

MWRA ADVISORY BOARD
Summary of the
MWRA BOARD OF DIRECTORS' MEETING
September 15, 1999

A meeting of the Board of Directors of the Massachusetts Water Resources Authority was held on September 15, 1999 at the Authority Headquarters in Charlestown. **Present:** Chairman Robert Durand, Gubernatorial Representative; John Carroll, Norman Jacques and Andrew Pappastergion, Advisory Board Representatives; Robert Spinney, City of Boston Representative; Lucile Hicks, Gubernatorial Representative; Joseph MacRitchie, City of Quincy Representative; Marie Turner, Town of Winthrop Representative. **Absent:** Vincent Mannerling and Andrea d'Amato, City of Boston Representatives; Donald Mitchell, Gubernatorial Representative.

AGENDA

Report of the Chair

No Report.

Report of the Executive Director

Douglas MacDonald, Executive Director of the MWRA, reported that the Authority expected approximately six inches of rain as a result of Hurricane Floyd beginning Thursday evening. The MWRA implemented an emergency preparedness plan involving fuel, batteries and a staffing plan. The Emergency Operations Center will be opened at noon on Thursday.

Mr. MacDonald reported that testing which tracks the drinking water supply indicates that the drinking water of today is measurably better than the drinking water of two years ago. He noted that the improvements are due to projects performed by the MWRA.

A video taped advertisement for a drinking water filter was played during the Board meeting in which the actor expressed concern regarding contaminants in the drinking water. Mr. MacDonald noted that the Consumer Confidence Report (CCR) will hopefully inform the public through test results that the MWRA water supply is safe to drink. Mr. MacRitchie suggested that staff purchase the advertised filter to test the water after using the filter.

Mr. MacDonald acknowledged the efforts of Miriam Maxian who announced her departure from the MWRA to move to San Francisco.

Mr. MacRitchie and Ms. Hicks, Co-Chair of the Special Committee on CIP Management, reported that the Committee has met several times and has developed four to five issues for discussion. Noting that there was no consensus, the Co-Chairs recommended a presentation be made to the Board of Directors to ensure that the Board understands the procedures in the CIP Process. The Committee recommends a discussion at the Board level of policy considerations relating to putting a cap in place on the Capital Budget.

Mr. Pappastergion recommended that staff prepare a presentation of various methods of dealing with a cap on the Capital Budget and their implications for reducing project scope and eliminating or delaying projects.

Mr. Carroll stated that he would like to be involved in decisions related to the increase of the debt cap, from \$4.37 billion to \$4.75 billion, and expressed his concern regarding the effect a debt cap increase would have on future rates. Mr. Carroll asked that staff prepare materials and give a presentation regarding the debt cap and what projects it would effect at the next meeting. He stated, "This type of discussion on the CIP spending cap is the most important thing we can talk about in the next year. We are reaching the stage where people are feeling the pinch. We need to tighten our belts, and not allow so much money to be borrowed. We need to make some hard-line decisions to keep the rates under control. We need a retreat to discuss this further." Senator Durand agreed that a retreat is needed this fall. He requested staff to identify a time in October.

Mr. MacDonald noted that without a debt cap increase, MWRA would have to shut down construction altogether and pay contractor's penalties, which has rating agency significance. He termed the idea "nuclear". Mr. Carroll replied, "We really have to get this thing under control."

Ms. Hicks expressed concern that the Board look far enough into the future to be sure MWRA can meet its obligations. Mr. Carroll noted that the MWRA could use rate stabilization funds to meet their obligations. He stated, "We should decide what we want our rate increases to be for the next ten years and make it happen. Two to three percent is acceptable compared to seven percent."

Mr. Jacques questioned the need for a raise in the debt cap since the Authority has \$60 million remaining. Mr. MacDonald noted that the legislature raises the debt cap in small increments based on analyses provided by the MWRA.

APPROVALS

SRF Refunding and New Borrowing Authorization

The Board voted to adopt the twenty-eighth Supplemental Resolution authorizing the issuance of up to \$110,000,000 in Massachusetts Water Resources Authority General Revenue Bonds (1999 Series F subordinate series), and up to \$350,000,000 of Massachusetts Water Resources Authority General Revenue Bonds (1999 Series G subordinate refunding series), and the supporting Issuance Resolution.

In October, the Massachusetts Water Pollution Abatement Trust (commonly called the SRF) is prepared to extend most outstanding 20-year MWRA debt an additional ten years allowing for the reduction of annual debt service payments through 2014. Currently there is approximately \$375,000,000 of SRF debt outstanding. This bond issue will refinance up to \$350,000,000. The balance will be retired using existing debt service reserves.

