



New Issue: MOODY'S ASSIGNS Aa1/VMIG 1 RATINGS TO \$325 MILLION OF NEW YORK CITY MUNICIPAL WATER FINANCE AUTHORITY FIRST GENERAL RESOLUTION VARIABLE RATE BONDS

Global Credit Research - 19 Mar 2012

\$9.1 BILLION OF FIRST RESOLUTION AND \$19.0 BILLION OF SECOND RESOLUTION DEBT OUTSTANDING FOLLOWING CURRENT ISSUE; OUTLOOK IS STABLE

NEW YORK CITY MUNICIPAL WATER FINANCE AUTHORITY, NY
Combined Water & Sewer Enterprise
NY

Moody's Rating

ISSUE	RATING
Water and Sewer System Revenue Bonds, Adjustable Rate Fiscal 2012 Series B-1	Aa1/VMIG 1
Sale Amount	\$100,000,000
Expected Sale Date	03/20/12
Rating Description	Revenue: Government Enterprise
Water and Sewer System Revenue Bonds, Adjustable Rate Fiscal 2012 Series B-2	Aa1/VMIG 1
Sale Amount	\$100,000,000
Expected Sale Date	03/20/12
Rating Description	Revenue: Government Enterprise
Water and Sewer System Revenue Bonds, Adjustable Rate Fiscal 2012 Series B-3	Aa1/VMIG 1
Sale Amount	\$75,000,000
Expected Sale Date	03/20/12
Rating Description	Revenue: Government Enterprise
Water and Sewer System Revenue Bonds, Adjustable Rate Fiscal 2012 Series B-4	Aa1/VMIG 1
Sale Amount	\$50,000,000
Expected Sale Date	03/20/12
Rating Description	Revenue: Government Enterprise

Moody's Outlook N/A

Opinion

NEW YORK, March 19, 2012 --Moody's Investors Service has assigned Aa1/VMIG 1 ratings to the New York City Municipal Water Finance Authority's \$325 million Water and Sewer System General Resolution Revenue Bonds, Adjustable Rate Fiscal 2012 Series B, consisting of \$100 million Subseries B-1, \$100 million Subseries B-2, \$75 million Subseries B-3 and \$50 million Subseries B-4. The bonds, which will have liquidity support through a standby bond purchase agreements provided by US Bank, NA, the California Public Employees' Retirement System, State Street Bank and Trust Company, and The Northern Trust Company, are scheduled to price on March 27. Proceeds will be used primarily to redeem commercial paper that was issued to finance a portion of the authority's capital plan.

SUMMARY RATING RATIONALE

The long-term ratings reflects strong bondholder protections provided by the authority's legal structure; healthy debt service coverage provided by a first lien on the system's gross revenues and enhanced by independent rate-setting ability; the essential nature of New York City's water and sewer system and the monopoly the city and the authority have in providing that service; the challenges of operating and maintaining the system given its size, age and density of the population it serves; a rising debt burden; and continued need for large rate increases. The outlook is stable. The short-term ratings reflect the credit quality of the banks providing the standby bond purchase agreement ("SBPA") for the bonds, the structure of the SBPA and the likelihood of its termination without a mandatory tender of the bonds.

STRENGTHS

- Legal structure that provides strong bondholder protections, including: bankruptcy protection and legal separation from the fiscal condition of New York City; autonomous rate-setting authority; and a gross revenue pledge
- A long history of regular, independently-set rate increases that maintain financial stability, support a substantial capital program, and provide healthy debt service coverage
- Ample water supplied from the city's own extensive reservoir network; low transmission costs relative to other large systems; water rates that currently are moderate compared to other large cities; and authority to sell liens to monetize unpaid bills and provide incentive to delinquent customers to pay

CHALLENGES

- The water and sewer system's size, age and density pose operating and maintenance management challenges
- Substantial debt issuance estimated going forward and the projected need for large rate increases to support it and maintain adequate debt service coverage
- A history of state and federal regulatory mandates which drive approximately 20% of the system's capital improvement program, and could substantially increase the authority's future borrowing needs

