

**MWRA ADVISORY BOARD MEETING  
NOVEMBER 18, 2010  
CHELSEA OPERATIONS CENTER  
2 GRIFFIN WAY, CHELSEA, MA – 11:30 A.M.  
MINUTES APPROVED AT THE FEBRUARY 17, 2011 MEETING**

Thirty-three people were in attendance, including twenty-one voting members: Michael Bishop, BELMONT; John Sullivan, BOSTON; John Sanchez, BURLINGTON; Andrew DeSantis, CHELSEA; J. R. Greene, GUBERNATORIAL APPOINTEE; Bill Hadley, LEXINGTON; Jay Fink, LYNN; Charles McCollum, MARBLEHEAD; Cassandra Koutalidis, MEDFORD; Katherine Haynes Dunphy, MILTON; Wiff Peterson, NATICK; Lou Taverna, NEWTON; Bernie Cooper, NORWOOD; Peter Smyrnios, PEABODY; Jeff Zager, READING; Carol Antonelli, SOMERVILLE; John DeAmicis, STONEHAM; Bob Angelo, WESTWOOD; Zig Peret, WILBRAHAM; Michael Woods, WILMINGTON; Anthony Blazejowski, WOBURN.

Also present: John Carroll and Joseph Foti, MWRA BOARD OF DIRECTORS; Joe Lobao, WILMINGTON; Fred Laskey, Michael Hornbrook, Rachel Madden, Kathy Soni and Marianne Connolly, MWRA STAFF; Joe Favaloro, Cornelia Potter, Matthew Romero and Mary Ann McClellan, MWRA ADVISORY BOARD STAFF.

**A. APPROVAL OF THE SEPTEMBER 16, 2010 MINUTES OF THE ADVISORY BOARD**  
Chairman Katherine Dunphy called the meeting to order at 11:40 a.m. A Motion was made **TO APPROVE THE MINUTES FROM THE SEPTEMBER 16, 2010 ADVISORY BOARD MEETING**. It was seconded and passed by unanimous vote.

Chairman Dunphy introduced MWRA Executive Director Fred Laskey who welcomed everyone to Chelsea. Mr. Laskey stated that repairs have successfully been made to the secondary leaks that came out of the May water break.

**B. REPORT OF THE EXECUTIVE DIRECTOR**  
MWRA Advisory Board Executive Director Joseph Favaloro stated that the Advisory Board has hired a new Government Media Coordinator, Magda (Maggie) Atanasov, who will be starting on December 1. She comes to the Advisory Board from Speaker DeLeo's office and when she arrives she will begin to work on the Legislative Package and all the other components that are critical to the office.

Yesterday there was a presentation made on the Lead and Copper Rule Compliance before the MWRA Board of Directors. The results continue to be good, with the system as a whole continuing to be well under the action level; however, the communities of Marblehead and Brookline were not in compliance.

**C. PRESENTATION: MWRA WASTEWATER SYSTEM UPDATE** – Michael Hornbrook, MWRA Chief Operating Officer  
MWRA Chief Operating Officer Michael Hornbrook stated that the Combined Sewer Overflow (CSO) Program has reached its peak and is now on its down side as far as implementation and

spending. MWRA has already spent more than 80% of the CSO funds, with well over 90% of CSO projects completed. Significant benefits have been derived from this program.

One of the largest components still out there is the South Boston CSO Storage Tunnel/Pump Station/Force Main and Ventilation Building. The pump station is a 15 million gallon per day (MGD) station located at the Conley Terminal in South Boston. Once the CSO tunnel along the beach is filled or partially filled by rain events, it is stored instead of going to the beach. It contains both storm water and combined sewerage. This pump station will then take the volume that is in the station and pump it through Boston Water and Sewer interceptors to the MWRA's headworks and out to Deer Island for treatment.

The pump station, force main and ventilation building are scheduled for completion in May and will be brought online just prior to the major swimming season. This tunnel will capture CSO events up to a 25-year event; it will also capture storm water resulting in the South Boston beach being one of the cleanest urban beaches for water quality in the country.

The buried ventilation building, which had some controversy surrounding it, is at the upstream end of the CSO storage tunnel, near the Bayside Exposition Center, which was recently purchased by U-Mass-Boston. It is a below-ground chamber and the facility will house the ventilation fans and carbon absorption units for any air that exits from the tunnel system that will be treated prior to discharge. Construction is on schedule.

The East Boston CSO Project is also substantially complete. It was a micro-tunneling project by Barletta that installed two and one-half miles of new sewers in East Boston, which will now provide enough capacity to drastically reduce the CSO discharges into the inner harbor. This was a difficult project to undertake because it is in an extremely urban area with a dense population. A lot of the utilities were unmarked. Even with a no dig alternative such as micro-tunneling, utilities were still a significant issue. This project has been online since July 2010.

