

New Issue: [Massachusetts Water Resources Authority](#)

MOODY'S ASSIGNS Aa2 RATING TO MWRA'S (MA) \$329 MILLION REVENUE BONDS, SERIES 2009

SENIOR LIEN DEBT AFFIRMED AT Aa2, SUBORDINATED DEBT AFFIRMED AT Aa3, TOTAL OF \$4.5 BILLION IN RATED DEBT OUTSTANDING

Water/Sewer
 MA

Moody's Rating

ISSUE	RATING
General Revenue Bonds, 2009 Series A	Aa2
Sale Amount	\$98,000,000
Expected Sale Date	02/04/09
Rating Description	Revenue

General Revenue Bonds, 2009 Series B	Aa2
Sale Amount	\$230,880,000
Expected Sale Date	02/04/09
Rating Description	Revenue

Opinion

NEW YORK, Feb 3, 2009 -- Moody's Investors Service has assigned Aa2 ratings to the Massachusetts Water Resources Authority's (MWRA) \$98 million General Revenue Bonds, 2009 Series A and approximately \$230 million General Revenue Refunding Bonds, 2009 Series B. Concurrently, Moody's has affirmed the Aa2 rating assigned to the authority's \$3.08 billion of outstanding senior lien general revenue bonds (post-refunding) and the Aa3 rating assigned to the authority's \$1.15 billion subordinated general revenue bonds; MWRA's outlook remains stable. The Series A bonds will finance fiscal 2009 capital improvement projects while the Series B bonds will refund roughly \$230 million in outstanding long-term senior-lien fixed-rate debt. The Series B bonds are expected to refund certain maturities of MWRA's Series 1997D, 1998A and 1998B bonds for a present value savings of approximately 8.28% of refunded principal with no extension of maturity. These bonds are secured by a net revenue pledge of the system and benefit from strong structural provisions including a 1.2 times rate covenant on senior lien debt. Additional security is provided for two-thirds of MWRA's revenues, because of the underlying strength of the member communities' general obligation pledges to make timely assessment payments to the authority and a tested state intercept program.

The Aa2 senior lien rating and stable outlook recognize the solid credit strength of the authority's service area, a well-managed but high debt burden and the authority's well-managed financial position despite anticipated future reserve reductions under its recently amended bond resolution. Also incorporated in the long-term ratings are a substantial and complex debt structure with significant exposure to variable rate debt as well as a sizeable swap portfolio, satisfactory legal covenants which require rate revenue coverage of 1.1 times on combined senior and subordinated debt service but do not call for a subordinated debt service reserve, MWRA's strong historical collection of assessments supported by historical receipt of 100% of assessments within the levy year, one-third of which come from the Boston Water and Sewer Commission (rated Aa2). Additional credit factors include MWRA's ability to intercept the majority of the members' quarterly state aid payments, stable membership with lack of alternative sources, independent rate-setting authority and the essential nature of the services provided. Also reflected in the ratings are the risks associated with the authority's substantial variable-rate debt portfolio, which includes enhancement provided by letters of credit and standby purchase agreements, as well as a complex but closely-managed swap portfolio with a substantial negative mark-to-market value. While the potential exists for sustained elevation and acceleration of debt service costs as well as large draws on reserves, MWRA's long-term credit strength is not significantly impaired due to its sound reserve position, robust cash flow and its capable management team's proven ability to substitute financial providers or arrange alternate financing. The subordinated Aa3 rating incorporates the bonds' subordinate position relative to MWRA's \$3.08 billion in senior lien debt and the authority's weaker legal covenants requiring rate revenue coverage of 1.1 times on combined senior and subordinated debt service, including subordinated fixed-rate loans issued to the authority by the State Revolving Fund (Massachusetts Water Pollution Abatement Trust rated Aaa/stable outlook).

