



MWRA Advisory Board Summary
of the
MWRA Board of Directors Meeting
Wednesday, June 8, 2011

Prior to the Board of Directors meeting, a budget hearing on the Draft FY12 Capital Improvement Plan and the Current Expense Budget was held with Advisory Board staff and MWRA staff. In attendance at the budget hearing was: MWRA Board Members Michael Gove, Joel Barrera, John Carroll, Andrew Pappastergion, Joseph Foti, Vincent Mannering, Kevin Cotter, James Hunt III, Jack Walsh and Marie Turner, in addition to staff from the MWRA and MWRA Advisory Board. The meeting opened with introductory remarks by Katherine Dunphy, Chair of the MWRA Advisory Board, followed by a PowerPoint presentation by Advisory Board staff summarizing the Advisory Board's review process and key comments and recommendations. Following the Advisory Board's presentation, staff of the Authority gave a power point presentation on the updated current and capital budgets. The morning committee meetings were consolidated into the full Board meeting in the afternoon.

A meeting of the Board of Directors of the Massachusetts Water Resources Authority was held on June 8, 2011 at the Charlestown Navy Yard. **Present:** Chair Rick Sullivan, Michael Gove, and Joel Barrera, Gubernatorial Appointees: John Carroll, Andrew Pappastergion and Joseph Foti, Advisory Board Representatives; Vincent Mannering, Kevin Cotter and James Hunt III, City of Boston Representatives; Jack Walsh, City of Quincy Representative & Marie Turner, Town of Winthrop Representative.

Report of the Chair

No Report.

Report of the Executive Director

Executive Director Fred Laskey welcomed back Board Member Marie Turner. She thanked everyone for their calls and support during the time she was absent.

Mr. Laskey also mentioned that there would be a dedication of the CSO facility in South Boston which will take place on June 23rd. Governor Patrick along with Mayor Menino will be in attendance. There will be a tour of the facility along with a brunch hosted by Save the Harbor Save

the Bay on the beach following the dedication. Mr. Laskey extended the invitation to the Board meeting attendees to celebrate this success.

Mr. Laskey noted that the staffing study which was requested by the Advisory Board is moving into high gear. The study is being conducted in order to show the current staffing levels at the MWRA as well as comparing it to other water utilities. Also, the Request for Proposal (RFP) for the Management Information System (MIS) study should be presented before the Board in July for approval.

APPROVALS

Reduction in Insurance Reserve Requirement

The Board reviewed the Insurance Consultant Triennial Report, as required by the General Revenue Bond Resolution, and voted to authorize a reduction to the funding level of the Insurance Reserve Fund from \$19 million to \$14 million, funding the reserve at the mid-range point of the consultant's recommended fund balance range of between \$12 million and \$16 million.

The MWRA's General Bond Resolution ("Resolution") requires that various reserve accounts be maintained as security for the bondholders. Section 515 of the Resolution requires that MWRA maintain an Insurance Reserve Fund ("Reserve") to pay for the cost of replacement or repairs to the water and sewer systems as a result of fire or other causes customarily insured against, which are not covered by an existing policy. The Resolution requires that every three years the balance in the Reserve be reviewed by either the consulting engineer or an insurance consultant, with the most recent review being conducted in February 2011.

MWRA's insurance consultant, Kevin F. Donoghue & Associates, reviewed MWRA's current and historical insurance programs, its claims/loss history and any unique exposures that may exist. As a result of the analysis, Donoghue finds that funding the Reserve within a range of \$12 million to \$16 million is sufficient. Staff plans to fund the Reserve in the middle range of \$14 million, which represents a \$5 million reduction to the Reserve account. The next insurance consultant report will be due in 2014.

MWRA FY12 Insurance Program Renewal

The Board voted to authorize the Executive Director, on behalf of the Authority, to award the lowest eligible and responsive bidders, insurance policies, bonds and contracts for services for MWRA's FY12 Insurance Program, for the period beginning July 1, 2011, through June 30, 2012, for the premiums and fees described below for a total program not to exceed \$1,703,776.

