

MWRA ADVISORY BOARD
Summary of the
MWRA BOARD OF DIRECTORS' MEETING

November 17, 1999

A meeting of the Board of Directors of the Massachusetts Water Resources Authority was held on November 17, 1999 at the Authority Headquarters in Charlestown. **Present:** John Carroll, Norman Jacques and Andrew Pappastergion, Advisory Board Representatives; Vincent Mannering, Robert Spinney and Andrea d'Amato, City of Boston Representatives; Lucile Hicks and Donald Mitchell, Gubernatorial Representatives; Joseph MacRitchie, City of Quincy Representative; Marie Turner, Town of Winthrop Representative. **Absent:** Chairman Robert Durand, Gubernatorial Representative.

AGENDA

Report of the Chair

No Report.

Report of the Executive Director

Douglas B. MacDonald, Executive Director of the MWRA, reviewed several items from the Board of Directors Report on Key Indicators of MWRA Performance.

Mr. MacRitchie asked, "What is our turnover rate?" Staff replied that the turnover rate is 200 people per year. Mr. MacRitchie felt that the turnover rate was high.

APPROVALS

Alternative Funding for Local Pipeline Assistance Program

In order to assure that funding is available beginning in 2000 if the Commonwealth of Massachusetts fails to authorize a community pipeline assistance program modeled after the State Revolving Loan program, for which MWRA funding has been included in the FY00-02 Capital Improvement Program (CIP), the Board voted to approve (with Messrs. Carroll and Pappastergion opposed) the establishment of an MWRA program to provide interest free loans to rehabilitate community water pipelines with funding to be included in the FY01 Current Expense Budget (CEB). Under either funding approach, the program should make \$25 million available annually to MWRA water communities for pipeline relining and replacement in proportion to each community's share of total unlined pipe miles. MWRA's determination of the proportionate share of unlined pipes in January 2000 will be the basis for funding allocations through FY09; to be reviewed in five years.

Barbara Gottschalk, MWRA Director of Finance, stated that this program is an effort to pull together the Local Pipeline Improvement Program and the Board's choice of Ozonation/Chloramination Treatment decision for the Walnut Hill Water Treatment Plant. The Board's treatment decision incorporated Governor Cellucci's support for a program of ten-year interest-free loans to reline or replace unlined water pipes. The

alternative funding is planned should the MWRA/Commonwealth proposal not be approved by the legislature. Due to the pending treatment litigation, a pipeline plan must be in place. The alternative funding approach would be an MWRA administered program, funded through a Tax Exempt Commercial Paper (TECP) Program. The MWRA would fund the interest while communities repay the principal. Additionally, funding will be distributed to communities proportional to each communities unlined pipe with the caveat that partially served communities receive only partial funding.

Mr. Mannering requested that the current percentages of unlined pipe be used for the first ten years as an incentive for communities to do repairs. He stated that if the application were to change annually, aggressive communities who have made repairs would be punished, as their portions would decrease. A ten-year allocation would allow communities to plan for future projects, as they would know in advance what their allocation was. Mr. Pappastergion disagreed with the ten-year fixed amount and suggested three to five years, stating that percentage of unlined pipes should change significantly if the program is working. The intention of this program was to fix pipes to avoid filtration. A fixed ten-year amount is counter to the original intention of this program. Marie Turner suggested a review after five years.

Mr. Pappastergion asked, “What happens if a community doesn’t use their allocation in a particular year?” Ms. Gottschalk replied that allocations not used by June could be redistributed to other communities. The Local Pipeline Task Force will need to work out the specifics.

Mr. Favaloro stated, “Absent the desire of the Board to revisit the filtration decision, there really is no option. The MWRA needs to have a pipeline program in place. Clearly state funding would be preferred.”

Mr. Jacques remarked that the Board opted to vote against filtration because a pipeline improvement program was part of the package. Mark Smith of EOEAA stated that Administration and Finance still supports a state-subsidized program. The pipeline initiative is a victim of the legislative budget stalemate.

