



MWRA Advisory Board Summary
of the
MWRA Board of Directors Meeting
Wednesday, September 15, 2010

A meeting of the Board of Directors of the Massachusetts Water Resources Authority was held on September 15, 2010 at the Charlestown Navy Yard. **Present:** Chair Ian Bowles, Joel Barrera and Michael Gove, Gubernatorial Appointees; John Carroll and Joseph Foti, Advisory Board Representatives; Kevin Cotter and James Hunt III, City of Boston Representatives; Jack Walsh, City of Quincy Representative. **Absent:** Andrew Pappastergion, Advisory Board Representative; Vincent Mannerling, City of Boston Representative; Marie Turner, Town of Winthrop Representative.

REPORT OF THE CHAIR

MWRA Board Chairman Ian Bowles stated that he felt that MWRA staff had a bit of an over-reaction to the leak at Shaft 5A; staff should take a look at communication channels and calibrate reactions.

The Board voted to (1) designate the September 15, 2010 meeting as the Annual Meeting, which, as provided in the Authority's by-laws, will be deemed a special meeting of the Board for purposes of election of officers; (2) elect John Carroll as the Vice-Chairman of the Board of Directors; (3) appoint Joseph Foti as Secretary of the Board and Bonnie Hale and Rosemarie Convery as Assistant Secretaries; Thomas Durkin as Treasurer and Matthew Horan and Kathy Soni as Assistant Treasurers; and (4) ratify the appointment of members to standing Committees. New Committee Chairs will be appointed every two years – with two of the four chairmanships changing each year.

REPORT OF THE EXECUTIVE DIRECTOR

MWRA Executive Director Fred Laskey stated that MWRA has received word that a startup company called Flowdesign is developing an alternative state-of-the-art wind turbine based on a jet engine. Flowdesign has requested that the Authority allow them to put a prototype up on Deer Island at their expense. The Authority already has approval from the Federal Aviation Administration for a third turbine at that location. The turbine could be installed as early as February.

Chairman Bowles added that Flowdesign is a startup company but it is backed by high profile venture capital firms and it is seen by the investors as potentially the next big thing in wind energy and is about 33% more efficient than standard turbines. It produces more energy at lower wind speeds.

Mr. Laskey noted that a sub-committee has been convened to focus on the staffing study that was requested by the Advisory Board. Director of Administration and Finance Rachel Madden provided the Board with draft recommendations on topics the study should include for a starting point. The sub-committee has 11 members, including Board members Joel Barrera and Joseph Foti, Advisory Board Chair Katherine Dunphy, Advisory Board Executive Director Joe Favaloro, MWRA Executive Director Fred Laskey, MWRA Chief Operating Officer Michael Hornbrook, Ms. Madden, members of the Labor Coalition and MWRA staff.

Mr. Laskey said in regard to the leak at Shaft 5A, because staff was worried perhaps we were over cautious on the mobilization; however, once we realized the situation was under control, we de-mobilized quickly.

Chairman Bowles said he thinks it is something to think about on how it makes the MWRA look in the public eye. Mr. Laskey said he thinks the best thing staff did was to bring the media to the site to show them that the situation was stable.

Staff hoped to make the repairs live; however, the engineers believe making a repair to a ten-foot pipe that is under 100+ square pounds of pressure in a 30-foot deep hole would be no small feat. Staff is evaluating the best means to make a dry repair in the fall or early winter and have developed a strategy involving the acceleration of the Hultman project.

Mr. Laskey said staff believes this leak could be collateral damage from shutting the valves off rapidly during the first incident; Camp Dresser & McKee feel very clearly that this is the case.

Chairman Bowles said it was his understanding that the Hultman project had already been accelerated. Mr. Laskey said because the project was accelerated, staff is in a position to propose the use of the Hultman to make this repair. Hyper-accelerating the project will allow for a planned repair in the fall or early winter.

Chief Operating Officer Michael Hornbrook stated that should the leak become catastrophic, staff does have an emergency plan in place that would involve using the open reservoir and adding free chlorine, which would not require a boil order; however, residual effects could result in bacteria in the system. MWRA could get two to four days without a boil order.

