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Summary:

New York City Municipal Water Finance Authority; CP; State Revolving Funds/Pools; Water/Sewer

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Summary:

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Credit Profile				
US\$317.0 mil wtr and swr sys second gen resolution rev bnds ser 2016 BB-1 dtd 11/24/2015 due 06/15/2046				
Long Term Rating	AA+/Stable	New		
US\$23.0 mil wtr and swr sys second gen resolution rev bnds ser 2016 BB-2 dtd 11/24/2015 due 06/15/2046				
Long Term Rating	AA+/Stable	New		

Rationale

Standard & Poor's Ratings Services assigned its 'AA+' long-term rating to New York City Municipal Water Finance Authority's (NYCMWFA) series 2016BB subseries 1 and 2 second general resolution water and sewer system revenue bonds. We also affirmed our 'AA+' underlying ratings (SPURs) on the authority's existing second-resolution bonds, as well as our 'AAA' unenhanced long-term rating on the system's first general resolution revenue bonds. The outlook is stable for all ratings.

We understand bond proceeds will be used to convert commercial paper (CP) notes to long-term debt, as well as to refund portions of the authority's long-term debt for interest-rate savings purposes.

The difference in the long-term ratings between the first- and second-resolution debt reflects lien priority and the active use of both liens. We have applied the primary criteria to determine the entity's general creditworthiness (ICR) and have applied this rating to the first-resolution (senior) issues, and also assigned a rating that is one notch lower to the second-resolution (subordinate-lien) issues.

The long-term ratings reflect the fundamental credit strengths of the NYCMWFA, which include, in our opinion:

- The bondholder protections provided by the issuer's legal and structural features, including a gross pledge of revenues that results in true separation from the utility's operating function when combined with the New York City Water Board's ability to raise rates (a true-up mechanism) and the segregation of funds;
- The system's fundamental credit strengths, characterized by a large and diverse customer base, extremely strong financial risk profile, and management practices that are likely to ensure similarly robust financial results; and
- The capacity and demonstrated willingness to adjust rates when necessary, especially in the face of a sizable capital improvement plan (CIP) of \$14.9 billion in forecasted capital commitments through fiscal 2025 (including some projects that have already been funded). Despite the sheer size of the CIP, NYCMWFA has been extremely successful in managing the myriad of projects to timeline and budget, while still meeting or beating all deadline-certain requirements; as such, the level of mandated projects relative to the total CIP---and the magnitude of each rate adjustment--continues to decrease.

As of October 2015, NYCMWFA had about \$30.2 billion in total outstanding debt, \$26.2 billion of which is second-resolution debt. A first-lien pledge on the system's gross revenues secures the first-resolution debt. A debt service reserve fund (DSRF) provides additional liquidity to the first-resolution debt. The second-resolution bonds are subordinate and do not benefit from a DSRF. Although New York Water's debt is currently rated above the U.S., the system has a predominantly locally derived revenue base. Local service charges, derived through an autonomous rate-setting process, represent virtually all of the entity's revenues. This, coupled with operating expense flexibility, precludes exposure to federal revenues.

The Water Board has a long history of adjusting rates annually as necessary. Due to the conservatism in the budgeting, actual rate increases are typically less than originally forecasted. The 2.97% increase implemented for fiscal 2016 was the lowest in 10 years; as recently as fiscal 2014 the financial forecast indicated fiscal 2016 would see a rate increase of 7.9%. Because management continually updates its extensive long-term plans, we believe it will continue to beat its forecast even if the implemented rate adjustments are smaller than originally planned. We also believe that as management continues to bring down its nonrevenue water and rehabilitate its distribution system. The CIP remains the key driver behind the continued rate adjustments. Despite the large size of the capital program, key projects all remain within budget and on time, reflecting management's ability to manage the scope of the capital program at a high level.

The main driver of the capital program is rehabilitation of assets, both on a discretionary basis as well as due to regulatory mandates. Even given the unfunded environmental mandates, management has reduced regulatory-driven projects to below 20% of total capital commitments. The planned capital expenditures from fiscal 2016 to 2025 will fund improvements in all aspects of operations, with the sanitary sewer system accounting for approximately \$9.8 billion in identified needs. Officials typically initially fund certain capital improvements through the \$600 million CP program before using long-term debt to retire the notes. The authority's forecast through fiscal 2020 assumes about \$1.4 billion per year in additional debt.

