PUBLIC FINANCE

Massachusetts Water Resources Authority

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Credit Profile		
US$338.005 mil multi-modal subord gen rev rfdg bnds 2008 ser A dtd 05/29/2008 due 08/01/2037		
Long Term Rating	AA-/A-1+/Stable	New
US$224.77 mil multi-modal subord gen rev rfdg bnds 2008 ser E dtd 05/29/2008		
Long Term Rating	AA-/A-1+/Stable	New
US$199.4 mil multi-modal subord gen rev rfdg bnds 2008 ser C dtd 05/29/2008 due 11/01/2026		
Long Term Rating	AA-/A-1/Stable	New
US$191.705 mil multi-modal subord gen rev rfdg bnds 2008 ser F dtd 05/29/2008 due 08/01/2029		
Long Term Rating	AA-/A-1+/Stable	New
US$124.595 mil multi-modal subord gen rev rfdg bnds 2008 ser B dtd 05/29/2008 due 08/01/2031		
Long Term Rating	AA-/A-1+/Stable	New
US$83.615 mil multi-modal subord gen rev rfdg bnds 2008 ser D dtd 05/29/2008 due 08/01/2011		
Long Term Rating	AA-/A-1/Stable	New

Ratings Detail >>

Rationale

Standard & Poor's Ratings Services assigned its 'AA-' long-term rating to Massachusetts Water Resources Authority's 2008 Series A-F multi-modal subordinated general revenue refunding bonds. The outlook is stable.

In addition, Standard & Poor's affirmed its 'AA' rating, and stable outlook, on the authority's outstanding senior-lien general revenue debt and its 'AA-' underlying rating (SPUR), and stable outlook, on the authority's outstanding subordinate-lien debt.

The 2008 Series A-F bonds will be used to refund 13 series of outstanding subordinate variable-rate demand bonds and auction-rate securities.

The ratings reflect:

- The authority's strong management, which has generated a trend of satisfactory reserves and solid liquidity over a period of many years and has successfully implemented numerous large construction projects;
- The authority's 100% collection rate from member towns, bolstered by an effective statutory collection enforcement mechanism that includes a state aid intercept;
- Adequate legal provisions, following modifications to the general bond resolution, including a senior-lien debt service coverage (DSC) ratio of 1.2x;
- The fiscal stability of Boston Water and Sewer Commission (revenue debt rating AA/Stable), which accounts for about 31% of the authority's budgeted fiscal 2008 rate revenues; and
- Historical senior-lien coverage that has ranged from 1.7x-2.1x, before rate stabilization transfers, over the past five years.

Rising debt service costs—primarily associated with construction of the Deer Island secondary treatment facility—constrain the rating. Capital financing costs have contributed to the authority's above-average wholesale water and sewer rates, and the authority's projections indicate that further rate increases are needed.

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 the authority derives 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. As such, the authority has represented and warranted that the trustee has a first, priority-perfected security interest in the revenues. Bond counsel has advised that the pledge is perfected automatically under the authority's 1984 enabling legislation.

In fiscal 2007, net revenues provided 2.1x coverage on the senior-lien bonds and 1.2x coverage on the combined senior- and junior-lien bonds. Total operating expenses increased by 1.3% from the level of fiscal 2006 to $227 million, with the largest increase due to increased maintenance ($6.4 million), primary at the Deer Island plant. Total operating revenue increased by 4%, to $510 million. At the end of fiscal 2007, the authority's unrestricted cash and investments totaled $83.3 million, or 134 days' operating expenses. Other reserves include a debt service reserve, with a balance of $254 million, which supports the $9.55 billion of future debt service. The community obligation and revenue enhancement fund has a $20 million balance, and the renewal and replacement fund has a $35 million balance.

The authority's 2008 budget projects net expenditures of $564.5 million, after $17.3 million of projected state debt-service assistance, which required a 4.5% increase in rate revenue. Debt service is the largest component of this budget, accounting for 56% of projected expenses. Management projects that this fixed cost will increase to 65% of the total budget by 2010, putting pressure on alreadyabove-average water and sewer rates. In 1990, debt service accounted for about 36% of the total budget. Management reports that expenditures and revenues have been better than budgeted through the first half of the fiscal year.

The authority's recent senior-lien bonds have been sold pursuant to proposed modifications to the authority's general bond resolution that would become effective with approval by two-thirds of the bondholders. Authority officials expect that these changes will be enacted in approximately 10 years. The authority's legal provisions would continue to provide adequate bondholder protection after the proposed changes. Under the modified legal provisions, the authority has covenanted to set rates and charges so that net revenues are at least equal to 1.2x annual debt service, which is still high for a wholesale entity. Actual coverage has remained consistently above covenanted levels, despite the large capital projects and resulting debt service. The rate covenant for subordinate-lien bonds would be 1.1x under the modified provisions.