APPROVALS

ADOPTION OF CAPITAL FINANCE MANAGEMENT POLICY

[Postponed.]

SEPTEMBER PCR AMENDMENTS – FY11

The Board voted to approve amendments to the Position Control Register reflecting organizational changes in the Administration & Finance and Operations divisions.

Upon the recent retirement of the Director of Finance Administration & Federal/State Assistance, it was decided not to backfill this position and to allocate these responsibilities among two current staff members. This would result in an annual savings of \$71,819.

In addition, there are three PCR amendments within the Operations Division for title changes for vacant positions, one of which also includes a location change. These PCR amendments are to better meet current needs and will have no fiscal impact.

EXTENSION OF EMPLOYMENT CONTRACT, MANAGER, SECURITY SYSTEMS AND PLANNING, OFFICE OF EMERGENCY PREPAREDNESS

The Board voted to approve the extension of the employment contract for Mr. Joseph Goodwin, Manager, Security Systems and Planning in the Office of Emergency Preparedness for a period of one year, from October 6, 2010 through October 6, 2011, at the current hourly rate of \$28.00, for an annual compensation not to exceed \$54,800.00.

Over the course of the last year, Mr. Goodwin had been instrumental in updating facility-specific Emergency Action Plans, an action item identified after the February 2010 Cottage Farm oil spill incident; this work is on-going. The need for the further continuation of this contract will be re-evaluated before the end of the current fiscal year.

There are sufficient funds available for this contract in the FY11 CEB.

Board Member Joseph Foti asked if staff anticipates extending this contract past one year. Should this be made a permanent position? David Gilmartin, Director, Emergency Preparedness, said he could not answer the question at this point; there is a tremendous amount of planning that needs to be done that we didn't have last year. Mr. Foti noted that this employee has already been here two years and he wondered if he shouldn't just be added to staff.

Board Member Joel Barrera asked if contract employees would be part of the staffing study. Ms. Madden said contract employees were not included; however, they could be added to the scope of the study.

CONTRACT AMENDMENTS/CHANGE ORDERS

MEDICAL SERVICES FOR OCCUPATIONAL HEALTH AND REGULATORY PROGRAMS: ALLONE HEALTH RESOURCES, CONTRACT A511, AMENDMENT 1

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Amendment No. 1 to extend the term of Contract No. A511 with AllOne Health Resources, Medical Services for Occupational Health and Regulatory Programs, by 12 months to November 30, 2011, with no increase in contract amount.

AllOne Health Resources provides medical services for programs that are managed by the Human Resources Department, such as 1) Pre-Placement Examination and Testing; 2) Occupational Health related Medical Monitoring and Vaccination services; 3) Department of Transportation Controlled Substance and Alcohol testing; and 4) Return-to-Work/Fitness-for-Duty Examination and Testing. The scope of services will remain unchanged for the 12-month extension period, during which time the Human Resources Department will reassess program needs and service requirements. The scope of services will be adjusted accordingly in anticipation of an open procurement for the next contract.

The current contract term is December 1, 2007 through November 30, 2010, with a not-to-exceed amount of \$115,122. To date, \$67,000 has been expended, with an additional \$8,000 anticipated to be spent through November 30, 2010; this leaves sufficient funding for the one-year extension of time.

Mr. Foti asked how this contract was originally procured. Human Resources Director Robert Donnelly stated that there was a bid process. Mr. Foti asked if the contract was advertised as a one to three year contract, isn't there a limit on how long it can be extended. Contracts Manager John Sabino said there is no legal impediment to extend the contract.

NORTH DORCHESTER BAY COMBINED SEWER OVERFLOW FACILITIES: FAY, SPOFFORD & THORNDIKE, LLC, CONTRACT 7013, AMENDMENT 5

The Board voted, with Mr. Foti opposed, to authorize the Executive Director, on behalf of the Authority, to approve Amendment No. 5 to increase the amount of Contract No. 7013 with Fay, Spofford & Thorndike, LLC, North Dorchester Bay Combined Sewer Overflow Facilities, in the amount of \$399,559.00.