DETAILED CREDIT DISCUSSION

SHORT-TERM RATING RATIONALE

The Bonds will have liquidity support from standby bond purchase agreements ("SBPAs") provided by (i) U.S. Bank National Association ("USB") rated Aa2/P-1, (ii) the California Public Employees' Retirement System ("CalPers") rated Aa3/P-1, (iii) State Street Bank and Trust ("State Street") rated Aa2/P-1, and (iv) the Northern Trust Company ("Northern Trust") rated Aa3/P-1 (the "Banks"). USB, CalPers, States Street and Northern Trust will provide the SBPAs for the B-1, B-2, B-3 and B-4 Bonds, respectively. The Bonds are scheduled to price on March 27th.

The short-term ratings of VMIG 1 on the Bonds are derived from the credit quality of the Banks, as providers of the applicable liquidity facility in the form of an SBPA, and the likelihood of termination of the applicable SBPA without a mandatory tender. Events that would cause the liquidity facility to terminate without a mandatory purchase of the Bonds are directly related to the credit quality of the Authority. Accordingly, the likelihood of any such events occurring is reflected in the long-term rating assigned to the Bonds. The Authority's revenue bonds, which reflects the current issue, are rated Aa1.

The Banks' obligations under the applicable standby bond purchase agreement can be automatically terminated or suspended as a result of the occurrence of any of the following events: (i) the Authority shall default on the payment of principal, interest, and redemption premiums on the bonds or any debt on parity with the Bonds and such payment is not made within 2 business days after the Authority's actual knowledge of such failure to pay; (ii) the Authority shall file a petition or otherwise seek relief under any federal or state bankruptcy or similar law; (iii) a final, nonappealable judgment shall be issued by a court of competent jurisdiction that the Bonds or any provision of the respective SBPA or the Resolution relating to the payment of principal and interest on the Bonds shall cease to be valid and binding; (iv) the Authority shall initiate legal proceedings that the Bonds or any material provision of the applicable SBPA or the Resolution relating to the payment of principal and interest on the Bonds is invalid or that the Authority has no liability thereon; (v) (a) the state or any other governmental authority with jurisdiction over the Authority imposes a debt moratorium, debt restructuring, debt adjustment or comparable extraordinary restriction on repayment when due and payable of the principal and interest on the Bonds or all debt obligations of the Authority secured by a lien on revenues, or (b) the Authority shall impose a debt moratorium, debt restructuring, debt adjustment or comparable

extraordinary restriction on repayment when due and payable of the principal and interest on the Bonds or any debt obligations of the Authority secured by a lien on revenues ; (vi) the Authority shall make a general assignment for the benefit of creditors, admit in writing its inability to pay its debts as they become due, or declare a moratorium on repayment of any parity debt, or file a petition of any law relating to bankruptcy, insolvency, reorganization, liquidation, winding-up or adjustment of debts; (vii) each rating agency shall assign a rating below investment grade to any debt on parity with the Bonds or each rating agency shall, for credit related reasons, withdraw or suspend any rating on debt on parity with the Bonds; and (viii) a final nonappealable money judgment shall be entered by a court or regulatory body of competent jurisdiction against the Authority in an amount in excess of \$10 million without the Authority satisfying such payment within 90 days from the first date of such judgment.

Each Subseries will initially bear interest in the daily rate mode and will pay interest on the 15th day of each month. Each Subseries of bonds are convertible, in whole, to the weekly, two-day, flexible rate, commercial paper rate, fixed and auction rate mode. Upon conversion (other than between the daily, two-day and weekly modes), the bonds of such Subseries shall be subject to mandatory tender. The SBPA only covers Bonds in the daily, two-day, and weekly rate modes and the short term rating will expire as to a Subseries of Bonds upon conversion of the interest rate of such Subseries of Bonds to a mode other than the daily, two day, or weekly rates. While the bonds bear interest at the weekly rate or two-day rate mode, interest shall be paid on the 15th day of each month.