1. Workers' Compensation Excess Policy with N.Y. Marine, submitted by broker Willis of MA, with a \$25 million limit and a \$500,000 self-insured retention, for a premium of \$99,424;

2. Property Policy (including Boiler & Machinery) with FM Global Insurance Co, with various limits of coverage with a \$2.5 million self-insured retention, for a premium of \$725,133;
3. General Liability Policy (including Automobile Liability, Protection and Indemnity, Wharfingers, and Employment Practice Liability) with C.V. Starr Insurance Co. and Civic Risk, submitted by broker William Gallagher Associates, with a combined \$35 million limit and a \$2.5 million self-insured retention, for a combined premium of \$524,232;
4. Excess/Umbrella Liability Policies with ACE/Westchester/AXIS and Great American Insurance companies, submitted by broker William Gallagher Associates, providing a combined total of \$65 million of coverage excess of primary coverage for a total combined premium of \$202,740;
5. Public Official's Liability Policy with State National Insurance Co., submitted by broker Wells Fargo, with a \$5 million limit with a \$1 million deductible, for a premium of \$47,173;
6. Fiduciary Liability Policy with Chubb Insurance Co., submitted by broker Wells Fargo, with a \$5 million limit with a \$1 million deductible, for a premium of \$7,125;
7. Public Official's/Crime Bond with The Hartford Insurance Co., submitted by broker William Gallagher Associates, with a limit of \$1 million with a \$25,000 deductible for a premium (including commission) of \$5,999;
8. Treasurer's bond with a \$1 million limit with a vendor to be determined in an amount not to exceed \$3,000; and
9. Broker contracts with William Gallagher Associates for an amount of \$70,000; Willis of Massachusetts for an amount of \$10,250; and Wells Fargo Insurance Services for an amount of \$8,700. MWRA's insurance program has been renewed on annual basis for the past eight years due to the reluctance on the part of insurance companies to issue policies for more than a one-year term. The existing (FY11) insurance program was procured through a competitive bid process for all lines of coverage. For FY12, staff again conducted a full competitive bid process for all lines of coverage in an effort to obtain the most competitive pricing and coverage available.

Contract with Wastewater Advisory Committee

The Board voted to authorize the Executive Director to execute a contract with the Wastewater Advisory Committee for a one-year period beginning on July 1, 2011, with a total cost of \$58,500.00

The Wastewater Advisory Committee (WAC) was created in 1990 to offer independent recommendations on wastewater programs and policies. WAC's proposed FY12 contract is level funded from FY11, and the wages and reimbursable expense line items in FY12 are exactly the same as FY11. The wages line item in the proposed FY12 WAC contract is \$53,375; WAC's budget assumes the Executive Director is a part-time position, and will work an average of four days per week. WAC's reimbursable expenses are budgeted at \$5,125. This includes a portion of the Executive Director's health insurance, stationery, payroll service expenses, bank expenses, highway tolls and parking expenses for meeting attendance of WAC's Executive Director and

members. Both office space and support services for WAC are provided by the MWRA in the Charlestown Navy Yard.

Contract with Water Supply Citizens Advisory Committee

The Board voted to authorize the Executive Director to execute a contract with the Water Supply Citizens Advisory Committee (WSCAC) for a one-year period beginning July 1, 2011, with a total contract cost of \$96,430.00.

WSCAC has received direct funding from MWRA since MWRA's formation in 1984. The proposed FY12 WSCAC budget is level-funded from FY11. The WSCAC Executive Committee has recommended some reallocations within the budget, but balanced increases and decreases. Within the Expenses section of the budget, health care costs increased, but postage, office expenses and tax/payroll service expenses all decreased resulting in an unchanged budget. Within the salaries section of the budget, the WSCAC Executive Committee recommended reducing the amount allocated for Executive Consulting from \$6,000 to \$2,000. This item was designed to allow current WSCAC staff to use the expertise of former WSCAC staff for specific cases but this has declined in recent years.

Bond Defeasance of Future Debt Service

The Board voted to authorize the Executive Director or his designee, on behalf of the Authority, to enter into and execute all necessary agreements and other instruments to escrow for redemption up to \$33,100,000 of outstanding MWRA debt to maturity.