The other no-dig solution implemented in East Boston was pipebursting by Caliacco. In this particular area, the MWRA owns some small-diameter clay pipe, which ran through East Boston. The new pipe is pulled through the clay pipe and gradually breaks the clay and is replaced with a large-diameter pipe.

As a result of these two projects and a project completed several years back, which was a cured-in-place liner, the MWRA has either rehabilitated or replaced all of its pipes in East Boston and has seen some drastic reductions in CSOs associated with that.

The Braintree-Weymouth Section 624 Rehabilitation is in Weymouth on Route 3A just after crossing the temporary Fore River Bridge. The Authority owns a large interceptor and at this point the Hingham force main comes in. Staff has discovered some significant hydrogen sulfide corrosion in its line. This was part of the Braintree-Weymouth relief facilities of seven projects. A temporary force main had to be installed for the Hingham discharge so that the original section could be rehabilitated. This was a large-diameter pipe that was in tough structural shape. The liner was just completed last week.

Parts of Deer Island are well over fifteen years old now. The 66 miles of chain on the primary and secondary clarifiers had to be replaced; this job is 62% complete. Deer Island is large and the asset protection projects are also large and expensive.

The Deer Island Heat-Loop Replacement Project is a piping system throughout Deer Island that is used for hot water, plant hot water and to keep the digesters at a level that will enable the biological process to perform. After more than 15 years, staff discovered that the original heat-loop system on the island that was buried was having some significant corrosion in the pipe. Construction of a new heat-loop system is underway and it is about a mile in length; the new pipes are being placed in the pipe galleries as much as possible so that staff will have easy access to them and/or the pipes will be put overhead, rather than bury them because of the corrosive soil on the island. This job is about 85% complete.

Deer Island is like a small city. As with the cities and towns, Deer Island has underground utilities such as electrical, water and sewer, and also has rubbish collection. Deer Island has all the issues that cities and towns have and now it is requiring maintenance, due to its age, harsh conditions (salt water environment) and the corrosive environment of a treatment plant.

The Deer Island Steam Turbine Generator collects digester gas from the digester system and produces steam, which in turn generates electricity and heat in the heat-loop system. This is an optimization project where the work is just beginning and should be finished by the end of the year. Staff is working to capture additional steam and generate an additional 5.5 million kilowatts of electricity that currently cannot be captured. This is part of the overall program to generate as much power as possible and to use alternative power to reduce costs.

MWRA has also signed a solar power agreement with the state. In addition to Deer Island having its own solar panels, MWRA has also entered into a power purchase agreement with the Commonwealth where a vendor will come in and install and maintain solar panels on MWRA property and the Authority gets to purchase the electricity at an extremely reduced rate, considerably cheaper than what can be bought now on the open market.

Another interesting alternative energy source is a new wind turbine called FloDesign. It is not the traditionally long extended three-blade wind turbine, but rather a prototype design that has a compressed area that funnels the wind and looks and performs like a jet engine. Based on the manufacturer's testing, it is 33% more efficient and takes less space than a traditional wind turbine. Under this deal, MWRA is providing space at Deer Island. This will produce 100 kilowatts and MWRA will receive the 100 kilowatts free. FloDesign is installing the wind turbine at its own expense and will maintain it; they are also responsible for removal. FloDesign is using it to test out their field design and marketing. If it proves successful, MWRA will be able to utilize that design in other locations.

The Advisory Board has asked what the MWRA is doing to protect its assets after spending nearly \$7 billion to build them. From the FY09 to FY13 period, MWRA had \$29 million for asset protection. For FY14 to FY18, \$124 million has been budgeted for maintenance projects. Budgeting for the residuals asset protection program goes from \$5 million to \$60 million so the shift toward asset protection versus court-mandated projects is visible.

Mr. Hornbrook said the MWRA has four remote headworks, three of which are on the north system; those are at Chelsea Creek, Columbus Park in South Boston, and Ward Street near Wentworth. These facilities were built in the 1960s and 75% of the flow to Deer Island comes through these three buildings, drops into the tunnels and then goes out to Deer Island for treatment. The purpose of these three buildings is to screen the flow to protect the pumps at Deer Island. MWRA has gotten through this screening process full shopping carts, railroad ties, plywood, a set of stairs, along with a lot of other material. These are key facilities and they were

partially updated in the 1980s and MWRA plans to do a full rehabilitation of these three facilities; construction alone is \$81 million. This project will be challenging because flow will continue to go through the facilities while they are being rehabilitated.

The Outfall Monitoring Program, which is part of the MWRA's NPDES permit, has required nearly \$3.5 million in spending per year on monitoring the impacts of the outfall. This monitoring has taken place for the last nine years since the outfall came online and for eight years prior to the outfall coming online. Over that time period, no adverse impacts have been seen and dramatic and beneficial increases in the water quality within Boston Harbor have resulted.