Second Amendment to the Memorandum of Agreement between MWRA and the Town of Weston

The Board voted to authorize the Executive Director, on behalf of the Authority, to execute a Second Amendment to the Memorandum of Agreement (MOA) between the MWRA and the Town of Weston. This Agreement describes the new access road for construction of the Loring Road Storage Tanks, the relocation of Shafts NE and NW from a location in the vicinity of Oak Street to a location on the northeastern corner of the Norumbega Covered Storage Facility site, landscaping at the Loring Road Storage Tanks, Shaft W, and Norumbega sites and implementation of a comprehensive drainage plan for Norumbega, as set forth in DEP’s Final Variance Order of Conditions for that facility.

At a meeting held on January 22, 1998, the Weston Working Group unanimously approved the new location for Shafts NE and NW. On June 9, 1998, Secretary Durand issued a Certificate on the April 1998 Notice of Project Change, which determined that this change did not require additional environmental review.

The second amendment to the MOA recognizes changes to the plans that include a new access route for construction of the Loring Road Tanks; the relocation of Shaft N; the conditions of the DEP Variance to the Wetlands Protection Act and a commitment to consult the Working Group on the final landscaping plans for the Loring Road and Norumbega Tanks. There are no new obligations. The relocation of Shaft N and the Loring Road construction access have resulted in a \$3 million savings to the MWRA.

November PCR Amendments – FY2000

The Board voted to approve amendments to the Position Control Register, including:

1. Reclassification of positions in the Sewerage Division to support changing data management and reporting requirements.

2. Other staff adjustments to reflect changing job responsibilities.

Mr. Pappastergion requested more information on the Assistant Director – Transport Department position. Charlie Lombardi, Director of Transport, stated that over the next several years Transport will be going through a reorganization. The Assistant Director will deal with day to day activities, including the control of overtime, as well as some other activities that are currently the Director of Transport’s responsibility.

Appointment of Contract Employee, Support Services Division

The Board voted to approve the employment contract of Alfred T. Pace, Assistant Contract Manager, Support Services Division, for one year commencing January 31, 2000, at an hourly rate of \$32.00 and for an amount not to exceed \$30,720.

Mr. Pace is currently employed by MWRA as an Assistant Contract Manager in the Procurement Department, but will retire from his full-time position on January 28, 2000. It is expected his services will be required throughout the current Purchasing Card Program, which expires in June 2001, and through the move-in stages of the Chelsea facility. The hourly rate of compensation is comparable to the hourly rate earned as an MWRA employee performing these duties.

Appointment of Program Manager – Instrumentation and Controls, Deer Island

The Board voted to approve the Executive Director’s recommendation to appoint Bradley Woodland to the position of Program Manager – Instrumentation and Controls, Deer Island Treatment Plant, at an annual salary of \$67,912 on the date to be determined by the Executive Director.

Mr. MacRitchie noted that interviews for this position were conducted in March and asked why it took six months to fill this position. Mr. Walker stated that the Authority has experienced considerable difficulty recruiting candidates for these types of positions because of the salary range.

Authorization for Wachusett Aqueduct Lining Rehabilitation

The Board voted to approve the concept to repair the Wachusett Aqueduct with a three-inch thick shotcrete lining, restoring its function as a reliable water conduit from the Wachusett Reservoir to the Walnut Hill area. The repair is needed in time for the planned shutdown of the Cosgrove Tunnel in the winter of 2002-2003 to connect the Cosgrove to the Walnut Hill Water Treatment Plant.

A shotcrete lining is constructed by anchoring steel fabric reinforcement to the inside surfaces of the aqueduct and spraying on three inches of concrete in two layers. First, a 2 ½-inch base of shotcrete would be applied followed by ½-inch finish course. The estimated cost to shotcrete the seven miles of surface conduit is \$11.6 million. Shotcreting is the recommended alternative since it addresses the existing deterioration for a relatively low cost.