The ventilation building was initially to be bid with the dewatering pump station at Conley Terminal and force main as one construction package; however, on November 12, 2008, the Board voted to separate the project into two construction contracts. On March 11, 2009, the Board voted to approve the design of the underground ventilation building. Although Amendment 4 included funding for the additional level of design required for the ventilation building, funding for the added construction administration services needed for two contracts was not included. Amendment 5 will provide additional funding for construction administration services for these two contracts.

The cumulative value of all change orders to this contract is \$1,502,471.10, added to the original contract amount of \$3,385,223.92, for an adjusted contract amount of \$4,887,695.02, or \$34,695.02 over budget. This amount will be covered within the five-year CIP spending cap.

Mr. Foti asked if changes are being made to the design. Deputy Chief Operating Officer Charlie Button said yes; changes had to be made to the foundation work because the ventilation building had groundwater issues. Mr. Foti said so the Board is voting \$1 million worth of amendments with no increase in time. Director of Wastewater Engineering Kevin O'Brien said originally the contract called for one contract for a pump station and odor control facility; when the decision was made to separate the contracts it increased the number of services required. Mr. Foti asked why that decision was made. Mr. Laskey said the decision was made to construct the ventilation building as an underground facility so the contracts were separated and it was a timing issue. Mr. Foti said so now we are spending an additional \$400,000 because of the decision to put the facility below ground and he wanted it noted that he made the right decision in the first place when he voted against it.

NORTH DORCHESTER BAY AND RESERVE CHANNEL: SHANK/BALFOUR BEATTY/BARLETTA, JV, CONTRACT 6244, CHANGE ORDER 19

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 19 to increase the amount of Contract 6244 with Shank/Balfour Beatty/Barletta, JV, North Dorchester Bay and Reserved

Channel, in a lump sum amount of \$420,175.14. Further, the Board voted to authorize the Executive Director to approve additional change orders as may be needed to Contract No. 6244 in amounts not to exceed the aggregate of \$85,000.00.

Change Order 19 is one of three final change orders to be processed before the contract can be closed out. Under the revised Management Policies of the Board of Directors, approved by the Board on January 13, 2010, change order increases and credits must be awarded separately; therefore, Change Order 18, for a total lump sum credit amount of \$524,606.79 was recently approved under delegated authority and is pending execution. In addition to Change Order 19, which reflects actual quantities used rather than estimated quantities of unit price and allowance items, because the work is not 100% complete and all police detail services have not been finalized (staff expect additional invoices to be submitted), Change Order 20 will be required to increase the Police Detail allowance by approximately \$81,000; staff expect to present Change Order 20 for approval under delegated authority when all police detail invoices have been received.

The cumulative value of all change orders to this contract is \$1,313,563.39, or 0.90% of the original contract amount of \$145,733,208.00, for an adjusted contract amount of \$147,046,771.39. The FY11 Capital Improvement Program budget includes \$147,151,000.00 for Contract 6244. Work on this contract is approximately 99% complete.

EAST BOSTON BRANCH SEWER, REPLACEMENT SEWER BY PIPE BURSTING: P. CALIACCO CORP., CONTRACT 6841, 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 amount of Contract No. 6841 with P. Caliacco Corp., East Boston Branch Sewer, Replacement Sewer by Pipe Bursting, for a lump sum payment amount of \$326,220.87.

Under Contract 6841, which began in April 2009, the Contractor replaced approximately one mile of existing 12- and 15-inch diameter combined sewers on Marginal, New, Maverick, Border and Jeffries Streets in East Boston, primarily by pipe bursting; the contract reached substantial completion on July 8, 2010.

At the intersection of Jeffries and Maverick Streets, the contract required pipe bursting with 16-inch diameter high-density polyethylene pipe from Receiving Shaft 10 to Insertion Shaft 10. After advancing 18 feet, the bursting head got stuck and could not complete the 48-foot reach. The contractor was required to install a recovery shaft to retrieve the bursting head. During the process of constructing the recovery shaft, MWRA staff noticed that a BWSC 42-inch diameter combined sewer pipe that crosses directly above MWRA's 12-inch diameter host clay pipe was constructed on a concrete slab that was not shown on the record drawings. The concrete slab also encased the 12-inch diameter host clay pipe. The contractor had to exercise extreme caution while navigating the utility congestion to install the support of excavation for the recovery shaft to retrieve the bursting head.