Even with so much driving the CIP, debt service coverage (DSC) on the senior and combined senior and subordinate debt was 19.7x and 8.5x, respectively, for fiscal 2015, the best financial performance in New York Water's history. The authority projects combined senior and subordinate DSC to remain steady at a still-healthy 3.9x by 2020. Because the forecast is predicated upon conservative assumptions, we have observed that actual financial results tend to be in line with, if not outperform, the projections. If we calculate total DSC on a traditional, albeit hypothetical, net revenue basis, the forecast for the next five years still indicates no lower than 2.2x, a level we would view as extraordinarily strong, especially for one of the biggest systems in the U.S.

Liquidity remains a major strength as well. Fiscal 2015 ended with a net cash surplus of more than \$1 billion, even after a cash defeasance of \$802.7 million. This puts total cash reserves equivalent to approximately nine months of operating expenses. While the authority does have interest-rate swaps that as of the end of fiscal 2015 carried an unfavorable mark-to-market valuation of \$103 million, we are of the opinion that the cash position is ample to address even the worst-case scenario of contingent liquidity risks, no matter how remote. Over their lifetimes, however, the swaps--just as the unhedged variable-rate debt--have served to generally lower the authority's cost of borrowing and currently are not expected to be terminated. In addition to the cash position, New York Water's cash flows are also

notable: the debt service funds held with the trustee are typically fully funded within the first few months of the fiscal year, allowing management to deploy its cash as it best sees fit, such as the nearly \$600 million in pay-as-you-go improvements funded in fiscal 2016 and 2017.

The system serves about 836,000 accounts, primarily in New York's five boroughs, all but 5% of which are metered. In addition, the authority provides water and sewer services to about 1 million customers in Westchester, Putnam, Orange, and Ulster counties, as it is required to make service available to any county in which the authority has water facilities. About 91% of the system is residential, with commercial and industrial users accounting for the balance. The overall operational profile, reviewed on a regular basis by a consulting engineer and most recently in March 2015, continues to receive high marks. The raw-water source remains pristine and has been ample for decades, even as per capita per day consumption continues to decline. Treatment capacity is adequate to meet demand for both the water and sewer systems, and the treatment plants overall face no ongoing compliance-related issues.

Outlook

The stable outlook reflects Standard & Poor's expectation that the system's financial profile will remain commensurate with the ratings over our two-year horizon. The large CIP simply reflects the current regulatory environment and a large system that serves roughly 9 million people. We believe the strong management, including long-term planning and transparency regarding future rate adjustments, will continue to allow the authority to fund identified needs despite expected inflationary rises in operating costs and sizable amounts of additional debt. Downside risk to the rating, while in our view extremely remote and unlikely, would be predicated mainly on external influences such as a new unfunded mandate from environmental regulators that could cause a sharp deviation in financial performance.

Related Criteria And Research

Related Criteria

- USPF Criteria: Water And Sewer Ratings, June 25, 2007
- USPF Criteria: Key Water And Sewer Utility Credit Ratio Ranges, Sept. 15, 2008
- USPF Criteria: Standard & Poor's Revises Criteria For Rating Water, Sewer, And Drainage Utility Revenue Bonds, Sept. 15, 2008
- Methodology: Definitions And Related Analytic Practices For Covenant And Payment Provisions In U.S. Public Finance Revenue Obligations, Nov. 29, 2011
- USPF Criteria: Assigning Issue Credit Ratings Of Operating Entities, May 20, 2015
- Criteria: Use of CreditWatch And Outlooks, Sept. 14, 2009
- Ratings Above The Sovereign: Corporate And Government Ratings—Methodology And Assumptions, Nov. 19, 2013

Related Research

• . U.S. State And Local Government Credit Conditions Forecast, Oct. 20, 2015

Ratings Detail (As Of November 13, 2015)

New York City Mun Wtr Fin Auth wtr & swr (1st resolution)