The proposed additional defeasance will provide benefit in FY15 and has moderate budgetary savings in FY12, FY13 and FY14 as interest on the defeased bonds due in those years will be paid by the escrow.

Establishing an escrow to defease debt requires that MWRA's bond counsel draft an agreement to this effect and an independent verification agent must certify that the funds in the escrow are sufficient to pay the remaining debt service. Bonds that are escrowed to maturity are not included in the MWRA's debt cap or debt service coverage calculations. Staff will continue to monitor market conditions and the maturities available to be defeased to ensure that the bonds selected provide MWRA with the highest available debt service savings.

CONTRACT AWARDS

Purchase of Firewalls, IPS, and Related Maintenance and Monitoring Services: Integralis, WRA No. 3224

The Board voted to approve the award of a purchase order contract for firewall and intrusion prevention system (IPS) software, hardware, maintenance and 365 day, around-the clock monitoring services to Integralis, Inc., and to authorize the Executive Director, on behalf of the Authority to execute and deliver said purchase order contract in an amount not to exceed

\$1,081,965.63 for a contract term of 48 months, with an initial Notice to Proceed of 36 months; and an option to extend an additional 12 months if recommended by staff, upon approval of the Executive Director.

The MWRA's Cyber Security Program employs a multi-layer strategy, called Defense-in-Depth, which is the Department of Homeland Security's recommended practice. A key component in the cyber security strategy is this contract, under which an external entity monitors MWRA's primary firewalls and intrusion prevention system (IPS) devices for cyber attacks and breaches.

In addition to monitoring services, under this new contract MWRA is also purchasing upgrades to all cyber security-related software components, firewalls, and intrusion prevention devices, since most of the equipment is six to seven years old and will no longer be supported by the manufacturers over the next 12 months. These upgrades and replacements will increase MWRA's security against cyber threats by searching for a greater number of attacks faster and more efficiently than the current system. MWRA staff will also continue to monitor the cyber security system and make any necessary recommendations for changes going forward.

Digester Sludge Overflow Piping and Plug Valve Replacement, Deer Island Treatment Plant: Walsh Construction Company, Contract 7055

The Board voted to approve the award of Contract 7055, Digester Sludge Overflow Piping and Plug Valve Replacement-Deer Island Treatment Plant, to the lowest responsible and eligible bidder, Walsh Construction Company, and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said contract in the bid amount of \$5,997,200, for a contract term of 730 calendar days from the Notice to Proceed.

As part of the wastewater treatment process, Deer Island collects thickened sludge and waste activated sludge from the Gravity Thickener and sludge thickening complex and distributes the sludge to three digester modules, each containing four anaerobic, egg-shaped, 3-million-gallon digesters that process the sludge. In addition, there are two 3-million-gallon sludge and gas storage tanks, which are utilized to store digested sludge and gas (methane). The digested sludge is then pumped to the Pelletizing Plant at the Fore River Staging Area; the gas is used in Deer Island's Thermal/Power Plant to provide fuel to the high pressure steam boilers.

The sludge piping distribution system consists of a network of thousands of feet of glass-lined piping varying in size from 8 inches to 20 inches, and glass lined plug valves for isolation. Glass lining is the industry standard for sludge piping to reduce friction (for ease of flow), which minimizes viscous sludge caking/clogging within the pipe. Several sections of the glass-lined piping system have shown significant deterioration.

Staff believes that the main reason for the deterioration is that residual sludge, normally present in the pipes when sludge is not actively being pumped, emits hydrogen sulfide as a normal by-product of decomposition. Over the years, this hydrogen sulfide has attacked the carbon steel piping through pinholes in the pipe's glass lining.

In addition to hydrogen sulfide, struvite build-up has also caused problems in the sludge piping distribution system. Struvite is a crystallized compound comprised of phosphate, ammonia, and magnesium, which can form a matrix with digested sludge solids and coat pipelines or other surfaces. Struvite build-up can impact the process equipment and piping and can result in the loss of digester and sludge thickening capacity.