Outlook

The stable outlook reflects Standard & Poor's expectation that the authority will continue to maintain satisfactory coverage and reserves as it experiences increasing debt service costs and projected rate increases. The escalating debt service costs, which will consume an increasing share of the operating budget—coupled with the authority's additional capital needs—constrain the rating. The legal structure embedded in the legal documents is adequate and continues to be an important underpinning of the ratings.

Service Area Economy

The Massachusetts Water Resources Authority provides wholesale water and wastewater service to 61 communities, concentrated mostly in the greater Boston metropolitan statistical area. The authority provides water service to 49 cities, towns, and special districts and sewerage collection and treatment to 43 cities, towns, and special districts. There are about 2.6 million people in its service area, who account for 43% of the commonwealth's total population. Boston Water and Sewer Commission, the leading customer, accounts for 31% of total authority charges in the fiscal 2008 budget. Standard & Poor's raised its rating on the Boston commission to 'AA' from 'AA-' in August 2004.

The four next-largest users include:

- Newton, Mass. (4.6% of fiscal 2008 charges);
- Quincy, Mass. ('A+' general obligation debt rating; 4.6%);
- Cambridge, Mass. ('AAA'; 3.6%); and
- Somerville, Mass. ('AA+'; 3.3%).

No community in the authority's service area that has a public rating is rated below investment grade. Of the 30 communities that have published ratings, 21 are in the 'AA' category or higher; five communities in the service area are rated 'AAA'; and seven are rated 'AA+'. Education, health care, financial services, and biotechnology are the major current drivers of the diverse regional economy.

The authority's management projects that it has ample water supply through at least 2020. The water supply is rated for a safe yield of 300 million gallons per day (mgd).

Legal Structure/Enforcement Mechanism

In accordance with enabling legislation, Massachusetts Water Resources Authority's board of directors independently exercises its rate-setting authority without regulatory approval. The authority annually adopts rates and charges every June. following an advisory board's notice, hearings, and receipt of nonbinding recommendations.

Authority assessments are billed annually and are paid 10 times during the year. Payment of the charges represents a general obligation (GO) pledge of the served communities; these communities are bound to the authority through legislation, not contract. With the exception of Boston Water and Sewer Commission, communities can offset increased water and sewer costs through the assessment of property taxes in excess of Proposition 2-1/2-imposed limits. All communities have retail water or sewer charges. Most communities' rate structures are designed to recover costs fully, although a few fund a portion of their water and sewer costs through property taxes.

If a community fails to pay the authority its charges, the authority, by legislative right, can intercept the community's state aid; however, it cannot intercept Boston Water and Sewer Commission's state aid. The authority must certify to the state treasurer the amount of unpaid charges; then, the treasurer is required, under law, to deduct the amount from money the commonwealth pays to the community. The authority has covenanted, in the general bond resolution, to use this enforcement mechanism in the event of nonpayment by a community. Since 1990, the authority has used this mechanism just six times, intercepting $1.3 million. However, no single year's intercept equaled more than 1% of revenues. Since fiscal 1993, the authority has collected 100% of its rate revenues without using the intercept. There have been no legal challenges to the intercept, and none are pending.

Legal Provisions

The proposed changes to the general resolution are as follows:

- The debt-service reserve requirement for senior bonds would be reduced to 50% of maximum annual debt service on an aggregate basis from the current level of 100% of average annual debt service on a series basis.
- The community obligation and revenue enhancement fund would be eliminated, abolishing the supplemental coverage ratio requirement. The community obligation and revenue enhancement fund coverage requirement is 0.1x DSC, and the total DSC requirement is 1.3x when combined with the primary coverage requirement.
- The investments permitted for the debt service funds and debt-service reserve funds will be expanded to include more permitted investments, including securities repurchase agreements. Investments in the debt-service reserve funds will no longer be limited to 15 years.
- The purpose of the renewal and replacement reserve fund will be defined more narrowly as a fund for emergency needs—the balance of which is determined by a consultant engineer. Any renewal and replacement reserve fund requirement in excess of $10 million may be covered by a line of credit,

such as a commercial paper (CP) program, rather than having to be funded with cash and investments.

The modification to the general resolution would free up roughly $155 million of reserves. Management expects that amounts released from the debt service reserve fund, due to the reduction in the debt service reserve requirement, would be used to redeem bonds.