CONTRACT AWARDS

Commercial Point, Fox Point and Somerville Marginal CSO Facilities Upgrade: R. Zoppo Construction, Inc., Contract 6496

The Board voted to approve the award of Contract No. 6496, Commercial Point, Fox Point and Somerville Marginal CSO Facilities Upgrade, to the lowest responsive bidder, R. Zoppo Corporation, and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said contract in the bid amount of \$7,176,000 for a term of 455 calendar days from the Notice to Proceed.

The purpose of these upgrades is to enhance disinfection performance and provide dechlorination, as well as to address safety and reliability issues. The treatment upgrades have been designed to ensure permit compliance and to optimize the use of chemicals for disinfection and dechlorination.

Monitoring & Control Communications Network: EMA Services, Inc., Contract 6654

The Board voted to approve the recommendation of the Consultant Selection Panel to select EMA Services, Inc. to provide study, design and engineering services during construction to the Authority for the Monitoring and Control Communications Network project, and to authorize the Executive Director, on behalf of the Authority, to execute a contract with EMA Services, Inc. in an amount not to exceed \$1,718,232 for a term of 52 months commencing December 1999.

This project, together with the existing network, will provide communications for all Waterworks facilities. Similarly, the Sewerage Division will be upgrading and constructing new facilities. These new or rehabilitated facilities must be added to the existing communications network in order to share operational data and to facilitate remote monitoring and control of these facilities.

Rehabilitation of Water Pumping Stations, Interim Instrumentation and Control: Ewing Electrical, Contract 6304

The Board voted to approve the award of Contract No. 6304, Rehabilitation of Water Pumping Stations, Interim Instrumentation and Control, to the lowest responsive bidder, Ewing Electrical Co., Inc., and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said Contract in the bid amount of \$495,000, for a term of 294 calendar days from the Notice to Proceed.

This project involves the rehabilitation of five pumping stations, each over 40 years in age, and overdue for attention to safety, reliability and efficiency concerns. Some equipment at each pumping station is inoperable. Also system demand patterns have shifted during the life of the facilities, requiring adjustments to pumping capacity at particular stations. In addition, station improvements have not kept pace with changes in building and safety codes.

CONTRACT AMENDMENTS/CHANGE ORDERS

Rehabilitation of Commonwealth Avenue Pumping Station: Methuen Construction Co., Contract 6132, Change Order 14

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 14 to increase the contract price on Contract No. 6132 with Methuen Construction Co., Inc., Rehabilitation of Commonwealth Avenue Pumping Station, in the amount of \$77,500, with no extension in time for contract completion. The original contract price was \$5,593,941.00, with cumulative change orders totaling \$705,850.64, for an adjusted contract price of \$6,299,791.64. And, further, to authorize the Executive Director to execute additional change orders as may be needed to Contract No. 6132 in amounts not to exceed the aggregate of \$250,000 and 180 days.

The Commonwealth Avenue Pumping Station provides 85% of the water service to the City of Newton and is a 53 year-old facility. The existing pumps were undersized and at the end of their useful lives. This contract has rehabilitated the existing pumping station and constructed a new building to contain additional pumps to upgrade the capacity and reliability of the pumping station. Change Order 14 authorizes replacement of approximately 117 linear feet of 36" cast iron suction line pipe with 36" ductile iron pipe.

Quabbin Reservoir Disinfection Facilities: CH2M Hill, Contract 6043, Amendment 4

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Amendment No. 4 to increase the contract price on Contract No. 6043 with CH2M Hill, Quabbin Reservoir Disinfection

Facilities, in an amount not to exceed \$741,000.00, with no change in the contract expiration date. The original contract amount was \$2,259,279.91, with cumulative change orders totaling \$1,600,205.59, for a total contract price of \$3,859,485.50.

