FitchRatings

Fitch Rates New York City Muni Water Fin Auth's Water and Sewer Revs 'AA+'; Outlook Stable

Fitch Ratings-New York-21 March 2018: Fitch Ratings has assigned an 'AA+' rating to the following New York City Municipal Water Finance Authority's (NYW, or the authority) revenue bonds:

--\$450 million water and sewer system second general resolution (SGR) revenue bonds, fiscal 2018 series EE.

The fiscal 2018 series EE bonds are scheduled for negotiated sale the week of April 2. Proceeds will refund certain first general resolution (FGR) and SGR bonds and pay for issuance costs.

The Rating Outlook is Stable.

SECURITY

The fiscal 2018 series EE bonds are special obligations of the NYW issued under the SGR and payable solely from and secured by a subordinate lien on gross revenues of NYW subordinate in lien to FGR bonds.

KEY RATING DRIVERS

SOUND LEGAL PROTECTIONS: NYW's legal structure enhances protection to bondholders from potential risks associated with the system and the city.

REGIONAL PROVIDER OF AN ESSENTIAL SERVICE: The system provides an essential service to an exceptionally large, diverse and economically important service area. Customers benefit from an abundant, high-

quality water supply that is approximately 90% exempt from expensive filtration requirements and extensive transmission costs.

ROBUST REVENUE DEFENSIBILITY: Strong financial management and a proven ability and willingness to raise rates is reflected in consistently solid financial results which includes all-in debt service coverage (DSC) exceeding 2.4x since fiscal 2013. The New York City Water Board's independent rate-setting authority remains an important consideration.

HIGH LEVERAGE: NYW's debt levels are high, stemming from substantial issuances to date to support the system's large regulatory compliance mandates and aging assets. Sizeable debt issuances programmed into the current capital plan will keep the authority's debt levels elevated for the long term.

WELL-MANAGED, LARGE CAPITAL PROGRAM: Sophisticated capital planning efforts have helped achieve compliance with large and costly mandated regulatory projects and have ensured the system's extensive assets are adequately maintained.

RATING SENSITIVITIES

MAINTENANCE OF SUFFICIENT RATES: The inability for the New York City Water Board to establish rates sufficient to ensure the continuation of the New York City Municipal Water Finance Authority's strong financial margins and currently robust debt service coverage levels on senior and subordinate lien obligations would be viewed negatively.

CREDIT PROFILE

The authority was created as a public benefit corporation in 1984 in order to issue bonds, notes, and other financing instruments to fund capital improvements to the system. The authority may not file for bankruptcy without state legislative approval and is bankruptcy-remote from New York City.

The New York City Department of Environmental Protection (DEP) is the system's operating agency, responsible

for performing day-to-day operational and maintenance requirements to keep the assets in a state of good repair. Capital and maintenance needs are expected to remain extremely large over time given the demand placed on system assets due to their age and expansive urban setting.

The water board is responsible for setting, levying, and collecting customer rates and system revenues to transfer to the authority for bond repayment and DEP operations and maintenance (O&M) reimbursement. The water board is also bankruptcy-remote from the city of New York.

STRONG LEGAL PROTECTIONS SUPPORT RATING

Fitch believes NYW bondholders benefit from strong legal protections that include:

- --The statutorily defined nature of the authority;
- --Ownership of system revenues by the bankruptcy-remote water board, which sets rates independently without city council approval;
- --Collection of revenues in a lockbox structure controlled by the trustee, which are used to pay debt service of FGR and SGR bonds before system O&M expenses and any lease payment to the city.

While these layers of legal protection do not completely shield FGR and SGR bondholders from the operational risks of the city's massive water and sewer enterprise, they limit diversion of revenues to general city operations.

Annual debt service obligations are consistently funded well in advance of scheduled payment dates by the system's revenue fund, which consists of both prior year revenues and carry-forward surplus cash. In fiscal 2017, the revenue fund contained \$1 billion, enough to pre-pay roughly two thirds of that year's combined gross FGR and SGR debt service. By year-end fiscal 2017, the carryforward revenue fund totaled \$1.2 billion, or 70% of the projected subsequent fiscal 2018 combined debt service.