Moody's also expects the authority to continue active and vigilant debt portfolio and operations management, as demonstrated by its historical ability and willingness to react effectively to market disruption and operational challenges. In June 2008, instability of financial institutions necessitated refunding of auction rate securities and insured floaters, reassignment of swap providers and remarketing agents. While operational stresses have included liquidation of guaranteed investment contracts, the loss of state assistance for debt service and spikes in variable rate interest costs, MWRA does not plan to implement a mid-year rate increase and projects satisfactory operating results in fiscal 2009 with ample coverage and no significant draw on reserves.

SYSTEM'S CAPITAL INVESTMENTS PROVIDE HIGH-QUALITY ESSENTIAL SERVICE TO LARGE SERVICE AREA

MWRA provides wholesale water and wastewater services to 61 communities in eastern Massachusetts (Commonwealth rated Aa2/stable outlook), serving approximately 2.6 million people or 43% of the Commonwealth's population. As a result of the authority's significant capital investment in waterworks and wastewater treatment and transmission facilities, the authority reports important improvements in water quality. Water is supplied to 49 local bodies and is primarily derived from the Quabbin Reservoir, located 65 miles west of Boston (G.O. rated Aa1/stable outlook) and the Wachusett Reservoir, located 35 miles west of Boston, with a combined capacity of 477 billion gallons; demand consistently falls below the safe yield level of 300 million gallons per day and capacity is expected to be sufficient for at least 20 years. Treatment of much of the system's water by ozonation and chlorination is provided at the system's John J. Carroll Treatment Plant, which went on line in July of 2005. Recently completed transmission and covered storage facility projects include the \$698 million 17.6-mile MetroWest Water Supply Tunnel and the \$107 million, 155 million gallon Norumbega Covered Storage Facility which is one of the largest in the world. Completion of these projects improves the system's security and compliance with the federal Safe Drinking Water Act. The authority's capital improvement plan (CIP) has shifted focus to maintenance and rehabilitation of pipelines, pumping facilities, and expansion of the system's central monitoring system. Finally, in close conjunction with the Massachusetts Department of Conservation and Recreation, the MWRA expects to contribute \$135 million for land acquisition over 15 years to preserve and protect its watershed areas.

Wastewater collection and treatment are provided to 43 communities with major treatment facilities located on Nut and Deer Islands in Boston Harbor. The \$3.5 billion Deer Island plant and 10-mile effluent outfall tunnel were phased into service beginning between 1996 and 2000 and allow for average daily flow of 361 million gallons per day (with peak capacity of 1,270 mgd). Sludge is piped to the authority's pelletization plant in the City of Quincy (G.O. rated A1) where it is processed into commercially available fertilizer. The MWRA's \$1.2 million long-range Capital Improvement Plan (CIP) calls for a substantial continued investment in combined sewer overflow projects as well as facility maintenance and upgrades of the conveyance system.

STRONG FINANCIAL POSITION DESPITE LOSS OF STATE AID

MWRA is expected to maintain a sound financial position, which has been sustained by frequent and sizable rate increases necessitated by significant debt obligations incurred in the last decade. The authority's primary revenue source is rates and charges assessed to 61 member communities (weighted average G.O. rating Aa3); assessments grew by an average annual rate of 4.4% between fiscal 2004 and fiscal 2008, and account for a projected 93% of fiscal 2009 revenues. Senior and total debt service coverage have comfortably exceeded covenants of 1.2 and 1.1 times, respectively. Senior lien coverage was ample at 2.3 times in fiscal 2008 while total debt service coverage was a narrower 1.2 times. Due primarily to conservative budgeting and timely response to operating pressures, fiscal 2009 senior and total coverage are projected 2.3 and 1.1 times, respectively. MWRA experienced a mid-year \$11.25 million reduction of state debt assistance, which was offset by \$11.3 million of reductions in operating and capital expenses. Future budgets rely on regular rate increases of 5.7% annually and are based on reasonable operating and capital assumptions; however adjustments may be required as continued state debt service support is not likely and future regulatory requirements are unclear. While MWRA's total coverage is lower than that of comparably-rated utilities the authority's credit profile is strengthened by historical 100% collection rates and the availability of the commonwealth's local aid intercept program for assessments. Furthermore Moody's notes that since 1989 management has transferred nearly \$250 million to various reserve accounts and used roughly \$114 million to defease outstanding debt as part of the authority's long-term strategy to smooth the impact of rate increases.

