

Arlington • Ashland • Bedford • Belmont • Boston • Braintree • Brookline

Dedham • Everett • Framingham • Hingham • Holbrook • Leominster

Medford • Melrose • Milton • Nahant • Natick • Needham • Newton

Revere • Saugus • Somerville • South Hadley • Southborough • Stoneham

Watertown • Wellesley • Weston • Westwood • Weymouth • Wilbraham



Burlington • Cambridge • Canton • Chelsea • Chicopee • Clinton

Lexington • Lynn • Lynnfield • Malden • Marblehead • Marlborough

Northborough • Norwood • Peabody • Quincy • Randolph • Reading

Stoughton • Swampscott • Wakefield • Walpole • Waltham

Wilmington • Winchester • Winthrop • Woburn • Worcester

**MWRA ADVISORY BOARD MEETING
NOVEMBER 15, 2012
CHELSEA OPERATIONS CENTER
TWO GRIFFIN WAY, CHELSEA, MA**

MINUTES APPROVED AT THE JANUARY 17, 2013, MEETING

Forty-five people were in attendance, including twenty voting members: Michael Rademacher, ARLINGTON; Michael Bishop, BELMONT; John Sullivan, BOSTON; Jay Hersey, BROOKLINE; John Sanchez, BURLINGTON; Andrew DeSantis, CHELSEA; J.R. Greene and Barbara Wyatt, GUBERNATORIAL APPOINTEES; Dan O'Neill, LYNN; Charles McCollum, MARBLEHEAD; Cassandra Koutalidis, MEDFORD; Katherine Haynes Dunphy, MILTON; Lou Taverna, NEWTON; Michael Coffey, QUINCY; Jeff Zager, READING; Nick Rystrom, REVERE; John DeAmicis, STONEHAM; Carol Antonelli, WAKEFIELD; Jeff Bina, WEYMOUTH; Joe Lobeo, WILMINGTON.

Also present: Andrew Pappastergion and Joseph Foti, MWRA BOARD OF DIRECTORS; George Burnell, LEXINGTON; Joe Welch, NORWOOD; Davis Scribner, PEABODY; Ken Morse, WEYMOUTH; Duane LeVangie and Beth Card, DEP; Phil Jasset, UCANE; Andreae Downs, WAC; Lexi Dewey, WSCAC; Fred Laskey, Michael Hornbrook, Rachel Madden, Ria Convery, Rick Trubiano, Pam Heidell, Steve Estes-Smargiassi, Kevin McCluskey, Kathy Soni, MWRA STAFF; Joe Favaloro, Matthew Romero, Maggie Kenneally, Cornelia Potter and Mary Ann McClellan, MWRA ADVISORY BOARD STAFF.

A. APPROVAL OF THE OCTOBER 18, 2012 MINUTES OF THE ADVISORY BOARD

Chairman Katherine Haynes Dunphy called the Advisory Board meeting to order at 11:36 a.m. A motion was made **TO APPROVE THE OCTOBER 18, 2012 MINUTES OF THE ADVISORY BOARD**. It was seconded and passed by unanimous vote.

B. REPORT OF THE EXECUTIVE DIRECTOR

MWRA Advisory Board Executive Director Joseph Favaloro stated that expansion of the water system has been a priority for both the Authority and the Advisory Board. Staff will continue to meet with Tri-Town (Braintree, Holbrook and Randolph) and Southfield regarding their joining the MWRA water works system. Additionally, North Reading has filed an Environmental Notification Form, which states that the Town of North Reading intends to pursue full-time membership as an MWRA water system customer.

C. PRESENTATION: SUSTAINABLE WATER MANAGEMENT INITIATIVES (SWMI) AND WATER MANAGEMENT ACT – Duane LeVangie, DEP Water Management Act Manager and Beth Card, Assistant Commissioner, MA DEP

Beth Card, Assistant Commissioner for the Bureau of Resource Protection, stated that the Massachusetts Department of Environmental Protection (DEP), the Department of Fish and Game and the Department of Conservation and Recreation (DCR) have been in partnership on Sustainable Water Management Initiatives (SWMI) and the Water Management Act.

SWMI was started in late 2009 for a number of reasons. Massachusetts is generally a water-rich state but there are periods of time where human and ecological needs can't be met so DEP must limit public use and enjoyment of the water resources. The conflict comes mostly in the summer months when human demand is highest and stream-flow can be at its lowest.