The SBPAs may be substituted and requires a mandatory tender of the applicable subseries of Bonds on the date of such substitution unless Moody's provides written evidence that the current rating on the applicable Subseries of Bonds will not be reduced or withdrawn as a result of such substitution.

The Bonds of each Subseries are subject to mandatory tender as follows: (i) on the interest rate conversion date for the Bonds of a Subseries being converted to a different rate mode, other than between the daily, two-day, or weekly rate modes; (ii) at the end of each flexible rate or commercial paper rate period; (iii) on the last day of the daily rate period, two-day period, or weekly rate period next preceding the expiration date or earlier termination of the applicable liquidity facility; (iv) on the date of substitution of the liquidity facility for any Subseries of Bonds, unless the rating on the bonds of such Subseries is being maintained, as evidenced in writing by each rating agency; and (v) no later than the business day immediately preceding the termination date of an applicable liquidity facility specified in a notice of termination delivered by such liquidity facility provider to the tender agent due to an event of default under the applicable liquidity facility.

During the daily mode, Bonds may be tendered for purchase on any business day provided notice is provided to the remarketing agent and tender agent by 11:00 a.m., New York City time, on such purchase date. Bondholders may tender their bonds during a weekly rate mode on any business day with at least seven days prior written notice to the remarketing agent and tender agent. Bondholders may tender their bonds during the two-day mode by delivering written notice by 3:00 p.m. New York City time, two business days prior to the purchase date to the remarketing agent and tender agent. Bonds which are purchased by the liquidity facility due to a failed remarketing may not be released by the trustee until such liquidity facility has been reinstated.

The SBPAs are sized for the full principal amount of the applicable Subseries of Bonds plus 35 days interest at the maximum rate of 9% for the bonds. The SBPAs will secure payments of purchase price while the applicable Subseries of bonds bear interest in the daily, two-day, and weekly modes.

Under the terms of the SBPAs, conforming draws received by the bank by 12:00 noon (New York time) on a mandatory or optional tender date will be honored by 3:00 p.m. (New York time) on the same day.

Each SBPA will terminate upon the earliest to occur of: (i) the stated expiration date (March 27, 2015); (ii) the date of delivery of a substitute SBPA for such series after the honoring a draw on the existing facility; (iii) the date on which all of the Bonds of such series have been paid in full, redeemed or converted to a rate mode other than the daily, two-day or weekly mode, (iv) the date the available commitment under the applicable facility is reduced to zero following (a) the receipt by the tender agent of a notice of termination from the applicable bank as a result of the occurrence of an event of default under the applicable SBPA or (b) substitution of the respective facility, (v) 15 days following the tender agent's receipt of notice of termination due to an event of default.

LEGAL STRUCTURE PROVIDES STRONG BONDHOLDER PROTECTIONS, REFLECTS STRONG RATINGS

The bonds are secured by a second lien on gross revenues of the water and sewer system, subject to the prior payment of debt service on the Aa1-rated first general resolution bonds. Additional security provisions provide strong legal protections beyond those found in most municipal water and sewer revenue bonds. These include insulation

from potential New York City fiscal stress, independent rate-setting, and (for first resolution bonds only) covenanted reserves, in addition to traditional revenue bond covenants. Neither the New York City Water Board (which sets rates) nor the authority has the ability to file for bankruptcy. A lease agreement between the board and the city establishes the board's ownership of system revenues, while a financing agreement between the board and the authority pledges those revenues first to bondholders, further protecting them from potential weakness in the city's financial position. Additionally, bond counsel has opined that system revenues could not be combined with New York City (general obligations rated Aa2 with a stable outlook) should the city file for bankruptcy protection. The lease with the city limits the annual rental payment to the greater of principal and interest on city general obligation debt issued for water and sewer purposes due in the fiscal year of the payment, or 15% of principal and interest due on the authority's bonds in that fiscal year. Importantly, the lease requires the city to operate and maintain the water and sewer system to its consulting engineer's recommendation regardless of whether or not it receives the board's rental payment.