Mr. Pappastergion remarked that the revisions to the SRF amount to \$4.4 million [savings] annually. These were the funds that three of the Board members voted to use to bring rates down." Ken Wissman, MWRA staff, stated that the \$4.4 million won't provide a benefit until FY01.

In response to Mr. Wissman's statement, Joe Favaloro, Executive Director of the MWRA Advisory Board, stated, "The Advisory Board pursued this issue during its review because there was a value that should have

been utilized to offset rate increases in FY00. It was voted down with a 7 to 3 vote.”

Letter of Credit Extension: Morgan Guaranty Trust Company of New York

The Board voted to authorize the Executive Director to extend the Authority’s irrevocable direct-pay Letter of Credit with Morgan Guaranty Trust Company of New York from January 20, 2000 to January 20, 2001 for a fee not to exceed \$685,000.

Credit enhancement for MWRA’s original Tax-Exempt Commercial Paper (TECP) program is provided by a \$358,000,000 irrevocable direct-pay Letter of Credit (LOC) provided by Morgan Guaranty Trust Company of New York (Morgan Bank). Staff recommends extending the LOC at the reduced amount of \$307,000,000. This reduction reflects the Board’s authorization of a second TECP this past August. Morgan Bank continues to have one of the higher credit ratings of any U.S. bank and MWRA’s TECP program supported by the Morgan Bank’s LOC continues to require relatively low interest payments.

Mr. Jacques stated that \$685,000 was a large sum of money for one more year and asked if staff took bids for the LOC. Mr. Wissman replied, “Staff did a review of a year’s rates and the trend. The lowest rate found was 22.5 basis points; this is 22.2 basis points. If MWRA did a procurement, we would not have been able to renew for one year at this rate.”

September PCR Amendments - FY2000

The Board voted to approve the amendments to the Position Control Register. They include:

Reclassification of positions in the Sewerage Transport Department that reflect the conclusion of mid-term negotiations with AFSCME, Local 1242 (Unit 2) regarding changing operations and maintenance requirements, required staffing adjustments and the implementation of competency-based training programs.

All of the position reclassifications are related to the operations initiatives in Sewerage Transport and reflect a tentative agreement with the AFSCME (Unit 2). All of the requested PCR adjustments relate to the overall organizational and staffing plans as bargained changes.

Appointment of Senior Program Manager, Plant Optimization, Deer Island

The Board voted to approve the Executive Director’s recommendation to appoint Jeffrey Reade to the position of Senior Program Manager, Plant Optimization, Deer Island Treatment Plant, Sewerage Division, at an annual salary of \$70,767.32, to be effective on the date designated by the Executive Director.

The Senior Program Manager supervises and directs the Process Instrumentation and Control Systems (PICS) and Technical Operations groups at Deer Island Treatment Plant (DITP). This position develops and conducts plant optimization programs, supports Operations in all technical matters, and ensures PICS reliability and PICS control improvements for the entire user community.

Mr. Reade has a wide range of wastewater experience, including field commissioning, testing, optimizing and training, substantial project management experience, and 13 years of relevant work experience. His credentials include a Master of Science degree in Environmental Engineering from Worcester Polytechnic Institute and a Bachelor of Science degree in Chemical Engineering from Northeastern University.

CONTRACT AWARDS

North Maintenance Facility Design Review and Construction Services: STV, Inc., Contract 6510

The Board voted to approve the recommendation of the Consultant Selection Committee to select STV, Inc. to provide design review and construction services for the North Maintenance Facility and to authorize the Executive Director, on behalf of the Authority, to execute Contract No. 6510 with STV, Inc. in an amount not to exceed \$338,890 for a term of three years.

A new facility is being designed and constructed by a developer who will lease the facility to the MWRA for 30 years with two ten-year options to extend the term. Because the facility will be leased, the MWRA is not responsible for providing the oversight services it would ordinarily extend during the design and construction of the project. However, under terms of the lease with the developer, the MWRA is responsible to maintain, repair and replace all portions of the premises with the exception of the roof, girders, mullions, beams and walls and other structural components.

STV will provide project management and design review for structural, electrical, mechanical, and civil engineering requirements. They will provide architectural services for interior design and space planning, industrial engineering, change order review and environmental remediation services.

Mr. Jacques asked, "Does the MWRA have any clout in changing materials?" Staff replied that during procurement, staff came up with specifications which required certain materials."

Mr. Pappastergion noted that staff was able to negotiate STV's contract price down by \$150,000 by reducing the scope of work and asked, "Did the Authority allow for a rebid with the reduced scope of work?" Staff explained that STV's bid contained more hours than MWRA deemed necessary. Mr. Pappastergion replied, "It is a large reduction and it concerns me that we didn't look at it on an equal basis with the other bids."