Despite a modest decline in overall reserves, MWRA is expected to maintain a sound reserve position, a critical factor in managing termination or acceleration events should market disruption and financial institution instability continue or worsen in the medium term. The authority maintains several reserve accounts which totaled roughly \$407 million in fiscal 2008, including an unrestricted operating reserve of \$36.5 million. Funds released subsequent to a fiscal 2008 refunding were used to defease \$37 million in outstanding debt, reducing the senior debt service reserve by \$34 million and the bond redemption fund by \$2.6 million. MWRA's cash position is satisfactory representing roughly 36% of O&M or 131 days of operations. The authority maintains a conservative investment strategy with its operating cash and \$217 million long-term investment portfolio held in government sponsored enterprises or fully collateralized deposit accounts. Moody's expects that MWRA will maintain its solid financial position given its conservative budgeting, planned regular rate increases and the anticipated maintenance of satisfactory reserve levels. Additional credit factors are expected reductions in liquidity as the authority utilizes its rate stabilization and bond redemption funds in the medium term to smooth future rate increases and reduce outstanding debt

associated with the highly-leveraged system.

SIZEABLE DEBT PORTFOLIO WITH SIGNIFICANT VARIABLE RATE EXPOSURE

MWRA's outstanding debt totals a sizeable \$5.7 billion, below its legislatively established debt limit of \$6.1 billion, reflecting completion in the last decade of \$6 billion in water and wastewater treatment facilities. Variable-rate debt represents a significant 28% of outstanding debt, and includes commercial paper (\$164 million, 3% of total debt), variable rate demand bonds (VRDBs) supported by letters of credit (\$210 million, 4%) and VRDBs supported by stand-by purchase agreements (SBPAs, \$1.16 billion, 20%). The authority's debt ratio of 72.2% is well above norms for utilities rated by Moody's but not unusual for systems providing wholesale operations and having to fund capital requirements associated with environmental consent decrees. The authority's debt burden is expected to remain elevated for the long term as principal is amortized slowly, at roughly 20% in ten years, reflecting the long useful life of the system's recently completed treatment plants. Authority officials remain generally conservative in budgeting for debt service but have reduced the budget for variable rate interest to 4% from 4.75% in previous years, somewhat reducing MWRA's flexibility to manage unanticipated increases in debt service costs due to bonds repurchased after failed remarketings as well as fluctuations in interest rates. The authority plans to issue up to \$200 million in debt annually in support of its \$1.05 billion five-year capital improvement program; the majority of projects focus on control of combined sewer overflows and maintenance of existing system assets as well as upgrades to improve water quality and system reliability and redundancy. However, MWRA plans to issue approximately \$100 million in senior lien fixed-rate bonds and \$60 million in subordinated fixed-rate SRF bonds in 2010 to provide new money financing for fiscal 2010 capital projects; future refundings to achieve debt service savings and mitigate future rate increases are likely as market conditions allow savings exceeding 4% of refunded principal.