This amendment deals with the ramifications of the decision to abandon the plan to construct a residual disinfection facility at Ludlow due to intense citizen opposition (\$196,000). The amendment also adds more extensive effort for Engineering Services During Construction, Facilities Startup, and treatment process optimization for the ongoing construction of the new primary disinfection facility at the Quabbin Reservoir, now approximately 50% complete (\$545,000).

MWRA will recover the entire cost of the Professional Services Contract and associated amendments from the three Chicopee Valley Aqueduct (CVA) communities (City of Chicopee, Town of Wilbraham and South Hadley Fire District No. 1). The costs will be recovered via the separate CVA rate approved by the Board of Directors on May 21, 1997.

Norumbega Covered Storage Design Build Owner's Representative: Malcolm Pirnie, Inc., Contract 6057, Amendment 2

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Amendment No. 2 to increase the contract price on Contract No. 6057 with Malcolm Pirnie, Inc., Norumbega Covered Storage Design Build Owner's Representative, in an amount not to exceed \$345,400, with no change in completion date. The original contract price was \$3,141,540, with Amendments totaling \$406,174, for an adjusted contract total of \$3,547,714.

The Owner's Representative will provide program and contract management support to MWRA staff and onsite MWRA field representation until the project is completed in 2004. This Amendment will add the following services to the scope of the existing contract: Increased level of effort for project coordination, monthly reporting, and sub-consultant management; Review of alternative structural design approaches, review of structural issues on other MWRA storage tank projects, and development of custom structural design/build specifications; Review of wetlands permitting submittals to address issues raised by the Weston Conservation Commission; Additional effort to develop testing requirements, procedures and standards; Development of specifications to ensure adequate circulation of water within the tank to prevent water quality degradation; Increased duration of monitoring stream flows and ground water on the project site to establish pre-construction conditions; Additional level of effort to prepare and produce interim draft submittals and final documents.

Walnut Hill Water Treatment Plant Design and ESDC: Camp Dresser & McKee, Inc., Contract 5017, Amendment 8

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Amendment No. 8 to increase the contract price on Contract No. 5017 with Camp Dresser & McKee, Inc. (CDM), Walnut Hill Water Treatment Plant Design and Engineering Services During Construction, in the amount of \$3,774,337, with no change in the contract expiration date. The original contract amount was \$23,459,620, with amendments totaling \$14,238,569, for an adjusted contract total of \$37,698,189.

Amendment 8 authorizes: 1) New design work for the Wachusett Aqueduct and MetroWest pump evaluation (\$414,306); 2) Additional design related to the water transmission system (\$440,034); 3) Additional design effort resulting from the detailed design review process (\$1,659,251); 4) Design of Operability Improvements to increase chemical feed control for the treatment processes and to enhance safety at Shaft C (\$317,500); 5) Additional work resulting from the longer design period (\$361,428); 6) Additional design effort to improve phasing from Ozonation to Filtration and to implement improvements to the ozonation design identified during the filtration design (\$386,263); 7) Additional Task 8 effort on

disinfection, the design of baffles in the storage tank, and operations support at the Cosgrove Disinfection Facility (\$195,555).

Technical Assistance Consulting Services – Hazardous Materials Assessment: EnviroSense, Inc., Contract 548TA, Amendment 1; Green Environmental, Inc., Contract 549TA, Amendment 1

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Amendment No. 1 to increase the contract price on Contract No. 548TA with EnviroSense, Inc., Technical Assistance Consulting Services – Hazardous Materials Assessment, in the amount of \$60,000; and to authorize the Executive Director, on behalf of the Authority, to approve Amendment No. 1 to increase the contract price on Contract No. 549TA with Green Environmental, Inc., Technical Assistance Consulting Services – Hazardous Materials Assessment, in the amount of \$70,000.

Environmental compliance audits have been conducted at 68 MWRA facilities, resulting in corrective action plans that are being implemented by MWRA staff. The action plans must be completed by June 30, 2000 under the Clean State Initiative. EnviroSense, Inc. and Green Environmental, Inc. have initiated a number of task orders in support of the action plans. The additional level of effort required from Technical Assistance consultants to meet the action plan deadline includes the award of a third, single year Technical Assistance Contract which will be presented to the Board in December.