Only after monthly required deposits under the SGR are satisfied and held by NYW's trustee will funds be released from the lockbox structure for other purposes, including the cash-defeasance of additional debt service and to pay O&M expenses. The system directed \$974.1 million of these available funds towards the early cash-defeasance of debt in fiscal 2017.

STRONG FINANCIAL AND DEBT MANAGEMENT

Strong financial results continued in fiscal 2017 despite a modest 1% consumption decline. All-in DSC of the FGR and SGR liens from net operating revenues (after deducting the aforementioned carry-forward revenues) was a strong 5.1x for the year and has averaged 4.2x since fiscal 2013. When calculated using the system's gross lien on revenues, all-in FGR and SGR DSC were 37x and 8x, respectively, consistent with historical levels. Liquidity, when measured by days' cash on hand based on the authority's unrestricted cash on the balance sheet, has been only minimal over time, as nearly all accumulated surplus revenues (per discussion above) are made available to prepay the next year's annual debt service or defease future maturities.

Financial projections through fiscal 2022 appear reasonable and assume continued manageable rate increases (discussed below), sizeable annual debt offerings and a continued 1% annual consumption decline. All-in DSC from net revenues is projected to remain strong, or no less than 1.8x through the current planning period (or 3.1x all-in on a gross coverage basis). Annual surpluses are forecast to remain in excess of \$900 million and will continue to pre-fund portions of subsequent years' annual debt service obligations as well as provide for the cash-defeasance of future bond maturities.

SOLID RATE-SETTING HISTORY

The authority's most recent rate increase was a modest 2.1% in fiscal 2016, the lowest increase in 16 years. The system's rate remained flat (at the fiscal 2016 level) in fiscals 2017 and 2018. The fiscal 2017 rate schedule included a proposal to remit a \$183 water and sewer credit to one- to three-family homeowners. This proposal was challenged in court by certain ratepayers, and thus while litigation was pending; the water board took no action to increase rates for fiscal 2018. In late 2017, the court ruled in favor of the water board, upholding the proposed \$183 water credit.

The water board expects to adopt a 2.1% rate increase in fiscal 2019, another 2.1% increase in 2020, 4.0% in fiscal 2021 and 5.0% in fiscal 2022. The average monthly residential bill relative to median household income levels for the service area remains affordable in comparison to utilities of other major cities. Customer payment

incentives and strong enforcement mechanisms have yielded positive collection results in recent years.

The projected increases should be manageable for the vast majority of the rate base, and preserve NYW's overall flexibility over the medium term. Fitch will continue to monitor the system's ability to set rates sufficient to maintain strong financial margins and currently robust DSC while sustaining rate affordability.

LARGE CAPITAL PROGRAM, LEVERAGED SYSTEM

The financing of the system's significant capital investment needs drive the bulk of NYW's cost of operations. The system's current fiscal 2018-2022 capital improvement plan (CIP) includes an estimated \$11 billion in water and sewer spending that will be primarily funded by long-term debt and bond anticipation notes.

The volume of regulatory-driven projects has been reduced to a more manageable level, equal to approximately 20% of total projected capital commitments compared with an average of about 77% over the prior decade. However, funding of non-mandated projects, particularly water treatment and distribution-related upgrades, has increased since 2014. NYW's current forecast shows additional bond issuances through fiscal 2022 addressing over 80% of annual CIP costs, offset by a modest pay-go component.

Debt levels are high and escalation beyond what is currently forecast could ultimately pressure NYW's rating. In fiscal 2017 the authority's total debt represented an elevated 106% of net system plant and 12.5x of funds available for debt service, well above Fitch's 'AA' sector medians. Fitch's assessment of the authority's leverage position is somewhat offset by the protection afforded to bondholders from the gross lien on revenues and the statutory provisions that restrict the authority from filing for bankruptcy protection. Moreover, Fitch believes the demonstrated commitment to raising rates as well as management's conservative budgeting will be key to preserving operating margins and meeting the sizeable debt service costs included in NYW's financial forecast.

SOLID SERVICE AREA ECONOMY

The authority's service area includes 8.5 million city (Issuer Default Rating AA/Stable) residents and an additional one million upstate residents. The city's broad economic base and unique role as a national and international

center for commerce, culture and tourism help to ensure the continued stability of the authority's service territory.