The cumulative total value of all change orders to this contract is \$1,509,415.89, or 20.55% of the original contract amount of \$7,344,285.84, for a total adjusted contract amount of \$8,853,701.73, or \$299,701.73 over budget. This amount will be covered within the five-year spending cap.

SUPPLY AND DELIVERY OF ODOR AND CORROSION CONTROL CHEMICALS FOR THE FRAMINGHAM EXTENSION SEWER AND FRAMINGHAM EXTENSION RELIEF SEWER: SIEMENS WATER TECHNOLOGIES, BID WRA-2966, AMENDMENT 2

The Board voted to authorize the Executive Director, on behalf of the Authority, to approve Change Order No. 2 to increase the amount of Contract No. WRA-2966 with Siemens Water Technologies, Supply and Delivery of Odor and Corrosion Control Chemicals for the Framingham Extension Sewer and Framingham Extension Relief Sewer, in the amount of \$160,000.00.

MWRA identified a nitrate-based specialty product called Nitrazyme that is being used in tandem with a sodium-chlorite produce, "VX456," to address both odor and corrosion problems in the Framingham Extension Sewer and the Framingham Extension Relief Sewer during the warmer months when temperatures and hydrogen sulfide levels typically climb. A pilot study was undertaken in 2002 utilizing a combination of these two chemicals and the results showed that the two products used in tandem reduced atmospheric hydrogen sulfide levels by two-thirds.

Summer 2010 has been significantly drier and hotter than recent past summers, conditions which greatly increase odor and the potential for corrosion within MWRA's sewers. In addition, staff were working at the Arthur Street Pumping Station in Framingham making mechanical and SCADA improvements, which required dry weather operation of pumps. MWRA also received a number of odor complaints. As a result, MWRA has used more treatment chemicals to keep hydrogen sulfide levels well below the 20 parts per million target and to try to mitigate community complaints. It should be noted that air space hydrogen sulfide entering the Arthur Street Pump Station has been reduced over the years as a result of ongoing community and industry odor and corrosion control efforts, thereby reducing MWRA's chemical treatment requirements; however, there will be chemical usage variations year to year depending on weather and/or operational activities.

Adding the \$160,000.00 for Amendment 2 to the original contract amount of \$278,640.00 provides an adjusted contract amount of \$438,640.00. There are sufficient funds to cover the cost of Amendment 2 in the Field Operations Department's FY11 Current Expense Budget.

INFORMATION

DELEGATED AUTHORITY REPORT – AUGUST 2010

Staff presented a listing of actions taken by the Executive Director under delegated authority for the period August 1 through August 31, 2010.

EFFECT OF JULY 2009 POPULATION ESTIMATES ON FY12 SEWER ASSESSMENTS

The annual charge for sewer services to member communities consists of both capital and operating expenses. In FY11, approximately 61% of sewer utility expenses pertain to capital expenses and 39% to operating expenses. The assessment for each community is determined according to MWRA's sewer assessment methodology, which has been in place since FY96. The components that enter into the calculation of each community's sewer assessment are: each community's share of average wastewater flow of the entire system, maximum flow, strength of flow, total population and sewered population. For FY11, the population component would account for approximately 46% of the total sewer assessment.

The total population component of the sewer assessment is based on the latest data published by the U.S. Census Bureau. For example, the FY11 assessments were based on July 2008 population numbers, so consequently the 2009 population figures released in July 2010 will impact the FY12 assessment.

As has been the case the past few years, there are significant changes in the population estimates for several MWRA communities in Suffolk County, including Boston (+4.0%), Chelsea (-9.8%), Revere (-14.1%) and Winthrop (+7.2%). The average for all 43 communities receiving MWRA sewer service is 1.7%. The impact for the majority of the communities does not represent a significant impact.