Sole-Source Extended Warranty, Maintenance and Service Agreement, Process Instrumentation and Control System, Deer Island Treatment Plant: ABB Automation, Inc.

The Board voted to approve the renewal of a sole-source extended warranty, service and maintenance contract for the Process Instrumentation and Control System at the Deer Island Treatment Plant, with ABB Automation, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said contract in the amount of \$1,114,224, for a contract term of three years, from July 1, 2011 through June 30, 2014.

The Deer Island Treatment Plant is controlled by a \$24 million process instrumentation and control system (PICS), which was originally procured competitively and installed under the Boston Harbor Project between 1995 and 2000. Staff estimates the current replacement value to be approximately \$40 million. That original contract was awarded to Bailey Controls Company, now known as ABB Automation, Inc. PICS provides a means for Deer Island staff to execute overall plant-wide process control as well as centralized monitoring, enabling the operation of the facility with minimum staffing. Process data from PICS is also available throughout MWRA via the MIS network and is essential for compliance reporting, plant optimization efforts, budgeting, and “event” evaluations.

CORRESPONDENCE

May 4, 2011 Letter from Town of Stoneham regarding Mitigation

Mr. Laskey discussed a letter that was received from the Town of Stoneham outlining their request for mitigation. The Authority purchased 5 acres of land which was located behind the former New England Memorial Hospital in the Stoneham in order to build Covered Storage. The town requested compensation for the lost tax dollars (\$190,000) that occurred due to the purchase of these 5 acres of land scheduled to be developed with 95 housing units. The Town is seeking \$90,000 annually for 30 years.

Board member, Joel Barrera noted that the mitigation memo was very helpful. Mr. Barrera believes with the exception of Quincy and Winthrop, the Authority should not enter into a pilot payment agreement for the long term. Board Member, James Hunt also agreed. Mr. Hunt stated that the discussion for pilot payments is more than 50% non-taxable for Boston. The MWRA owns a majority of it and it is the benefit of Bostonians. A long term pilot payment is out of the question but a project that will have to be looked at from a mitigation perspective.

There was a strong sense from the Board that pilot payments would not be supported. The Board requested that Mr. Laskey reengage the town and determine the best option available in order to work with Stoneham in order to minimize the construction impacts.

OTHER BUSINESS

Executive Director's Performance Review and Contract Extension

The Board voted to rate the performance of Frederick A. Laskey, Executive Director, for Fiscal Year 2011 as excellent, and to extend the term of the Executive Director's employment agreement and appointment as Executive Director by one year to June 3, 2014, subject to his consent.

Extension of Contract for Chief Operating Officer

The Board voted to extend the term of the employment agreement with Michael J. Hornbrook, Chief Operating Officer, by one year to May 31, 2014, subject to his consent.

INFORMATION

Delegated Authority Report-May 2011

No Discussion.

Mitigation Overview

MWRA has a history of providing mitigation, in the form of payments or environmental or operational considerations, to communities in which it has large construction projects or operational facilities. In FY2011, the total provided to communities for mitigation, either directly or indirectly, is \$10.7 million.

The Board first adopted a "Statement of Mitigation Principles" in 1988 to guide MWRA in its relationships with communities affected by new construction projects. Mitigation types divided into four categories:

- Amelioration of direct construction impacts;
- Meeting environmental/regulatory requirements;
- Providing community compensation for impacts;
- Establishing operating arrangements and constraints.

This policy has been refined over the years and was reviewed by the Board in 1995 and 1998 without any substantive changes.

Chief Operating Officer, Michael Hornbrook discussed the Boston Harbor Project at Deer Island and the Fore River Shipyard with regard to Construction Mitigation. When construction began

on the project, it mainly impacted two communities, Quincy and Winthrop. In 1988, the MWRA developed mitigation agreements with communities due to the direct construction impacts. In addition, the agreements also contained environmental and safety mitigation for noise, odor control, traffic along with fire and police services. Moreover, Braintree and Charlestown were also included in these agreements due to shorter-term construction impacts. Mr. Hornbrook explained the money covered the purchase of land and construction impacts to communities so there could be comparable land purchased somewhere else. He stated that the MWRA had 57% of its costs associated with direct construction projects and it is required by statute that the payments for these impacts be made.