Finances

Additional reserves include:

- An operating reserve fund that is funded semiannually and is equal to one-sixth of operating expenses, and that has a current $36.1 million balance;
- An insurance fund that is funded at a prescribed level, as determined by a qualified insurance consultant, and that has a current $19.0 million balance; and
- A renewal and replacement fund that is also funded at a level based on the recommendation of a consulting engineer, and that has a $35.0 million balance.

Two other reserves that are funded from year-end surpluses and used to smooth rates include a rate stabilization reserve with a $43.7 million balance and a bond redemption fund with a $35.4 million balance, which management can only use to retire or prepay debt outstanding.

Rates/Charges

Massachusetts Water Resources Authority's rates have increased by an average of about 4.4% annually from fiscal 2004 through fiscal 2008. For fiscal 2008, the authority's rates and charges increased by a combined 4.5%. However, continued debt service costs and the authority's capital improvement program (CIP) financing needs have led to a projection of higher rate increases—5.8%—for the next five fiscal years (assuming $17.25 million of commonwealth debt service assistance, about equal to the level in the fiscal 2008 budget). However, the commonwealth debt service has been volatile in recent years.

The rather large average annual residential water and sewer bill remains a concern. The monthly rate for 7,500 gallons of combined water/sewer service is an estimated $85 in fiscal 2008, and is forecast to be $112 in fiscal 2013. However, households in the authority's service area tend to use closer to 5,000 gallons per month, which results in a $58 monthly bill. In addition, the service area's high income levels somewhat offset these concerns.

Capital Improvement Program/Debt

Massachusetts Water Resources Authority 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 authority's remaining capital plans focus consists primarily of combined-sewer-overflow (CSO) projects. The authority had $203 million of fiscal 2008 capital spending in its budget, 77% of which is concentrated in five projects. The proposed fiscal 2009 CIP totals $1.22 billion for the six years from fiscal 2009 through 2014, which represents a significant reduction from the capital spending in the late 1990s. This reduction reflects the authority's shift to a more straightforward utility operation. Forecasting further out, the authority has recently completed a master plan for the repair and replacement of existing infrastructure and enhanced water system redundancies. The plan has identified $3.1 billion in system needs over the next 40 years.

The authority currently has about $3.1 billion of senior-secured general revenue bonds, $1.5 billion of subordinate bonds, $1.0 billion of state revolving fund debt, and $166 million of commercial paper (CP). The outstanding debt totals $5.7 billion—near the $6.1 billion statutory debt cap. However, the Massachusetts Legislature has adjusted the cap upward 14 times over the past 20 years. About 30% of debt will be retired over 10 years and 75% will be retired over 20 years.

Debt Derivative Profile: '2'

Standard & Poor's has assigned the authority a debt derivative profile (DDP) overall score of '2' on a scale of 1 to 4, with '1' representing the lowest risk and '4', the highest.

The overall score of '2' reflects our view that the authority's swap portfolio is a low credit risk, due to:

- The highly rated swap counterparties,
- The authority's strong credit rating (AA/Stable),
- A low degree of involuntary termination risk under the authority's swaps, due to a wide ratings trigger spread, and
- The strong economic viability of the swap portfolio over stressful economic cycles.

The authority's outstanding interest rate swaps are all floating- to fixed-rate agreements with a total notional value of $816 million.

Under the authority's floating- to fixed-rate swap agreements with Citigroup (AA-/Watch Neg) and Morgan Stanley Capital Services, which has a credit support guarantee from Morgan Stanley(AA-/Negative), the authority pays 3.99% to Citigroup and 4.03% to Morgan Stanley, and the counterparties pay the Bond Market Association (BMA) municipal swap index rate. Under the swap with Lehman Bros. Financial Products ('AAA'), the authority pays a fixed rate that ranges between 4.470% and 6.935% and receives the BMA municipal swap index rate; and in the forward-starting swap with Lehman Bros. Derivatives Products ('AAAt'), the authority pays 6.935% and receives the BMA municipal swap index rate starting in 2030. Goldman Sachs Group (AA-/Stable) guarantees the last floating- to fixed-rate swap, in which the authority pays 4.127% and receives 67.000% of LIBOR.

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 declines to 'BBB+'—which is seen as remote, due to its 'AA' strong credit profile. The swaps are perfectly hedged. The authority has not adopted a debt derivative policy. However, authority officials are aware of the risks associated with the agreements, and have had an active swap program to help diversify the debt portfolio for more than 20 years. Of the authority's debt outstanding, roughly 15% is true variable-rate debt or CP. 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.