The first resolution rate covenant requires net revenues to equal 115% of first resolution debt service, plus 100% of the sum of second resolution debt service, operating and maintenance expenses, and the city lease payment. First resolution bonds also benefit from a cash-funded debt service reserve equal to maximum annual debt service. First resolution issuance is subject to an additional bonds test that requires net revenues to equal 115% of maximum annual senior debt service for the next succeeding five years and 100% of second resolution debt service and operating and maintenance expenditures.

The second resolution rate covenant requires that net revenues on a cash basis be sum sufficient to cover combined debt service, operations and maintenance expenses and city lease payments. There is no debt service reserve on the second resolution bonds. The second resolution additional bonds test requires revenues to equal 110% of aggregate debt service for both first and second resolution bonds in either of the prior two fiscal years.

The authority pledges the gross system revenues to repayment of its debt obligations; revenues flow to the city (which operates the system through its Department of Environmental Protection) for operations and maintenance expenses after debt service is funded monthly on a one-fifth of interest, one-eleventh of principal basis. In the event that revenues are insufficient to cover monthly debt service requirements, bondholders have the right to claim all revenues of the system until debt service obligations are met. Additionally, the city has agreed through the lease to operate and maintain the system, regardless of full reimbursement from water and sewer revenues. The strength of this gross revenue pledge and the system's legal protections are key considerations reflected in the credit rating.

The authority has \$3.5 billion of Build America Bonds (BAB) outstanding. Pursuant to the Second General Resolution, subsidy payments such as the BAB subsidies anticipated to be received by the authority are treated as pledged revenue. Subsidy payments are expected to peak at 2.3% of revenue in this fiscal year; in the event that no subsidy payments are received, the authority could absorb the lost revenue in its rate setting process or through other adjustments. For purposes of the additional bonds test, interest is calculated on a gross basis. While the authority has a level debt service structure overall, a majority of its BABs have long maturities, and some with a single bullet principal payment. Additionally, a portion of the BABs feature make-whole call provisions. The combination of those features could reduce the authority's future flexibility to refinance its debt for savings and could increase its refinancing costs.

RATE INCREASES HELP MAINTAIN HEALTHY DEBT SERVICE COVERAGE

Last May, the New York City Water Board increased fiscal 2012 rates by 7.5%, a lower rate increase than the previously forecasted 9.8%. Based on current forecasts, the board estimates it will need to raise rates by 9.3% in each of fiscal 2013 and 2014, and by 6.0% in each of fiscal 2015 and 2016. The history of willingness to increase rates is a strong management feature and an important component of the ratings. Large rate increases like the ones implemented in recent years can be politically challenging, especially during economic downturns, but the board has demonstrated its willingness to undertake them. At the same time, the authority has endeavored to reduce its operating expenses and mitigate the size of future rate increases, which help to increase its flexibility to adjust as necessary.

The regular rate increases provide strong debt service coverage. Based on Moody's adjusted audited fiscal 2011 results, gross revenues (operating revenue plus investment income and subsidy income) cover aggregate debt service by 2.93 times, compared to 3.56 times in fiscal 2010, in part reflecting increased issuance of second resolution bonds as part of the Build America Bonds program. On a net basis, aggregate annual coverage was 1.68 times in fiscal 2011 compared to 1.35 times in the prior year. The authority estimates that gross aggregate coverage will be 2.42 times in fiscal 2012 and average 2.31 times through fiscal 2016, and net coverage will decline to 1.47

times in fiscal 2012 and average 1.45 times through fiscal 2016. The authority's estimates are usually conservative and we expect that trend to continue. Budgeted debt service assumes short-term rates of 4.25% and long-term rates of 6% and greater, both higher than rates on its outstanding debt. Additionally, through 2016 the authority has budgeted cash funded capital expenditures that average nearly \$175 million annually that can act as an additional cushion against lower revenues or higher expenses, or be used to defease bonds to lower its debt service costs.