In the mid-1990s, design began for the \$1.8 billion Integrated Water Supply Improvement Program, which included: MetroWest Water Supply Tunnel, the Norumbega Covered Storage Facility and the John J. Carroll Water Treatment Plant. These large construction projects would impact four communities: Framingham, Marlborough, Southborough and Weston.

More than half of the compensation paid to Framingham was for fire and rescue services during the construction of the Metro West Tunnel. In Marlborough, the Memorandum of Understanding (MOU) acknowledged construction of the MetroWest Tunnel and the John J. Carroll Treatment Plant. In addition, Southborough was impacted by the tunnel and treatment plant as well. Southborough had actually long been receiving a portion of its water free of charge but that was later increased under the 1997 MOU. In Weston, the agreement deals partly with the tunnel and with the Norumbega Covered Storage Facility. There was \$3 million paid to the Town of Weston for the purchase of open space to replace the land taken for the water tank.

Options for Fiscal Year Close-out

Director of Administration and Finance, Rachel Madden reported that despite closing out FY11 with a favorable surplus, the Authority continues to face three major liabilities: outstanding debt of \$5.9 billion with debt service payments expected to nearly double over the next ten years, an unfunded pension liability of \$42.6 million, and an increased Other Post Employment Benefits (OPEB) liability of over \$60 million. In light of these three daunting liabilities, MWRA has continued its aggressive efforts to control operational expenses, maintain a conservative fiscal management approach and adhere to a disciplined multi-year rates strategy. This combined approach has resulted in a surplus of funds for FY11, as it has in the past. After the defeasance of \$28.5 million, which will provide targeted rate relief in future years, staff projects a year-end surplus of approximately \$5 million primarily due to the deferral of the State Revolving Fund (SRF) borrowing to the next fiscal year.

There was a discussion among Board members as to what to do with the \$5 million surplus. Mr. Laskey said in his view, it should go to the pension. However, he realizes there are very daunting rate increases in the near future which can be problematic. Mr. Laskey believes there are two options available: put the surplus toward the pension or toward the debt in order to offset rate increases.

Several Board members believed the surplus should go toward the pension or OPEB. Ms. Madden believed the general consensus from the Board was to not put the surplus into OPEB.

Board member, Andrew Pappastergion said the surplus should be used to defease the debt because it makes the most logical sense. Mr. Pappastergion asked why the additional money should go into a retirement fund, noting that if it went to the retirement fund that the perception could be that the Authority's employees used the surplus to fund their own benefits. Board Member, James Hunt asked for the differences in perspective as it relates to rates for retirement versus debt. Ms. Madden explained that both the defeasance and the deposit to Rate Stabilization would provide the most direct way to target budgetary savings, since the available funds could, with some limitations, be directed to specific fiscal years. Deposits to the Retirement System offer the flexibility to achieve targeted budgetary relief since the savings would be spread over the remaining amortization of the unfunded liability. However, in general, funds transferred to the Retirement System would result in greater interest rate returns than a reserve deposit or a defeasance. Ultimately, option payments to the Retirement System could reduce the amortization schedule of the unfunded liability with the approval of the Retirement Board.

The rating agencies would view each option as favorable given that additions to reserves would increase MWRA's liquidity and both a deposit to the Retirement System and defeasance would reduce liabilities. As such, the choice of which option to employ really depends on the needs of MWRA at the time the funds are available.

May 2011 Power Outage at Deer Island

Mr. Hornbrook reported that at approximately 1:23 P.M. on Tuesday, May 24, 2011, Deer Island experienced a total power outage. Although power was initially restored within four minutes (1:27 P.M.), the plant experienced a second (partial) power outage at 2:46 P.M. At the time of the initial outage, weather conditions were clear and DITP was pumping approximately 370 mgd, which is approximately 25% of maximum plant capacity.