Long Term Rating

AAA/Stable

Affirmed

Ratings Detail (As Of November 13, 2015) (co	ont.)	
New York City Mun Wtr Fin Auth fiscal ser 2008 B-2		
Long Term Rating	AAA/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth fiscal 2013 ser 201	3AA-1	
Long Term Rating	AA+/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth fiscal 2014 ser AA-	5	
Long Term Rating	AA+/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth fiscal 2014 ser AA-	6	
Long Term Rating	AA+/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth ser 2008B-1B		
Long Term Rating	AAA/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth ser 2008 B-3		
Long Term Rating	AAA/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth ser 2008 B-4		
Long Term Rating	AAA/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth ser 2015BB-2		
Long Term Rating	AA+/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr and swr sys see	-	
Long Term Rating	AA+/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr and swr sys see	c gen res rev bnds	
Long Term Rating	AA+/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr & swr rev bnds	•	
Long Term Rating	AAA/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr & swr rev bnds 2025 2033 & cap apprec bnds due 06	fiscal 2001 ser C D dtd 05/15/2001	due 06/15/2001- 2016 2017 2019
Unenhanced Rating	AAA(SPUR)/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr & swr sys rev k	onds	
Long Term Rating	AAA/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr & swr sys rev k	onds	
Long Term Rating	AAA/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr & swr sys rev k	onds adj rate	
Long Term Rating	AAA/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr & swr sys rev b Long Term Rating	onds adj rate AAA/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr & swr sys rev k	onds adi rate	
Long Term Rating	AAA/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr & swr sys rev k	onds adj rate	
Long Term Rating	AAA/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr & swr sys rev b 2038	onds fiscal 2006 ser 2006D dtd 03/23	3/2006 due 06/15/2028-2029 2036
Unenhanced Rating	AAA(SPUR)/Stable	Affirmed

Ratings Detail (As Of November 13, 2015) (cont.) New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen resolution rev bnds adj rate fiscal 2006 sub-ser AA-1A & AA-1B dtd 10/27/2005 rmktd dtd 10/04/201 Long Term Rating AA+/A-1+/Stable Affirmed New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen resolution rev bnds adj rate fiscal 2006 sub-ser AA-1A & AA-1B dtd 10/27/2005 rmktd dtd 10/04/201 AA+/A-1+/Stable Long Term Rating Affirmed New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen resolution rev bnds ser 2015BB-1 due 06/15/2049 AA+/A-1/Stable Affirmed Long Term Rating New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen resolution rev bnds ser 2015BB-3 due 06/15/2050 Long Term Rating AA+/A-1/Stable Affirmed New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen resolution rev bnds ser 2015BB-4 due 06/15/2050 AA+/A-1+/Stable Affirmed Long Term Rating New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen resol rev bnds adj rate ser 2013 AA-2 Long Term Rating AA+/A-1/Stable Affirmed New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen resol rev bnds fiscal 2008 ser DD due 06/15/2039 Unenhanced Rating AA+(SPUR)/Stable Affirmed New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen res bnds Affirmed Long Term Rating AA+/A-1/Stable New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen rev bnd resolution fiscal 2014 ser AA-1 due 06/15/2050 Long Term Rating AA+/A-1/Stable Affirmed New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen rev bnd resolution fiscal 2014 ser AA-2 due 06/15/2050 AA+/A-1/Stable Long Term Rating Affirmed New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen rev bnd resolution fiscal 2014 ser AA-3 due 06/15/2049 AA+/A-1+/Stable Affirmed Long Term Rating New York City Mun Wtr Fin Auth wtr & swr sys 2nd gen rev bnd resolution fiscal 2014 ser AA-4 due 06/15/2049 Long Term Rating AA+/A-1/Stable Affirmed New York City Mun Wtr Fin Auth wtr & swr (FGIC) (SEC MKT) Affirmed AAA(SPUR)/Stable Unenhanced Rating New York City Mun Wtr Fin Auth wtr & swr (MBIA) (FGIC) (National) Affirmed Unenhanced Rating AAA(SPUR)/Stable New York City Mun Wtr Fin Auth wtr & swr (National) AA+(SPUR)/Stable Affirmed Unenhanced Rating New York City Mun Wtr Fin Auth CP series One A-1+ Affirmed Short Term Rating New York City Mun Wtr Fin Auth EMCP series 7 Short Term Rating A-1+ Affirmed New York City Mun Wtr Fin Auth EMCP series 8 A-1+ Affirmed Short Term Rating New York City Mun Wtr Fin Auth WS AAA/A-1/Stable Affirmed Long Term Rating