FINANCIAL OPERATIONS CONTINUE TO BE HEALTHY

Based on audited fiscal 2011 results, the authority's financial position is healthy. Operating revenues increased by 14.6% compared to fiscal 2010 based on audited figures, an amount that includes payments on accounts in arrears. Through fiscal 2016, the authority estimates that operating income will increase by an average of 5% annually, also a conservative forecast compared to more recent trends.

A trend of decreased consumption, in part related to the economic downturn, has reversed itself in the near term. For fiscal 2011 (which ended June 30) consumption was 2.5% greater than during fiscal 2010. For the first seven months of fiscal 2012 consumption is down by approximately 2.8% compared to the same period in the prior year. The authority's forecast reflects flat consumption during the current year followed by decreased consumption of 1% annually from fiscal 2013 through fiscal 2015 and a 2% decrease in fiscal 2016. We view these estimates as prudent considering slower economic growth forecasts going forward and increasing water conservation. Combined water and sewer payments through seven months of the authority's fiscal year are 1.1% greater than budget.

In response to decreased consumption trends, the city's Department of Environmental Protection (DEP), which operates the water and sewer system, has cut expenditures, including reductions in operating expenses. Fiscal 2011 operating expenses decreased by a substantial 24% compared to the prior year, although fiscal 2010 expenses were skewed upwards by retroactive wage settlement payments made to sewer workers that were absorbed by lower-than-budgeted short-term debt service costs, use of one-time funds, and by the rate increase. Through fiscal 2016, net operating expenses are projected to increase annually by 5.2%, which in part reflect ongoing cost containment efforts.

Regulations currently being considered by the state would permanently ban high volume natural gas drilling in the city's upstate watershed. Because the upstate water is not required to be filtered, potential contamination related to drilling would likely result in substantial costs for the system. The city has recommended that the state also create substantial exclusion zones around the upstate water infrastructure to further protect it from potential drilling damage. Making the drilling ban permanent and creating the exclusion zones would be a credit positive development for the authority, while permitting drilling close to the watershed infrastructure could raise credit challenges.

The authority has had the ability to sell liens for unpaid water and sewer charges since 2007. The first lien sale was held in June 2008 and its current lien sale authorization extends through 2014. The November 2011 lien sale netted \$13 million; the next lien sale is scheduled for May 2012. Besides the lien sales, the authority is in the process of installing automated meter reading equipment throughout the city which is expected to help historically challenged collection rates going forward: to date, 94% of all accounts have the automated meter reading system installed.

The system's cash position has historically been stable, with a fiscal 2011 cash-basis surplus of \$376.8 million. Cash surpluses are carried forward and applied to second resolution debt service in the following year. Given the current and projected rise in capital costs and annual debt service requirements, the maintenance of solid liquidity levels and ongoing annual financial margins will remain important credit factors supporting the strong ratings.

CAPITAL PROGRAM: EXTENSIVE CIP REFLECTS SIZE, AGE AND DENSITY OF THE SYSTEM; MANDATED PROJECTS A SECTOR-WIDE RISK

The city's Department of Environmental Protection's updated CIP includes an estimated \$13.3 billion of capital improvements for fiscal years 2012 through 2021 and reflects smaller annual capital commitments than in recent years, in part as the result of actions taken by New York City that include reducing city-funded capital commitments and stretching its capital plan across a longer period as it works to balance its budget amid the economic downturn. Although the plan is smaller, it still reflects a significant amount of leverage and could strain the authority's strong rating levels, particularly given the system's already highly leveraged position. Bond issuance in the current version of the CIP averages \$1.6 billion annually from fiscal 2012 through 2016, with total debt service forecasted to grow from \$1.3 billion in the current fiscal year to \$1.8 billion in fiscal 2016.