Of the \$1.5 billion in outstanding variable rate debt a sizeable \$844 million (55%) are hedged with interest rate swaps while the \$523 million remainder is unhedged. The current aggregate mark-to-market value of MWRA's swaps is negative \$155 million, although events resulting in automatic termination are currently somewhat remote. Moody's believes that while MWRA's current debt profile is structured and actively managed so that inherent variable-rate risks are somewhat mitigated by the diversity in swap counterparties and SBPA providers, the authority's solid cash position and the ability to borrow temporarily from operating, construction and other reserve funds and long-term for swap termination payments. Also offsetting debt structure risk is management's demonstrated ability to monitor debt portfolio performance and act effectively to replace or reassign swap and credit enhancement providers, generate additional assessment revenue through timely interim assessments and curtail operating expenditures to maintain the authority's sound financial position and debt service coverage. Although management reports that the authority's variable rate and hedged debt structures have produced aggregate savings estimated at \$238 million since 1997 when compared to historical fixed-rate interest costs, the risk of terminated SBPA and swap agreements due to failed remarketings and financial institution downgrades have increased during the current period of market disruption. Moody's has subjected MWRA's debt portfolio to various stress scenarios reflecting market dislocations resulting in increased interest and swap payment expense as well as accelerated principal repayments, demonstrating that, relative to the authority's resources and operational flexibility, its significant 28% exposure to variable rate debt and derivatives poses some risk but does not significantly impair its underlying credit strength. Cash reserves could be employed as a bridge to temporarily support operations and debt service while debt refunding, new credit enhancement agreements were negotiated or swap agreements are transferred. However, should prolonged market disruption prevent market access or cause cascading events requiring significantly increased interest rates, accelerated repayment or termination payments, reducing the authority's operating flexibility and draining cash reserves, MWRA's credit strength could be significantly affected with multi-notch downgrades a possibility. MWRA's debt portfolio includes no insured VRDB or auction rate securities; all such outstanding bonds were refunded in June 2008 with variable rate demand bonds which are supported by standby purchase agreements (SBPA).

COUNTERPARTY DIVERSIFICATION IN SWAP PORTFOLIO AND CREDIT SUPPORT

MWRA has entered into five floating-to-fixed swap agreements covering \$843 million in outstanding variable rate bonds issued in 2002 and 2008 with a total notional amount of \$884 million, with the most recent agreements entered into with Barclays Bank (Aa3) and Wells Fargo (Aa3) in September 2008 to replace agreements with Lehman Brothers affiliates that were terminated as part of Lehman's bankruptcy. All of the agreements are structured to match maturity with the original swap termination dates. Swap and termination payments are on parity with subordinated debt service payments. Most recent mark-to-market valuations indicate an aggregate liability to MWRA of approximately \$155 million. Early termination events are triggered if MWRA's underlying senior lien rating falls below Baa3 and although that risk is remote at this time payments could be bonded or funded with capacity in MWRA's commercial paper program, which is expected to have \$136 million available post-refunding and net of its \$50 million required environmental emergency reserve.

Portions of the 2008 Series A and 2008 Series E bonds are hedged by interest rate swaps with Barclays Bank and Wells Fargo Bank (notional amounts \$133 million, each). Lehman is obligated to pay the authority a variable interest rate equal to the SIFMA Municipal Swap Index rate while the authority is obligated to pay Barclays and Wells Fargo fixed interest rates ranging from 4.47% to 6.94% over the life of the bonds and swap agreement. The Wells Fargo swap expires on August 1, 2030 while the Barclays swap has an expiration date of August 1, 2037.

The 2008 Series C bonds are covered by a swap agreement with Citigroup (A2, notional amount \$117 million) and one with Morgan Stanley Derivative Products (A2, notional amount \$78 million). The swap agreement with Citibank provides that Citibank is obligated to pay the authority a variable interest rate equal to the SIFMA Municipal Swap Index rate while the authority is obligated to pay Citibank a fixed interest rate of 3.994%. Morgan Stanley is obligated to pay the authority a variable interest rate equal to SIFMA Municipal Swap Index rate and the authority is obligated to pay Morgan Stanley a fixed rate of 4.03275% (an increase negotiated concurrently with this refunding from the original fixed rate of 3.994%). The Citibank and Morgan Stanley swaps have an expiration date of November 1, 2026.

The Series 2008 A, 2008 Series D and Series E bonds together with Series 2002 D, which is supported by a LBBW letter of credit, are hedged by an interest rate swap with a total of \$312 million outstanding with Goldman Sachs Capital Markets, LP (A1, notional amount \$350 million). Goldman is obligated to pay the authority a variable interest rate equal to 67% of one-month LIBOR while MWRA is obligated to pay Goldman a fixed interest rate of 4.127%. The Goldman swap has an expiration date of August 1, 2015.