In order to determine the impact of the most recent population estimates on FY12 sewer assessments, staff has recalculated FY11 assessments using the new population figures. This calculation does not account for any other changes that will impact FY12 sewer assessments including changes to the sewer utility budget for FY12, changes in wastewater flow or strength of flow, or changes in the sewered/contributing population for each community.

Estimated impacts on the FY12 sewer assessment resulting from the changes in the population estimates for each community are as follows: Boston – \$1.2 million, or 1.1%; Chelsea – (\$394,455), or -6.4%; Revere – (\$783,335), or -8.2%; and Winthrop – \$81,497, or 2.8%. MWRA notified officials in each of these communities regarding this issue via letter on August 11, 2010.

Budget Director Kathy Soni stated that staff will use the 2009 population numbers for the proposed budget but will use the 2010 census data for the final budget. Mr. Foti said releasing the proposed numbers is a mistake because it is false information. Mr. Barrera agreed.

Mr. Foti noted that the numbers can't be correct; if verified by the U.S. Census, Chelsea will challenge the numbers. Ms. Madden stated that staff wanted to ensure that it was communicating any information it had as it came through because there was criticism last year for not keeping people up to date. Mr. Foti said another community challenged the numbers last year and benefited from it; Chelsea didn't challenge the numbers. If this information is

verified, Chelsea will challenge the numbers this year. Ms. Madden noted that this is a unique scenario; staff doesn't usually have a ten-year census to update numbers for the final budget.

Mr. Laskey asked if it is practical, rather than sending out two sets of numbers, to tell the communities we will send the numbers out in March to get the final ten-year census numbers included. Mr. Favaloro said he thinks there is merit in trying to find some common ground. To send out one set of numbers based on assumptions and then change the numbers in March will confuse people. It will save a lot of aggravation down the road.

Mr. Foti said he is concerned because if the numbers change in March, it means every interim year is flawed.

Board Member James Hunt III noted that Boston chronically gets undercounted in the census for many reasons including a transient population (65% are renters and student population).

Mr. Laskey said staff will work with the Advisory Board on how best to handle this situation.

FISCAL YEAR 2010 YEAR-END CAPITAL PROJECT PERFORMANCE REPORT

Budget Director Kathy Soni said FY10 has been a successful year in terms of the Capital Program. During FY10, MWRA achieved significant progress on several major projects: the completion of the Blue Hills Covered Storage Design/Build Contract; North Dorchester Bay Tunnel Contract; Morrissey Boulevard Storm Drain; substantial completion on the East Boston Branch Sewer Relief, Rehabilitation of five Pumping Stations and Deer Island Wind Contracts.

Total FY10 capital spending was \$211.4 million, which was \$40.2 million or 16% less than the \$251.6 million budgeted including contingency of \$13.8 million. Excluding the contingency budget, the variance is \$26.4 million or 11% less than the \$237.9 million annual budget primarily due to a revised expenditure forecast for work on the North Dorchester Bay Pump Station and Sewers, schedule changes to the Cambridge Sewer Separation contracts, work expected in FY10 but completed in FY09 for the Blue Hills Covered Storage project, and delay of Watershed Land purchases.

FY10 underspending was less than FY09 and recent years' trends. Staff continue to evaluate and modify procedures and key assumptions to tighten variances, but actual contract awards and timing will always impact spending trends in any given fiscal year. Spending on several programs, such as the Community Managed CSO Program, Infiltration/Inflow Local Financial Assistance Program, Local Water Pipeline Improvement Loan Program and Watershed Land Purchases, account for approximately 11% of the total CIP. Given that these programs are not directly managed by the MWRA, it can be difficult to determine projected spending levels. This year these programs accounted for \$31.6 million or approximately 15% of the FY10 spending. It is important to note that capital funds are borrowed as needed, based on the construction fund balance and actual spending trends, not only on estimated budgeted expenditures.

Mr. Laskey reminded the Board that MWRA was dramatically under-spending for years and it raised questions on whether we were over-budgeting; staff has tightened up and improved that process.