Structured Rating

Standard & Poor's has assigned its 'AA-/A-1+' rating, and stable outlook, to Massachusetts Water Resources Authority's multi-modal subordinated general revenue refunding bonds, 2008 Series A, 2008 Series B, 2008 Series E, and 2008 Series F bonds, and has assigned its 'AA-/A-1' rating, and stable outlook, to 2008 Series C and D bonds.

The 'A-1+' rating on the 2008 Series A bonds is based on a standby bond purchase agreement (SBPA) provided by Dexia Credit Local (AA/Stable/A-1+). The 'A-1+' rating on the 2008 Series B bonds is based on an SBPA provided by Bank of America, N.A. (AA+/Stable/A-1+). The 'A-1' rating on the 2008 Series C and D bonds is based on an SBPA provided by Bayerische Landesbank (BLB) (A/Stable/A-1). The 'A-1+' rating on the 2008 Series E bonds is based on an SBPA provided JPMorgan Chase Bank, N.A., (AA/Stable/A-1+). The 'A-1+' rating on the 2008 Series F bonds is based on a SBPA provided by Bank of Nova Scotia (AA-/Stable/A-1+).

The SBPAs will provide coverage of principal and interest for unremarketed bonds for a maximum of 34 days' interest at 12% annually during the weekly mode. The SBPAs will terminate their commitment upon receipt of notice of conversion to the daily, commercial paper, and term modes. The anticipated termination date for the BLB and Dexia Credit Local SBPAs is May 28, 2011. The anticipated termination date for the JPMorgan Chase Bank SBPA is May 28, 2009. The anticipated termination date for the Bank of America and Bank of Nova Scotia SBPAs is May 28, 2011.

Each SBPA provider will terminate its commitment without notice to the bondholders upon the occurrence of several events, including, but not limited to, the lowering of the obligor's rating below 'BBB-'. The obligor is not a source of tenders upon an immediate termination of each SBPA.

The bonds are subject to mandatory tender upon:

- Conversion to another mode,
- Substitution of the liquidity facility, and
- The occurrence of an event of default as indicated in each liquidity facility.

Unless paid in full or remarketed, bank bonds purchased by BLB and Dexia Credit Local SBPAs shall be subject to mandatory redemption in equal, quarterly principal installments during a five year term. During the first 30 days after purchase, the bank rate will be the base rate. During the following 60 day period, the bank rate will be the base rate plus 1%, and thereafter, the bank rate will be the base rate plus 2%.

Unless paid in full or remarketed, bank bonds purchased by the JPMorgan Chase Bank and Bank of America SBPAs shall be subject to mandatory redemption in ten equal semiannual installments during a five-year term beginning 180 days after the purchase date. From the date of purchase until the purchase commitment for each SBPA has ended, the bank rate will be the base rate plus 1%, and thereafter, the bank rate will be the base rate plus 2%.

Unless paid in full or remarketed, bank bonds purchased by the Bank of Nova Scotia shall be subject to mandatory redemption in 12 equal quarterly installments during a three year term beginning 180 days after the purchase date. During the first 30 days after purchase, the bank rate will be the base rate. During the following 60-day period, the bank rate will be the base rate plus 1%. During the following 90-day period, the bank rate will be the base rate plus 2%, and thereafter, the bank rate will be the base rate plus 2.5%.

Ratings Detail (As Of 28-May-2008)		
Massachusetts Wtr Resources Auth gen rev bnds		
Massachusetts Wtr Resources Auth wtr & swr		
Long Term Rating	AA/Stable	Affirmed
Massachusetts Wtr Resources Auth		
Massachusetts Wtr Resources Auth gen rev (MBIA)		
Massachusetts Wtr Resources Auth multi modal subord gen rev		
Massachusetts Wtr Resources Auth multi modal subord gen rev		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Long Term Rating	AA/A-1+	Affirmed
Massachusetts Wtr Resources Auth gen rev		
Massachusetts Wtr Resources Auth gen rev (FSA)		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Massachusetts Wtr Resources Auth gen rev bnds		
Massachusetts Wtr Resources Auth gen rev (AMBAC)		
Massachusetts Wtr Resources Auth gen rev (FGIC)		
Massachusetts Wtr Resources Auth gen rev (MBIA)		
Massachusetts Wtr Resources Auth gen rev (MBIA)		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Massachusetts Wtr Resources Auth multi modal sub gen rev rfdg bnds		
Massachusetts Wtr Resources Auth multi modal subord gen rev		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Long Term Rating	AA+/A-1+	Affirmed
Massachusetts Wtr Resources Auth sub gen rev bnds		
Massachusetts Wtr Resources Auth subord gen rev (MBIA)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed

Many issues are enhanced by bond insurance.