The total program includes \$5.6 billion of water supply and water distribution projects, \$4.5 billion for water pollution

control, including \$178 million for consent decree projects, and \$2.0 billion for sewers. While conservation remains a component of the system's strategy, DEP is identifying alternate water sources to ensure reliability during future droughts and the maintenance of the existing supply system. Authority officials report the system is in compliance with lead regulations and no material capital costs are expected in this area. Notably, the percentage of the capital plan that reflects mandated projects has decreased significantly, which provides significant flexibility to adjust to fluctuations in revenues and expenses. However, the water and sewer sector is a highly regulated one and mandated capital projects and related uncontrollable costs are always possible. In particular, the New York system benefits significantly from a determination by the federal government that it does not have to filter its upstate drinking water supply. That ruling expires in 2017 and if it is not renewed or if the renewal includes additional conditions beyond those currently in force, the systems' capital costs could be increased substantially.

VARIABLE RATE DEBT AND INTEREST RATE DERIVATIVES

The authority has approximately \$3.5 billion of variable rate obligations outstanding (both hedged and unhedged), including an \$800 million commercial paper program (\$400 million of which is extendible commercial paper without external liquidity support); the variable rate portfolio reflects 12% of the authority's total outstanding debt (which will increase slightly to 13% following new money variable rate demand bonds the authority plans to issue later in March). The variable rate debt is not insured, and standby bond purchase agreements with a diverse portfolio of liquidity providers contain favorable legal provisions, most notably a lack of term-out requirements that would accelerate principal in the event that any bond becomes a bank bond. About 41% of the standby bond purchase agreements that provide liquidity support to the authority's variable rate demand bonds are provided by European banks. None of the bonds have become bank bonds and continue to trade at rates favorable to the authority, especially considering that it budgets debt service on variable rate bonds at 4.25%.

The authority has entered into four swap agreements with four different counterparties in an aggregate notional amount of \$621 million; as of December 31, 2011 the mark-to-market value was -\$112.6 million. Termination of the swaps by the counterparties is limited to highly unlikely events. In the event that the authority should owe a termination payment, the swaps include provisions that allow the rate setting process to occur before the payment is due.

OUTLOOK

The outlook for the New York City Municipal Water Finance Authority's is stable. Implementing the authority's capital plan requires substantial issuance of new debt, which in turn requires sizeable rate increase to support. While the authority has a history of enacting the necessary rate adjustments, political pressure to hold rates down could become stronger in the future. Additionally, like water and sewer systems throughout the nation, regulatory mandates also could drive future capital costs upwards and create other uncontrollable spending needs.

WHAT COULD MAKE THE LONG-TERM RATING GO UP

- A stronger additional bonds tests or other stronger limitations on leveraging the pledged revenues
- A significant and sustained improvement in collection rates and sustained stability in consumption levels

WHAT COULD MAKE THE LONG-TERM RATING GO DOWN

- Failure to continue to set rates at levels needed to afford the system's sizeable capital program, large debt load and the water and sewer system's significant operating costs that result in weakened financial ratios or debt service coverage
- New state or federal regulations that require especially large capital expenditures or that create uncontrollable costs for the authority

WHAT COULD MAKE THE SHORT-TERM RATING GO UP

- Not applicable

WHAT COULD MAKE THE SHORT-TERM RATING GO DOWN

- The short-term rating on the bonds could be lowered if the short-term rating on the banks or the long-term rating of the borrower was downgraded.

The principal methodology used in this rating was Analytical Framework For Water And Sewer System Ratings published in August 1999. Please see the Credit Policy page on www.moody.com for a copy of this methodology.

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Although this credit rating has been issued in a non-EU country which has not been recognized as endorsable at this date, this credit rating is deemed "EU qualified by extension" and may still be used by financial institutions for regulatory purposes until 30 April 2012. Further information on the EU endorsement status and on the Moody's office that has issued a particular Credit Rating is available on www.moody.com.

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