FY2010 4TH QUARTER ORANGE NOTEBOOK

The "Orange Notebook" presents performance indicators for operational, financial, workforce and customer service parameters tracked by MWRA management each month. Significant outcomes for the quarter include the following:

For FY10, Deer Island annual maintenance targets were met for Preventive Maintenance, Preventive Maintenance Kitting, Operations Light Maintenance and for the first time, Predictive Maintenance.

For Field Operations, Light Maintenance and Preventive Maintenance were slightly less than targeted, but higher in the fourth quarter. Overtime spending was higher than budgeted as a result of the May 1st water main break and March rainfall events.

Total meter uptime remained above the target of 95%, with water revenue meters slightly below target due to ongoing construction projects and routine instrumentation down time and wastewater meters are back on target after the third-quarter storm events.

Laboratory Services maintained compliance with "DEP audit readiness" at four certified locations for the year. In the fourth quarter, Lab staff tested a month's worth of samples in two days in support of the May 1st water main break.

Water quality and demand complaints remained very low throughout FY10. Community water use was 6 MGD higher at the end of June than the previous year. Staff completed a new community database program to more quickly notify customer communities in the event of an emergency.

Board Member John Carroll asked why the MWRA is above the industry benchmark in overtime as a percentage of wages and salaries. Mr. Hornbrook said one reason is that MWRA keeps its staffing low and needed to bring extra support due to the high flows experienced during spring 2010. Ms. Madden noted that overtime and standby pay as part of the overall personnel costs will be analyzed as part of the staffing study.

PROGRESS OF BWSC-IMPLEMENTED CSO PROJECTS AND PROJECTED FINANCIAL ASSISTANCE THROUGH DECEMBER 2010

The Boston Water and Sewer Commission (BWSC) continues to make significant progress completing the Combined Sewer Overflow (CSO) projects it is responsible for implementing on schedules that comply with milestones in Schedule Seven of the Federal Court Order in the Boston Harbor Case.

David Kubiak, Senior Program Manager, stated that staff plans to transfer \$7,673,799 into the BWSC CSO account to cover anticipated eligible costs through December 2010. From 1996 through June 2010, BWSC spent a total of \$225.2 million for eligible CSO work funded by MWRA. BWSC has substantially completed the South Dorchester Bay, Stony Brook, Neponset River, Constitution Beach, Fort Point Channel and Bulfinch Triangle sewer separation projects and the Morrissey Boulevard Storm Drain Project, which together involved the installation of more than 245,000 linear feet (46 miles) of new storm drain.

Of the projects in this group, only the Reserved Channel is not yet complete.

The FY11 CIP budget includes \$302,157,000 for design and construction of the BWSC-implemented CSO projects in the MOU and FAA.

CLINTON WASTEWATER TREATMENT PLANT DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

Like the Deer Island Treatment Plant, the Clinton Wastewater Treatment Plant requires a National Pollutant Discharge Elimination System (NPDES) Permit to discharge into a receiving water. The Clinton Treatment Plant's NPDES Permit expired in September 2005 and has been administratively continued since that time. Staff expect that a draft NPDES Permit for the Clinton Wastewater Treatment Plant will be published for public comment shortly; EPA has provided MWRA with a pre-draft copy of the permit, which staff has reviewed. The permit will be issued jointly by EPA and MA DEP. The pre-draft permit contains new stringent effluent limitations for phosphorous that cannot be met by the existing plant. The expected phosphorous limitations are similar to those required of other wastewater treatment plants in the Nashua River watershed.

Meeting the phosphorous requirements would require the construction of additional treatment facilities at an estimated cost of \$3.5 million. (Operating costs would add approximately \$130,000 annually.) MWRA and members of the public will have 30 days (in some cases 60 days) to comment on the draft permit once it is issued. In order to preserve the right to appeal, MWRA must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting its position by the close of the public comment period. If MWRA wishes to appeal the final permit decision, it must petition the Environmental Appeals Board within 30 days of the issuance of the final permit decision. MWRA may appeal any issue that it provided comment on during the public comment period or any changes from the draft to final permit decision.