Supply and Delivery of Polymer for Deer Island Treatment Plant (DITP): Polydyne, Inc., WRA-1797

The Board voted to approve the award of a purchase order for the supply and delivery of polymer for the Deer Island Treatment Plant to the lowest responsive bidder, Polydyne, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said purchase order in the bid amount of \$1,459,551 for a period of two years.

The Deer Island Treatment Plant utilizes dry polymer as a sludge thickening agent in the sludge centrifuges. The MWRA benefits from the resulting higher sludge concentrations under the pricing formula for operation of the Pelletizing Facility.

Competitive bids were directly solicited from five vendors, and a notice of bid was publicly advertised in eleven publications. Bids were received from four vendors. The bid process required vendors to conduct lab tests as well as field tests in the DITP Centrifuge System. Each vendor's unit cost of their product was evaluated according to each product's field test.

Chelsea Trunk Sewer Relief Project: P. Gioioso & Sons, Inc., Contract 6262

The Board voted to approve the award of Contract No. 6262, Chelsea Trunk Sewer Relief Project, to the lowest responsive bidder, P. Gioioso & Sons, Inc., and to authorize the Executive Director, on behalf of the Authority, to execute and deliver said contract in the bid amount of \$3,524,385 for a term of 365 calendar days.

The Chelsea Trunk Sewer Relief Project consists of the replacement of 1,800 feet of existing sewers using open cut construction methods, replacement of 500 feet of sewer by pipe jacking, rehabilitation/replacement of 700 feet of outfall pipe, and the installation of floatable control baffles at three outfalls (CHE002, CHE003 and CHE004).

The existing sewers range in size from 8 inches to 15 inches in diameter and are owned by the City of Chelsea; the replacement pipes are 30 inches in diameter. At completion of the project, the City of Chelsea will retain ownership and be responsible for future operation and maintenance.

CONTRACT AMENDMENTS/CHANGE ORDERS

Ancillary Design Modifications -- Phase III: R. Zoppo/Interstate Engineering, JV, Contract 6180, Change Order 44

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 44 to increase the contract price on Contract No. 6180 with R. Zoppo/Interstate Engineering Corp., JV, Ancillary Design Modifications - Phase III, in an amount not to exceed \$71,589, increasing the contract amount from \$33,609,184.71 to \$33,680,733.71. No time extension is required. The vote also authorized the Executive Director to approve additional change orders as may be needed to Contract No. 6180 in amounts not to exceed the aggregate of \$250,000.

The change order would cover the removal and re-installation of the existing primary sampler at a cost of \$29,998; and the furnishing and installation of a control station disconnect switch for the six sample pumps, and conduit and conductors from the six sample pumps to the input/output cabinet at a cost of \$41,591.

The cumulative value of all change orders to this contract totals \$5,489,168.71 or 19.47% of the original contract amount. Work on the contract is approximately 77.5% complete.

Nut Island Headworks: Modern Continental/SAE Americon, Contract 5850A, Change Order 121

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 121 to increase the contract price on Contract No. 5850A with Modern Continental/SAE Americon, JV, Nut Island Headworks, in the amount of \$219,000, increasing the contract amount from \$85,007,232.15 to \$85,226,232.15. No time extension is required. The vote also authorized the Executive Director to approve additional change orders as may be needed to Contract No. 5850A in amounts not to exceed the aggregate of \$250,000.

The contract documents, which reflect DEP/EPA approval, require the Contractor to furnish and install a 60" check valve on the three existing outfall pipes to prevent growth of marine life and accumulation of debris inside the outfall pipes which would restrict their capacity in the event of emergency use. Any emergency discharge is to be first directed to these three outfalls, two of which are over one mile off shore, the other being approximately 3/10 of a mile off shore. Only if capacity of these outfalls is exceeded can flow be diverted to a new concrete spillway located on the Nut Island shoreline. This procedure is intended to minimize any impacts to Quincy and surrounding communities. The Change Order compensates the contractor for the amounts associated with removing the three check valves (to allow removal of obstructions) and reinstalling them, as directed by the MWRA.

East/West Spot Pond Supply Mains Rehabilitation Project: Montgomery Watson Americas, Inc., Contract 6223, 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. 6223 with Montgomery Watson Americas, Inc., East and West Spot Pond Supply Mains Rehabilitation Project, in the amount of \$696,717, increasing the contract amount from \$9,404,000 to \$10,100,717.

This project will rehabilitate the Spot Pond Supply Mains by replacing main line valves, meters, air release valves, blow-off valves and rehabilitate or replace pipe as determined necessary by visual inspection, testing and engineering analysis. Rehabilitation methods might include cleaning and lining, joint sealing, spot repairs on steel mains, cathodic protection and/or slip-lining. Unsound pipe will be replaced where necessary.