Four SBPAs provide credit support for the authority's Series 2008 A-F bonds totaling \$1.15 billion in outstanding VRDBs. Agreements represent reasonable diversity with Dexia Credit Local (A1/P-1) covering the \$338 million Series 2008A bonds (29%), Bayerische Landesbank (Aa2/P-1) with the \$283 million Series 2008C and D bonds (25%), Bank of America, N.A. (Aa2/P-1) with the \$125 million Series 2008B, JP Morgan Chase Bank (Aa1/P-1), N.A. with \$225 million Series 2008E (20%) and the Bank of Nova Scotia (Aa1/P-1) with the \$192 million Series 2008F (17%). Letters of Credit (LOC) issued by Landesbank Hessen-Thuringen GZ (Helaba, Aa2) and Landesbank Baden-Wuerttemberg Capital Markets (Aa1) support the remaining \$210 million of VRDBs.

Please see Moody's previously-published credit reports from June 2008 for additional detail on the providers' credit quality and the SBPA agreements.

Outlook

The stable outlook reflects the authority's sound financial position with a history of steady rate revenue increases to meet the authority's substantial capital improvement program, as well as the service area's strong credit profile and 100% collection history with strong enforcement provisions. The stable outlook also incorporates management's demonstrated ability to act effectively, by managing expenditures or raising additional revenue, to address unanticipated expenditure or revenue fluctuations.

What could change the rating - UP

- *Significant enhancement of service area's composite credit strength
- *Improved coverage for subordinated debt
- *Reduced debt ratios
- *Reduced exposure to risks associated with variable rate debt and derivative agreements

What could change the rating - DOWN

- *Significant reduction of reserves and liquidity beyond adopted bond resolution requirements
- *Failure to reduce debt burden as planned
- *Higher debt ratios or increased exposure to variable rate debt
- *Acceleration of debt amortization due to failed remarketings and subsequent bank bond repayment at higher interest rate
- *Deterioration of service area's composite credit strength
- *Reduction in debt service coverage
- *Failure to effect mid-year rate adjustments or expenditure controls, if necessary

KEY DATA AND RATIOS

Type of System: Water and Sewer Treatment and Transmission

Population of Service Area: 2.7 million

Local Bodies assessed wholesale rates and charges (fiscal 2009): 61

Rate Revenue Collections within 30 days of due dates (fiscal 2008): 100%

Total Revenues (fiscal 2008): \$540 million

Debt Ratio (fiscal 2008): 72.2%

Amortization of Principal:

10 years 20%

20 years 66%

30 years 92%

Legal Coverage of Senior Debt (fiscal 2008): 2.3x

Legal coverage of Senior & Subordinated Debt (fiscal 2008): 1.1x

Operating Ratio (fiscal 2008): 46.5%

Rate Revenue Increase (fiscal 2009): 4.45%

Average Annual Rate Revenue Increase (fiscal 2004-2009): 4.4%

Post-Sale Senior Lien Debt Outstanding (Senior Lien): \$3.16 billion

Variable Rate Subordinated Debt Outstanding: \$1.36 billion

Subordinated SRF Debt Outstanding: \$967 million

Post-Sale Commercial Paper Outstanding: \$164 million

State Revolving Fund Subordinated Debt Outstanding: \$996 million

METHODOLOGY AND LAST RATING ACTION TAKEN

The principal methodology used in rating the current issue was "Analytical Framework for Water and Sewer System Ratings," which can be found at www.moodys.com in the Credit Policy & Methodologies directory, in the Index of Special Reports - U.S. Public Finance. Other methodologies and factors that may have been considered in the process of rating this issuer can also be found in the Credit Policy & Methodologies directory.

The last rating action was on June 11, 2008 when Aa3 ratings were assigned to MWRA's General Revenue Bonds, 2008 Series A-F, and the outstanding Aa2 and Aa3 ratings and the stable outlook were affirmed.

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