Ratings Detail (As Of November 13, 2015) (cont.)		
New York City Mun Wtr Fin Auth WS		
Long Term Rating	AAA/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth WS		
Long Term Rating	AAA/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth WS		
Long Term Rating	AAA/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth WS		A.C
Long Term Rating	AAA/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth WS Long Term Rating	AA+/A-2/Stable	Affirmed
Unenhanced Rating	NR(SPUR)	Ammined
New York City Mun Wtr Fin Auth WS VRD	X <i>Y</i>	
Long Term Rating	AAA/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (wrap of insured) (A	GM & BHAC) (SEC MKT)	
Unenhanced Rating	AAA(SPUR)/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (AGM)		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (AGM) (SEC MKT)		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (AGM) (SEC MKT)		
Unenhanced Rating	AAA(SPUR)/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (BHAC) (SEC MKT)		A.C
Unenhanced Rating	AAA(SPUR)/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (CIFG) (SEC MKT) Unenhanced Rating	AAA(SPUR)/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (MBIA) (AGM)		- Infinited
Unenhanced Rating	AAA(SPUR)/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)	. ,	
Long Term Rating	AA+/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution))	
Long Term Rating	AA+/A-2/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution))	
Long Term Rating	AA+/A-2/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)		
Long Term Rating	AA+/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)		
Long Term Rating	AA+/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)		Affirme e d
Long Term Rating	AA+/Stable	Affirmed

Ratings Detail (As Of November 13, 2015) (cont.)		
New York City Mun Wtr Fin Auth WS (2nd gen resolution)		
Long Term Rating	AA+/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)		
Long Term Rating	AA+/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)		
Long Term Rating	AA+/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)		
Long Term Rating	AA+/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)		- mininea
Long Term Rating	AA+/A-1+/Stable	Affirmed
		7 mmmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution) Long Term Rating	AA+/A-1/Stable	Affirmed
		7 minineu
New York City Mun Wtr Fin Auth WS (2nd gen resolution) Long Term Rating	AA+/A-1/Stable	Affirmed
		Ammed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)	AA+/A-1/Stable	Affirmed
Long Term Rating		Ammed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)		A (C
Long Term Rating	AA+/A-1/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)		A () 1
Long Term Rating	AA+/A-1+/Stable	Affirmed
New York City Mun Wtr Fin Auth WS (2nd gen resolution)		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr & swr		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
New York City Mun Wtr Fin Auth wtr & swr VRDB s	er 1995A	
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed
New York St Envir Facs Corp, New York		
New York City Mun Wtr Fin Auth, New York		
New York St Envir Facs Corp (New York City Mun Wtr Fin 2012D dtd 07/12/2012 due 06/15/	n Auth) state clean wtr & drinking wtr Sl	RF rev bnds 2nd resol ser
Long Term Rating	AAA/Stable	Affirmed
New York St Envir Facs Corp (New York City Mun Wtr Fin	n Auth) SRF (AMBAC)	
Unenhanced Rating	AAA(SPUR)/Stable	Affirmed
New York St Envir Fac Corp (New York City Mun Wtr Fin	Auth) state wtr poll ctl	
Long Term Rating	AAA/Stable	Affirmed
New York St Envir Fac Corp (New York City Mun Wtr Fin	, -	,
Long Term Rating	AAA/Stable	Affirmed
New York St Envir Fac Corp (New York City Mun Wtr Fin	,, ,	A (G
Long Term Rating	AAA/Stable	Affirmed
New York St Envir Fac Corp (NYC Mun Wtr Fin Auth) SRI	(INIDIA) (INATIONAL)	

Ratings Detail (As Of November 13, 2015) (cont.)		
Unenhanced Rating	AAA(SPUR)/Stable	Affirmed
Many issues are enhanced by bond insurance.		

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