The cause of the initial outage appears to be traced back to a failure of the communications system within NStar's Station 132 on Deer Island this has yet to be confirmed by NStar. The cause of the second outage was due to a problem with under voltage on one of the MWRA's CTGs. Power was eventually restored and there were no CSO or SSO activations during these events. Director of DITP, Daniel O'Brien and his team were applauded for taking care of this quickly.

West Roxbury Tunnel Rehabilitation Update

Mr. Hornbrook reported that the FY11 CIP contains \$75 million for rehabilitation of the entire 12,400-foot West Roxbury Tunnel. A recent inspection had found that 7,300 feet of the tunnel is in good condition and does not warrant any rehabilitation. Thus, the Proposed FY12 CIP reviewed at the budget hearing earlier today proposes an elimination of funding for the repair of 7,300 feet of tunnel, which brings the recommended funding level down to \$38 million.

The inspection also revealed that an additional 4,800 feet of tunnel has only had slight to moderate deterioration in the lining. The remaining 300 feet has substantial gaps in concrete on the upper half of the tunnel liner. However, this is a deep rock tunnel and the gaps in the liner

expose bed rock. Staff believes that it is very unlikely that the rock will collapse, particularly since MWRA's successful efforts to reduce the hydrogen sulfide upstream makes further corrosion unlikely. Further, the lining is unreinforced and provides little, if any, structural support.

There was a discussion amongst Board members as to whether any rehabilitation is necessary at this time. Mr. Vetere explained that the tunnel was built in 1964 and the first time an inspection was done was in 1999. Staff did not find anything devastating during that study. Staff has decided to leave funds in the budget in order to take care of any necessary work that may need to be completed in the future. The issue is whether to do work on the entire length (N. Haven Street to the Construction shaft). There is a possibility of doing work on the first 800 feet but that needs to be looked at over a five year window. It's deep rock tunnel so it is very hard for that to fail.

Board member, John Carroll stated that there was a thorough investigation done so ratepayers should not be impacted. Mr. Mannering stated that he did not like the way the staff summary was worded, he wanted the staff to provide results that assured that the current tunnel was secure. The consequences of the tunnel collapsing are catastrophic. Mr. Carroll re-read the exact text from the staff summary and believed it verified that there wasn't any need to do the additional work. Mr. Mannering disagreed with the approach of not doing any work on the tunnel. He stated that while he agreed with Mr. Vetere's approach to conduct an inspection, he also believes that some work needs to be done, not just monitoring it. Project Manager, Kathleen M. Cullen explained that the tricky part is even if you are going to repair the first 300 feet or even if you go out a mile, the cost is significant. Mr. Vetere stated that if the Board feels comfortable with staff working on it, then it is something that can be done. If staff went in 300 feet, then it would be one construction season instead of four. This would be less money and something staff would consider.

2010 Annual Water Quality Report (Consumer Confidence Report)

The EPA's Consumer Confidence Report (CCR) program has been an important national initiative that has promoted better information and education for consumers about their publicly supplied drinking water. The CCR has been an integral part of MWRA's drinking water communication program since 1999 and staff strives to produce an easy-to-read, visually appealing document. MWRA has again produced three separate versions of the CCR for 2010:

one for each of the fully-supplied communities in Metropolitan Boston and Metro West, one for each of the partially-supplied communities in metropolitan Boston and Metro West, one for each of the partially-supplied communities. A Spanish translation is also produced. All communities in metropolitan Boston and MetroWest that use MWRA's CCR again took the opportunity to provide a community-specific letter to report additional local information. This year per DEP's request, each community was asked to include information on local contact names, telephone numbers, and information on local meetings in its letter.

Mr. Estes-Smargiassi reported that the 2010 report emphasizes MWRA's excellent source water, the test results from the reservoir to the tap, and indicates that system-wide, MWRA again met

the Lead and Copper Rule. The report notifies consumers that certain communities had higher lead levels and the additional information is available in the community-specific letter. This report is being mailed to every household in the MWRA's service area between June 6 and June 27, 2011 to meet EPA's Consumer Confidence Report Rule deadline of July 1.

This summary does not include every item discussed by the Board, nor the full extent of the discussions. Please contact Maggie Atanasov at the Advisory Board office with questions, comments or requests for more information.