The composition of the city's economy contributed to its relative employment stability during the most recent recession and ability to regain many of the private-sector jobs lost during that period. Unemployment was a low 3.9% in December 2017 and wealth levels exceed and match state and national levels, respectively. However, poverty levels, consistent with the large urban nature of the city, are elevated at 20% of the population.

Contact:

Primary Analyst Eva D. Rippeteau Director +1-212-908-9105 Fitch Ratings, Inc. 33 Whitehall Street New York, NY 10004

Secondary Analyst Andrew DeStefano Director +1-212-908-0284

Committee Chairperson
Doug Scott
Managing Director
+1-512-215-3725

Date of Relevant Rating Committee March 6, 2018.

Media Relations: Sandro Scenga, New York, Tel: +1 212-908-0278, Email: sandro.scenga@fitchratings.com

Additional information is available on www.fitchratings.com

Applicable Criteria

Rating Criteria for Public-Sector, Revenue-Supported Debt (pub. 26 Feb 2018)

(https://www.fitchratings.com/site/re/10020113)

U.S. Public Finance Short-Term Debt Rating Criteria (pub. 01 Nov 2017)

(https://www.fitchratings.com/site/re/905637)

U.S. Water and Sewer Rating Criteria (pub. 30 Nov 2017) (https://www.fitchratings.com/site/re/10010508)

Additional Disclosures

Solicitation Status (https://www.fitchratings.com/site/pr/10024249#solicitation) Endorsement Policy (https://www.fitchratings.com/regulatory)

ALL FITCH CREDIT RATINGS ARE SUBJECT TO CERTAIN LIMITATIONS AND DISCLAIMERS. PLEASE READ THESE LIMITATIONS AND DISCLAIMERS BY FOLLOWING THIS LINK:

HTTPS://WWW.FITCHRATINGS.COM/UNDERSTANDINGCREDITRATINGS. IN ADDITION, RATING DEFINITIONS AND THE TERMS OF USE OF SUCH RATINGS ARE AVAILABLE ON THE AGENCY'S PUBLIC WEB SITE AT WWW.FITCHRATINGS.COM. PUBLISHED RATINGS, CRITERIA, AND METHODOLOGIES ARE AVAILABLE FROM THIS SITE AT ALL TIMES. FITCH'S CODE OF CONDUCT, CONFIDENTIALITY, CONFLICTS OF INTEREST, AFFILIATE FIREWALL, COMPLIANCE, AND OTHER RELEVANT POLICIES AND PROCEDURES ARE ALSO AVAILABLE FROM THE CODE OF CONDUCT SECTION OF THIS SITE. DIRECTORS AND SHAREHOLDERS RELEVANT INTERESTS ARE AVAILABLE AT

HTTPS://WWW.FITCHRATINGS.COM/SITE/REGULATORY. FITCH MAY HAVE PROVIDED ANOTHER PERMISSIBLE SERVICE TO THE RATED ENTITY OR ITS RELATED THIRD PARTIES. DETAILS OF THIS SERVICE FOR RATINGS FOR WHICH THE LEAD ANALYST IS BASED IN AN EU-REGISTERED ENTITY CAN BE FOUND ON THE ENTITY SUMMARY PAGE FOR THIS ISSUER ON THE FITCH WEBSITE.

Copyright © 2018 by Fitch Ratings, Inc., Fitch Ratings Ltd. and its subsidiaries. 33 Whitehall Street, NY, NY 10004.