Sludge Processing Facility Expansion, Phase 3: The Poole and Kent Co., Contract 6012, Change Order 7

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 7 to increase the contract price on Contract No. 6012 with The Poole and Kent Co., Sludge Processing Facility Expansion, Phase 3 – Inside Work, in an amount not to exceed \$55,000. The original contract amount was \$22,378,000.00, with cumulative change orders totaling \$304,754.98 (1.36% of the original contract), for an adjusted contract price of \$22,682,754.98. Change Order 7 authorizes the Executive Director to approve additional change orders as may be needed to Contract No. 6012 in amounts not to exceed the aggregate of \$250,000 and 180 days.

This change order authorizes the Contractor to install a steel frame at each of six exhaust fans in order to support the exhaust fan silencer and stack assemblies. The contract documents required that a fan mounted silencer and stack assembly be secured with three guy wires per assembly. Subsequent to award, the fan manufacturer recommended that the silencer and stack not be mounted on the fan, and a separate structure became necessary. The steel frames are required so that the exhaust fan peripherals can be supported by the roof instead of by the fan.

Braintree-Weymouth Tunnel and Intermediate Pump Station: Stone & Webster, Contract 5313, Amendment 5

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Amendment No. 5 to increase the contract price on Contract No. 5313 with Stone & Webster, Braintree-Weymouth Tunnel and Intermediate Pump Station, in an amount not to exceed \$1,010,000, with no extension of time. The original contract total was \$7,687,200, with change orders totaling \$3,191,086, increasing the contract total to \$10,878,286.

The additional design work at the Intermediate Pump Station and Headworks involves: 1) An instrumentation system to allow the facility to be SCADA-compliant in preparation for the future SCADA Master Plan; 2) A tagging system for all of the equipment to allow input into a computer maintenance system; 3) Changes to the grit system to reduce maintenance and operational problems and costs; 4) A change to the access road to coordinate with Sithe.

The modifications at the Deer Island Treatment Plant (DITP) include relocation of the existing barge loading sludge pumps, new in-line grinders for the new sludge pumps, and associated piping, valves, instrumentation and controls in order to pump sludge from the DITP to the pelletizing plant at the Fore River Staging Area. Additional activities during the design which need to be performed involve additional coordination and review of the bidding documents with the MWRA, the Town of Weymouth, the Working Group, and with Sithe and Boston Edison Company. Additional services during construction will involve administering the Project Labor Agreement, mapping of geological features during tunneling and managing the receipt of advice from tunnel safety, tunnel design and noise experts.

Secondary Treatment Facilities Phases I and II: Malcolm Pirnie, Contract 5701, Amendment 10

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Amendment No. 10 to extend the time for completion of Contract No. 5701 with Malcolm Pirnie, Inc., Secondary Treatment Facilities Phases I and II, by five months to May 31, 2000.

Malcolm Pirnie, Inc. will provide additional engineering services for an extended period to resolve an outstanding issue on Secondary Clarifier Batteries A & B (CP-203). This Amendment provides additional time for those services but no additional funds, as there are available funds in the contract.

Deer Island Ancillary Modifications Phase III: R. Zoppo/Interstate Engineering, JV, Contract 6180, Change Order 49

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 49 to increase the contract price on Contract No. 6180 with R. Zoppo Corp./Interstate Engineering Corp., JV, Ancillary Design Modifications – Phase III, in the amount of \$24,790. No time extension is required. The original contract price was \$28,191,605.00, with cumulative change orders totaling \$5,757,865.63 (20.4% of the original contract), for an adjusted contract amount of \$33,949,470.63. This Change Order also authorizes the Executive Director to approve additional change orders as may be needed to Contract No. 6180 in an amount not to exceed the aggregate of \$250,000.

