have been calculated to include rates, charges, and interest earnings, but exclude transfers in from the rate stabilization fund. In addition, net revenues have been increased by noncash other postemployment benefit expenses and subordinated commonwealth payments. At fiscal year-end 2018, the authority's unrestricted current cash and investments were \$64 million, or a good 84 days' operating expenses.

These levels of coverage and unrestricted cash have been consistent with previous years, and management has indicated that, over the next several years, these financial metrics will not deviate significantly from the historical trends.

Other reserves include \$43 million in a rate stabilization fund and \$26 million in a bond redemption fund at June 30, 2018. Management projects to draw from both the bond redemption fund as it defeases additional debt, and the rate stabilization fund for general rate stabilization, through 2028.

Debt service is the largest component of the budget, accounting for about 60% of audited operating and debt service expenses; while these figures are elevated, in our opinion, wholesale systems tend to have relatively high debt levels compared to retail systems and present less of a credit concern to us. For the variable-rate portion of its portfolio, MWRA currently budgets for a 3.5% average interest cost, which is well above the actual rate of about 2.1%, as indicated by management.

Unhedged variable-rate debt represents 8% of the authority's portfolio (or \$419 million). Another 7% is hedged through various swap agreements. The total notional value of the swaps is \$363 million; their fair value is negative \$85 million (with respect to MWRA) as of March 8, 2019, and all swaps are floating-to-fixed. Counterparties include Barclays Bank PLC; Wells Fargo Bank N.A.; Citigroup Financial Products, with a credit support guarantee from Citigroup Inc.; and Morgan Stanley Capital Services, with a credit support guarantee from Morgan Stanley. All documents list a 'BBB+' rating trigger as an additional credit event for the counterparties. There is an additional credit event if the authority's rating goes down to 'BBB+', which we see as remote due to its strong 'AA+' credit profile. The authority has also adopted a debt derivative policy and has incorporated this into its general debt policy. In addition, management has reported that it actively manages and reviews its swap agreements. Due to the low degree of termination risk, we did not factor in the swaps' value-at-risk as a contingent liability for the authority.

Given MWRA's large swap and variable-rate portfolio, if termination triggers are implemented on the swaps or failed remarketings on any variable-rate bonds occur, these could also lead to fiscal stress, in our view. However, it is our understanding that most of the additional interest costs in the case of a failed remarketing would only occur after 90 days; we believe this provides the authority sufficient time to examine its financial options. Regarding the swaps, an additional termination event occurs if the counterparties' rating or MWRA bond rating drops to 'BBB+' or lower. We view a drop of the rating on MWRA bonds to this level as remote, and if any counterparty rating should do so, a collateral posting or replacement counterparty would need to be furnished.

MWRA has completed most of the major projects in its CIP, including the Deer Island Harbor wastewater treatment plant, the MetroWest water supply tunnel, and the John J. Carroll water treatment plant. The planned CIP spending for 2019 is \$179.2 million, and the current plan identifies \$1.052 billion to be spent from 2019-2023.

Outlook

The stable outlook reflects S&P Global Ratings' view of the authority's financial position, as well as management's demonstrated willingness to increase rates. We expect that the authority will maintain financial metrics consistent with historical trends and will also continue to benefit from the diversity of the underlying economic base.

Upside scenario

We could raise the rating if MWRA consistently returned higher liquidity--particularly given the exposure to variable-rate debt--and annual all-in DSC.

Downside scenario

If the authority can't maintain its financial stability supported by consistent rate increases or if the local units begin to experience difficulty in paying their annual assessments, we could lower our rating on the bonds. However, given management's demonstrated willingness to implement rate increases and the broad and diverse economic base, we currently do not believe that MWRA's creditworthiness will be pressured in these ways in the next two years.

Ratings Detail (As Of April 12, 2019)

Massachusetts Wtr Resources Auth multi modal subord gen rev		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts Wtr Resources Auth multi modal subord gen rev		
<i>Long Term Rating</i>	AA/A-1+/Stable	Affirmed
Massachusetts Wtr Resources Auth multi modal subord gen rev		
<i>Long Term Rating</i>	AA/A-1/Stable	Affirmed
Massachusetts Wtr Resources Auth multi-modal subord gen rev		
<i>Long Term Rating</i>	AA/A-1/Stable	Affirmed
Massachusetts Wtr Resources Auth multi-modal subord gen rev		
<i>Long Term Rating</i>	AA/A-1/Stable	Affirmed
Massachusetts Wtr Resources Auth WTRSWR		
<i>Long Term Rating</i>	AA/A-1/Stable	Affirmed
Massachusetts Wtr Resources Auth WTRSWR		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts Wtr Resources Auth WTRSWR		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts Wtr Resources Auth WTRSWR		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts Wtr Resources Auth		
<i>Unenhanced Rating</i>	AA+(SPUR)/Stable	Affirmed
<i>Long Term Rating</i>	AAA/A-1+	Affirmed
Massachusetts Wtr Resources Auth gen rev		
<i>Unenhanced Rating</i>	AA+(SPUR)/Stable	Affirmed
Massachusetts Wtr Resources Auth gen rev bnds		
<i>Unenhanced Rating</i>	AA+(SPUR)/Stable	Affirmed

Many issues are enhanced by bond insurance.

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw or suspend such acknowledgment at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com (subscription), and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.