Mr. Hornbrook added that co-permitting is another issue that could be tied to the NPDES permit. Communities tributary (Clinton and Lancaster) would be listed with the MWRA. The Authority does not believe that it is appropriate for entities that did not apply for the NPDES permit, and are not owned or operated by the MWRA, to be included on its discharge permit. MWRA has relined its interceptor pipe, which is the only part of the collection system it owns and operates, and has thereby addressed the I/I for which it is responsible. MWRA believes that regulatory agencies should address I/I with the communities directly and not through the vehicle of MWRA's permit.

For example, DEP already has Administrative Consent Orders for I/I reduction with both the Town of Clinton and the Lancaster Sewer District.

MWRA Advisory Board Executive Director Joseph Favaloro stated that the Advisory Board has an attorney that is ready and willing to go to court on the co-permittee issue. DEP may say they are not using the MWRA for enforcement but when all is said and done, MWRA may be used as an instrument to impact communities. In many ways the co-permittee issue in Clinton's permit may be the way to challenge the issue at this point.

Mr. Barrera asked how the Advisory Board would pay for a lawsuit. Mr. Favaloro said the Advisory Board has a separate legal budget in a segregated account.

UPDATE ON WACHUSSETT RESERVOIR ALGAE TREATMENT AND COMMUNITY WATER QUALITY

Summer is typically the time of year that algae levels increase in the Wachusett Reservoir and present potential water quality problems. The presence of some types of algae can cause taste, odor or other nuisance problems. Additionally, coliform also tend to increase during the summer.

As with all healthy natural water bodies, many different algae are present in Wachusett Reservoir. Only certain species are of concern in Wachusett Reservoir and these are monitored and their levels quantified. The primary nuisance algae causing taste and odor in MWRA's water supply are *Anabaena* and *Synura*. Other potential nuisance algae include *Dinobryon*, *Chrysosphaerella* and *Urogljenopsis*. MWRA has an algae response plan; trigger levels for nuisance algae have been developed and once reached, consideration is given to the need to treat the reservoir with copper sulfate to reduce the algae levels. It is important to note that the decision to treat is not based solely on reaching trigger levels; consideration is also given to weather conditions, the presence of other algae, odors, and species-specific information to help in evaluating whether or not staff believe a bloom is imminent.

During this summer, all of the nuisance algae were present at one time or another but none reached trigger levels until August 2 when *Dinobryon* reached the trigger. In addition, *Synura* and *Chrysosphaerella* levels were elevated. Levels were monitored closely at this point with samples collected and analyzed every other day. On August 14, *Dinobryon* levels suddenly tripled and with this, the decision to treat was made. On August 15, staff injected 5,000 pounds of copper sulfate into the Wachusett Reservoir. Treatment was coordinated with the Department of Conservation and Recreation and the Department of Environmental Protection. No taste or odor complaints were reported before or after treatment.

Betsy Reilley, Senior Program Manager, Quality Assurance, noted that this was the first copper sulfate treatment MWRA has been required to make since 2006.

Each summer since the John J. Carroll Water Treatment Plant (CWTP) came online in late July 2005, low levels of total coliform bacteria have been detected at the plant's outlet and at the inlet to the City of Marlborough's distribution system. Although the small number of coliform positives at the CWTP outlet and the Marlborough entry point do not represent a health risk, they can present a regulatory risk. For some communities, as few as two coliform positives may result in an exceedance of the 5% maximum contaminant level or MCL. Water quality in the rest of the metropolitan area has been excellent since the CWTP went online; however, there were an unusual number of total coliform positives throughout MWRA's service area between August 2 and August 4. No communities exceeded the Total Coliform Rule limits for the month (other than Bedford, which is partially supply by MWRA and appears to have had a local source related issue). The reason for this occurrence is unknown but could be due to the higher temperatures observed this summer in samples.

Fully served communities with coliform positives during August 2-4 were: Belmont (2); Brookline (1); Somerville (1); Deer Island (1).

The copper sulfate treatment had negligible budgetary impacts. The chemical cost for 5,000 pounds of copper sulfate was approximately \$3,000 but the purchase was made a few years ago when the last reservoir treatment was conducted; the unused product was properly stored since that time. Beyond that, incidental costs for fuel for the boat and staff time are the only other related costs.

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 or requests for more information.