The contract documents require the Contractor to enclose four stairwells that are located at Digester Modules 1 and 2. During a review by the Contractor and Construction Manager, it was determined that as designed, the height of the ceiling did not provide sufficient headroom to allow personnel to use the stair enclosures without possibility of head injury. Therefore, it was necessary to raise the roof of the enclosures by 7” to eliminate this safety hazard. Because the Contractor’s workforce was on site, they proceeded with raising the roof enclosures and this work is now complete. Additionally, overhead lighting was not originally specified and now must be added to the stair enclosures. Without overhead lighting, the enclosures will not be sufficiently lit to utilize the stairs safely.

INFORMATION REPORTS

Capital Project Construction Contracts to be Advertised

[At the CIP Hearing in May, the Board directed staff to present for its review the merits of each capital project at least six months prior to the scheduled date to advertise for construction.]

MWRA staff submitted three new projects for Board review, which are expected to have first construction contracts advertised between January and September 2000. The projects are Spot Pond Supply Mains – Rehabilitation (\$6.2 million), BWSC Floatables Controls (\$2 million) and Cathodic Protection of Distribution Mains (\$0.4 million).

Mr. MacRitchie noted that the idea behind the review was for the Board to receive the complete picture of construction contracts being awarded, including projects that have already begun, not just new projects. Ms.

Hicks agreed, stating that the Board needed to determine if this is the right project at the right time. Mr. Jacques suggested that future Staff Summaries should include a Part A with new projects and a Part B with continued projects, with a grand total.

Mr. Carroll stated that the review should include a listing of anything in the Capital Improvement Program (including projects for design), thus the Board can take a serious look at projects to get rates under control. He asked, "What would happen if we postponed Spot Pond?" Steve Estes-Smargiassi noted that the MWRA has committed a certain number of pipelines in a consent order.

Ms. Hicks asked if projects are listed in a priority order and noted that she needed a sense of urgency to begin a project at a specific time in order to know when she could say "no". Mr. MacDonald replied, "The pipeline programs are driven by the consent decree. You have to look at all the pipeline projects. The only thing else is North Dorchester Bay."

Mr. Carroll emphasized: "We have to find out when we can say 'no'. We can't have 5 to 6% compounded rate increases a year."

Proposed FY01-03 Capital Improvement Program

[One of the recommendations of the Special Committee on CIP Management, presented to the Board on September 15, was that staff present an overview of the proposed CIP to the Board in November so that Board input can be incorporated before the draft budget is transmitted to the Advisory Board for its review and comment.]

The proposed Capital Improvement Program (CIP) for FY01-03 represents primarily a continuation of MWRA's ongoing capital program, with increased emphasis on ongoing asset maintenance. The proposed budget includes just one new construction project: Northern High Service Pipeline Rehabilitation – Sections 13-18 and 48. The estimated cost of the project, which grows out of the Waterworks Master Plan, is \$17.4 million, with construction scheduled to begin in FY2011. There are three other new projects in the proposed budget, but none involves construction. Two are studies designed to improve operational efficiency and effectiveness (Wastewater Process Optimization Study and Wastewater Meter System Study), at a total cost of \$909,000. The third is for \$1.5 million to fund implementation of the recommendations of the Regional I/I Task Force that are expected next spring.

Ron Joseph presented issues for Board consideration. The Local Pipeline Improvement Program will now be funded through the Tax Exempt Commercial Paper Program (instead of the CIP), with associated debt service costs to be paid from the CEB. He stated that no changes were recommended on the North Dorchester Bay CSO project. Mr. Joseph noted that the major change in the budget is an increase for ongoing asset maintenance: The proposed increases would provide for \$20 million per year by FY10.

Mr. MacRitchie reinforced his earlier point that the Board requires an overall picture of projects, not just new construction projects.

This summary does not include every item discussed by the Board, nor the full extent of the discussions. Please contact Mary Ann McClellan at the Advisory Board Office with questions, comments and requests for additional information.