Over time, MWRA has been requesting reductions in the monitoring requirements from the regulatory agencies. It is one of the most extensive outfall monitoring requirements in the country and staff believes the MWRA has answered the questions sufficiently associated with Stellwagen Bank and endangered species, such as whales. Over the course of the years MWRA has been petitioning for and getting some reductions. A petition for some significant reductions was approved recently and MWRA believes, in scope, that the new monitoring program will be better and more efficient. MWRA has been lobbying the independent outfall monitoring panel, EPA, DEP and the Division of Marine Fisheries and just found out this week that Marine Fisheries has approved the MWRA's reductions, which will result in about \$850,000 in savings on reductions in the outfall monitoring plan. MWRA believes it will give better results and it is a more efficient plan.

The Clinton NPDES permit is interesting to the communities for two reasons. One is increased nutrient removals; the Clinton plant discharges into the south branch of the Nashua River and MWRA has new nutrient removal levels. This is an issue to the members because it is going to cost between \$3 and \$4 million in capital costs and additional operations and maintenance costs. The Town of Clinton does not reimburse MWRA fully for the costs of operating the treatment plant and the reimbursement has a \$500,000 limit; whatever cost is not reimbursed by the Commonwealth is made up by member communities and that is based upon the historical issue of creating the Wachusett Dam and the impacts the dam had on the Town of Clinton.

Co-permittees are another issue. The draft NPDES permit lists Lancaster and Clinton as co-permittees. MWRA has commented on the draft permit that it is not appropriate; Clinton and Lancaster did not even apply to be a co-permittee nor did they sign a NPDES application. They do not own or operate the plant and the MWRA does not own or operate their collection systems. Staff believes this is going to be an issue on the Deer Island NPDES permit as well. The Advisory Board has already set aside funds for legal issues should it be necessary. The reason that EPA and DEP want communities listed as co-permittees on the NPDES permit is that they want to do more enforcement against the local communities in regard to Sanitary Sewer Overflows and I/I removal. If a community is named as a co-permittee, the regulators will have an easier enforcement action against the community than indirectly through violations of the Clean Water Act, which is what they are doing now. MWRA has objected to including communities as co-permittees on the draft permit and will most likely be appealing it as well. The Advisory Board has commented as well.

The Deer Island NPDES permit continues in effect, even though it has expired, until a new permit is issued. The regulators have verbally told MWRA that they will be listing communities as co-permittees will be in the new permit.

Residuals processing has \$60 million budgeted for the future. The contract for the pellet plant at Fore River expires in FY2016. A study will begin soon on what the MWRA should be doing in its place. Should the pelletization process continue? What does the regulatory outlook look like? What are the new technologies? There are some good ideas out there and if there is any opportunity to reduce volumes and costs, staff wants to take a look at them and will keep the Advisory Board informed.

Finally, there seems to be a concentrated effort by both EPA and DEP to do increased enforcement on Sanitary Sewer Overflows (SSOs) on member communities. MWRA has been working with some communities that have come under that enforcement action, providing them with information. EPA and DEP can do enforcement through the storm water permit or through alleged violations of the Clean Water Act. Recently one community enforcement action was based on non-reporting. MWRA advises communities that if they have an SSO at any time, report it. DEP has a form that is easy to fill out. If the SSO is reported, you are on a lot firmer ground for defense of the SSO occurring.

MWRA is preparing a scope of services on its north tributary area for a north system optimization study; this is a hydraulic study that will be going out for consultant services to see where any of the interceptor systems can be optimized to help get more flow to the treatment process to hopefully reduce SSOs on the smaller scale storms and potentially if there are locations where an SSO is going to occur because it is beyond the capacity of the system, is there a way to control the SSO better to keep it from going into basements and streets to minimize the public health and environmental impacts.

#### D. COMMITTEE REPORTS

Executive Committee – Katherine Haynes Dunphy

##### ❖ ACTION ITEM: MWRA ADVISORY BOARD 2011-2012 LEGISLATIVE PACKAGE

Mr. Favaloro stated that staff provided a presentation on the Advisory Board's 2011-2012 Legislative Package at last month's meeting. With approval from the Advisory Board, this package will be filed in January. The next step will be, when Maggie comes on in December, staff will work with the MWRA to find legislators to sponsor and then file the legislation.

There was a spirited discussion at the Executive Committee relating to the Clinton Wastewater Treatment Plant. Is there a way to recover funds for operation of this plant? Is there a different approach to try to get to a better position on the Clinton issue? That is not part of today's package; however, language can be filed at any time if an approach is determined.

A Motion was made **TO APPROVE THE MWRA ADVISORY BOARD 2011-2012 LEGISLATIVE PACKAGE**. It was seconded and passed, with J. R. Greene abstaining from the vote.