Telephone: 1-800-753-4824, (212) 908-0500. Fax: (212) 480-4435. Reproduction or retransmission in whole or in part is prohibited except by permission. All rights reserved. In issuing and maintaining its ratings and in making other reports (including forecast information), Fitch relies on factual information it receives from issuers and underwriters and from other sources Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The manner of Fitch's factual investigation and the scope of the third-party verification it obtains will vary depending on the nature of the rated security and its issuer, the requirements and practices in the jurisdiction in which the rated security is offered and sold and/or the issuer is located, the availability and nature of relevant public information, access to the management of the issuer and its advisers, the availability of pre-existing third-party verifications such as audit reports, agreed-upon procedures letters, appraisals, actuarial reports, engineering reports, legal opinions and other reports provided by third parties, the availability of independent and competent third- party verification sources with respect to the particular security or in the particular jurisdiction of the issuer, and a variety of other factors. Users of Fitch's ratings and reports should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information Fitch relies on in connection with a rating or a report will be accurate and complete. Ultimately, the issuer and its advisers are responsible for the accuracy of the information they provide to Fitch and to the market in offering documents and other reports. In issuing its ratings and its reports, Fitch must rely on the work of experts, including independent auditors with respect to financial statements and attorneys with respect to legal and tax matters. Further, ratings and forecasts of financial and other information are inherently forward-looking and embody assumptions and predictions about future events that by their nature cannot be verified as facts. As a result, despite any verification of current facts, ratings and forecasts can be affected by future events or conditions that were not anticipated at the time a rating or forecast was issued or affirmed.

The information in this report is provided "as is" without any representation or warranty of any kind, and Fitch does not represent or warrant that the report or any of its contents will meet any of the requirements of a recipient of the report. A Fitch rating is an opinion as to the creditworthiness of a security. This opinion and reports made by Fitch are based on established criteria and methodologies that Fitch is continuously evaluating and updating. Therefore, ratings and reports are the collective work product of Fitch and no individual, or group of individuals, is solely responsible for a rating or a report. The rating does not address the risk of loss due to risks other than credit risk, unless such risk is specifically mentioned. Fitch is not engaged in the offer or sale of any security. All Fitch reports

have shared authorship. Individuals identified in a Fitch report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. A report providing a Fitch rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at any time for any reason in the sole discretion of Fitch. Fitch does not provide investment advice of any sort. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. Fitch receives fees from issuers, insurers, guarantors, other obligors, and underwriters for rating securities. Such fees generally vary from US\$1,000 to US\$750,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a single annual fee. Such fees are expected to vary from US\$10,000 to US\$1,500,000 (or the applicable currency equivalent). The assignment, publication, or dissemination of a rating by Fitch shall not constitute a consent by Fitch to use its name as an expert in connection with any registration statement filed under the United States securities laws, the Financial Services and Markets Act of 2000 of the United Kingdom, or the securities laws of any particular jurisdiction. Due to the relative efficiency of electronic publishing and distribution, Fitch research may be available to electronic subscribers up to three days earlier than to print subscribers.

For Australia, New Zealand, Taiwan and South Korea only: Fitch Australia Pty Ltd holds an Australian financial services license (AFS license no. 337123) which authorizes it to provide credit ratings to wholesale clients only. Credit ratings information published by Fitch is not intended to be used by persons who are retail clients within the meaning of the Corporations Act 2001

Fitch Ratings, Inc. is registered with the U.S. Securities and Exchange Commission as a Nationally Recognized Statistical Rating Organization (the "NRSRO"). While certain of the NRSRO's credit rating subsidiaries are listed on Item 3 of Form NRSRO and as such are authorized to issue credit ratings on behalf of the NRSRO (see https://www.fitchratings.com/site/regulatory), other credit rating subsidiaries are not listed on Form NRSRO (the "non-NRSROs") and therefore credit ratings issued by those subsidiaries are not issued on behalf of the NRSRO. However, non-NRSRO personnel may participate in determining credit ratings issued by or on behalf of the NRSRO.

Solicitation Status

Fitch Ratings was paid to determine each credit rating announced in this Rating Action Commentary (RAC) by the obligatory being rated or the issuer, underwriter, depositor, or sponsor of the security or money market instrument being rated, except for the following:

Endorsement Policy - Fitch's approach to ratings endorsement so that ratings produced outside the EU may be used by regulated entities within the EU for regulatory purposes, pursuant to the terms of the EU Regulation with respect to credit rating agencies, can be found on the EU Regulatory Disclosures (https://www.fitchratings.com/regulatory) page. The endorsement status of all International ratings is provided within the entity summary page for each rated entity and in the transaction detail pages for all structured finance transactions on the Fitch website. These disclosures are updated on a daily basis.