The addition of the Section 57 rehabilitation project in Medford to the East/West Spot Pond Supply Mains Rehabilitation Project requires additional funding for design services. Based on inspection of the water main by MWRA Operations crews during leak repair in 1998, it was determined that replacement is necessary, rather than cleaning and lining.

Mr. Pappastergion asked, “This money is for design services, do you have an estimate on how much pipe will be added to the project?” Staff responded that they hoped to put 40-inch slip-lined pipes inside the existing pipe with an estimated cost in the \$6 to \$7 million range.

Weston Aqueduct Supply Mains 2 and 4: W. Walsh Co., Inc., Contract 6312, Change Order 4

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 4 to increase the contract price on Contract No. 6312 with W. Walsh Co., Inc., Weston Aqueduct Supply Mains 2 and 4, in the amount of \$435,095.68, increasing the contract amount from \$7,795,790.01 to \$8,230,885.69, with no extension to the Contract Time. And, further, to authorize the Executive Director to approve additional change orders as may be needed to Contract No. 6312 in amounts not to exceed the aggregate of \$250,000.00.

The Contract Documents specify routine inspections of the interior of the pipeline upon completion of cleaning operations. Seven holes in the pipe wall approximately 3/8 inch in diameter were observed in the invert of pipeline in an area approximately 132 feet long. To determine what caused the holes and the extent of this condition along the invert, the MWRA directed the Contractor to cut two sample segments or “coupons” from the pipe. The two sample coupons revealed that the wall holes were located where previous repairs had been made to the pipe from the exterior using steel pipe nipples and caps/plugs. There were numerous corrosion pits on the inside of the pipe, many extended through the wall thickness of the pipe. One of the corrosion spots was sent to a corrosion specialty engineering firm for analysis, along with a soil sample. Neither of these conditions could have been known prior to cleaning the pipe. The results of the investigation indicated that 240 LF of the most severely effected section of the pipe should be replaced.

The replacement pipeline will be 60-inch welded steel with a PVC outer jacket for corrosion protection. Construction will require closing down one lane of Washington Street in Newton and the staged excavation, removal and installation of the new pipe line. This section of Washington Street has a reinforced concrete sub-base which will have to be replaced prior to the installation of finished pavement. The cost presented in this change order represents a lump sum cost to do this work.

Ms. Hicks noted that Washington Street is a major thoroughfare and asked, “Will the project cause a major disruption?” Staff replied, “MWRRA will have to install jersey barriers to reduce lanes for six weeks.” Ms. Hicks asked, “Will we have a corrosion problem with the replacement pipe?” Staff replied that 50-pound bags of magnesium will be placed next to the pipe to control corrosion.

MetroWest Water Supply Tunnel - Western Tunnel Segment: MetroWest Tunnelers, JV, Contract 6054, Change Order 10

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 10 to increase the contract price on Contract No. 6054 with MetroWest Tunnelers, JV, MetroWest Water Supply Tunnel Project--Western Tunnel Segment, in an amount not to exceed \$928,681.00, increasing the contract price from \$145,265,660.51 to \$146,194,341.51, with no extension of time; provided that the staff shall not direct the contractor to alter contractually-specified grouting procedures without further discussion with the Board, except in response to a clear indication that water inflow will otherwise exceed the contractual baseline. And, further, to authorize the Executive Director to approve additional change orders, as may be needed to Contract No. 6054 in amounts not to exceed the aggregate of \$250,000.00.

The Contract Documents require that two probe holes be advanced 150 feet ahead of the Tunnel Boring Machine (TBM) and a pre-excitation grouting program be employed. This program is intended to identify water-bearing fractures in the rock and, by grouting, reduce water inflows and stabilize the ground.

In the Geotechnical Design Summary Report (GDSR) the tunnel has been divided into Subreaches. Subreach B is an area containing known fractured ground and water-bearing faults, historically described as the Bloody Bluff Fault Zone. The GDSR also includes a contract estimate of 3,500 GPM for the total water inflow over the entire length of the Western Tunnel Segment. Despite pre-excitation grouting, total water inflows into Subreach B have increased from 900 GPM to 2,000 GPM.

Staff recommended that pre-excitation grouting be continued and intensified to control water and permit the TBM to mine more effectively by using a three-stage sequence of grouting shorter 50-foot increments, and recommended a change from a micro-fine cement to a Type III Portland cement that is less expensive and has been as effective in filling fractures.

Mr. Carroll disagreed with the need to intensify the pre-excitation grouting and suggested that when the inflow exceeds 3,000 GPM, then a new procedure to reduce the inflows should be adopted. The Board of Directors agreed with Mr. Carroll’s suggestion.

Mr. MacRitchie noted that approving the Change Order would result in a 2% increase on the contract. He stated, “Although it is a lot of money, it is a small percentage of the project.”

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.