##### ❖ PREVIEW: THE MWRA ADVISORY BOARD'S 2010 ANNUAL WATER AND SEWER RETAIL RATE SURVEY

Matthew Romero noted that due to the Advisory Board's move, the Annual Water and Sewer Retail Rate Survey had a later start this year. Information has been received from all of the MWRA communities and information is still being solicited from the non-MWRA and national communities.

In FY10 the MWRA final wholesale assessments increased 3.8%. The 2009 Retail Rate Survey listed average MWRA community household charges ranging from \$797 at 60,000 gallons to

\$1,196 at the 90,000 gallon standard that the Advisory Board uses as a benchmark. The average MWRA retail rate increase was about 5.3% and over the ten years from 1999-2009 it increased by 72% using the 90,000 gallon standard.

This year, the final wholesale assessments increased 1.49% in FY11, the lowest increase since 1996. The preliminary results of the 2010 survey responses list average MWRA community household charges ranging from \$834 at 60,000 gallons up to \$1,252 at 90,000 gallons. The average retail rate increase for the system at 90,000 gallons is 4.4%, which is also the lowest retail rate increase from communities in nine years. Using the ten years from 2000 to 2010, MWRA retail rates have increased 76%.

The combined annual water and sewer retail rates from 1991 averaged \$443 per home and \$1252 in 2010, using the 120 HCF or 90,000 gallon standard. The 120 HCF or 90,000 gallons is the American Water Works Association's standard and part of the reason the Advisory Board uses that standard is to have one constant number to track. In the recent surveys, staff has included the DEP actual-use data more prominently; this information was provided to DEP from each community about their average household usage.

The average DEP usage in 2007 was 85.7 hcf; in calendar year 2008 that fell to 81.2 hcf; in calendar year 2009, which is the data used in this year's survey, it fell again to 73.4 hcf. Data reported by the communities is showing the trend that the MWRA has been seeing system-wide as well, which is that consumption continues to go down and costs continue to increase for everyone.

In the 2010 residential costs compared to other U.S. cities, the average is \$922 based on the preliminary information received. Proofs will be sent to communities for review and after confirmation it will be sent to the printer.

Mr. Favaloro added that this shows there is a direct correlation between MWRA assessments and retail rates. Further, this shows that water sales are plummeting, which results in less dollars coming into the communities amplifying the need for a responsible System Expansion Policy to spread the base.

**Finance Committee** – Bernard Cooper

❖ **CIP/CEB UPDATE**

Cornelia Potter stated that so far this year staff has been monitoring both the capital and current expense budget spending patterns.

Starting with the capital program, spending through the first four months of the year has been just over \$50 million as compared to \$63 million budgeted, for a difference of about 20%. Much of this lower than budgeted spending is for the CSO Program where there is a lot of activity but there is lower or later spending than the Authority had assumed in building the budgets, both on the Authority managed projects and the timing of distributions for certain of the community-managed CSO projects. This category of under-spending can be expected to close as the year progresses.

On the current expense side, the Authority is reporting spending of \$185 million or \$9 million under budget for the year-to-date. Much of that lower spending is due to continued and unprecedented low variable rate interest rates (which also contributes to lower investment income), which translates into a year-to-date surplus of nearly \$6.5 million for variable rate debt

alone. While there is no guarantee that these rates will stay this low, current accruals point to the potential of a measureable surplus by the end of the year.

While these current patterns of spending are occurring this fiscal year, the Authority is well underway in preparing both the capital and current expense budgets for fiscal year 2012. On the capital side, staff is already in the process of reviewing preliminary CIP numbers and reviewing those potential numbers with compliance to the capital spending cap. The next step is preparation of the staff summary for the next Board meeting. In December the Authority will be requesting the Board to approve transmittal of the CIP to the Advisory Board for its regular annual review.

On the Current Expense Budget side, staff has begun the direct expense budget requests from each department with draft's due to the budget department over the next couple of weeks. By mid-December, preliminary numbers and possibly a rate revenue requirement are scheduled to be developed followed by updated planning projections. This budget traditionally goes to the Board of Directors in February for approval to transmit to the Advisory Board for review.

Debt service continues to dominate and put pressure on the rates. There will be a special meeting of the Executive Committee on December 10 to discuss the direction of debt service and projections for future payments and future rates. Members are welcome to attend.

**Operations Committee** – Jay Fink

❖ **STATUS: CLINTON DRAFT NPDES PERMIT**

Mr. Favalaro said Mr. Hornbrook talked about the status of the NPDES draft permit for Clinton and staff did make its comments via a letter.

**E. ADJOURNMENT**

**A MOTION WAS MADE TO ADJOURN THE MEETING AT 12:46 P.M.** It was seconded and passed by unanimous vote.

Respectfully submitted,

Lou Taverna, Secretary