Ms. Card stated in all honesty, the allocation system that is implemented at DEP under the Water Management Act needs to be improved. In the past, permit decisions made under the Water Management Act have led to costly litigation and a lack of certainty amongst all of the parties on what the expectations are and how DEP intends to implement the Act for permitting processes. DEP staff plans to use SWMI as an opportunity to make the program better.

There are two key components of the initiative: 1) there is the safe yield component, which is the maximum dependable amount of water that can be withdrawn during a drought period and how the safe yield was established for the watersheds in the Commonwealth; and 2) one of the most exciting pieces of the initiative is the stream-flow criteria where stream-flow criteria is being used to set goals associated with flow alteration and how a mitigation process could be used to offset the impact of water withdrawals in the stream-flow criteria.

The focus would be to maintain healthy streams and improve degraded areas over time. Over the last several years, there have been more than 50 meetings with technical advisory groups, public water suppliers, watershed groups, advocacy groups, and academia weighing in on the policy framework that DEP is working on. There is also some good news for MWRA communities as well. First, these will be regulations that will address permanent volumes for permits under the Water Management Act. Also a key component of the SWMI framework encourages non-MWRA communities to evaluate other feasible alternatives of water sources, which for many would be the MWRA.

Duane LeVangie, DEP Water Management Act Manager, stated that SWMI might be something that the MWRA can benefit from. The key achievements in SWMI merge the science developed over the last ten years in Massachusetts; that science will be brought down to roughly 1,400 sub-basins in Massachusetts. That is merging fish data, withdrawal data and United State Geological Survey (USGS) work that has been done over that period of time. This science is nation-leading.

One of the exciting parts is stream-flow criteria. Resolution of safe yield is a big legal problem that staff hopes to address with this initiative. For 25 years, the Water Management Act has required DEP to identify the acceptable safe yield in a watershed or basin. That has been a difficult legal policy and scientific question for 25 years. Through this process, staff hopes to resolve that problem and come up with a safe yield across the Commonwealth. This is a merging of policy and science. The goal is to maintain healthy streams and improve degraded ones over time. There are 27 major watersheds in the state.

There are two basins in Massachusetts that have current allocations that exceed safe yield; those are the Ipswich River Basin and the Ten-Mile River Basin, which is in the Attleboro/North Attleboro and Rhode Island border area. The formula also shows that many of the basins are statistically below their allocation levels as well.

Water withdrawals are only part of this issue; impervious cover is a significant driver in this as well. DEP staff has proposed that the more water that is needed, the more that area needs to be preserved. In other words, the mitigation is commensurate with the impact.

In the Water Management Act, tiers have been set up for permit reviews. The tiers are based on what is asked of it. For example, a tier 1 community is one that is not asking for any more water; they have a permit and want to maintain the volumes they have and they are not looking for more. There is a set of eight standard conditions that apply to all permittees. These are conditions on water use efficiencies (65 gallons per person per day), 10% unaccounted for water, and water use restrictions. If you have a water management permit, you have standard conditions one through eight.

If you are not asking for more water but are in an area where flow levels are significantly impacted or you have a cold-water fishery, then DEP asks that you manage your system better environmentally, perhaps pump this well, versus that well; use an alternative source; or find a way to more beneficially operate the system. Then they would minimize their existing uses. Minimizing would be steps that can be taken to lessen that impact such as additional conservation or changing operational functions.

Tiers 2 asks for a little more water; tier 3 asks for a lot more water but is not changing the flow levels. Communities that fall into tiers 2 and 3 are expected to comply with conditions 1 to 8 that everyone gets. Tier 3 would be asked to look for feasible alternatives. This is where MWRA could come into play.

Tier 4 are systems that are asking for more water but whether it be a lot or a little, it would change a flow level. They would need to identify if there is a feasible alternative and must minimize and mitigate that additional ask.

When talking about minimizing or mitigating, there are a lot of things people can do to improve their water management including demand management and rate structures to encourage conservation. Enterprise accounting is viewed as a best management practice for most water systems. DEP is trying to come up with a numbering system that would give communities points if they adopt practices that DEP encourages that would be commensurate with the impact. DEP would encourage things that keep water in the basin.

Massachusetts has more dams per square mile than any other state. Some are mill dams and others are power dams. Dam removal in this case would improve the ability for fish to migrate up and down stream.

Ms. Card stated that in doing the SWMI initiative, one thing has been a bit unusual for a DEP regulatory process. DEP has been piloting the SWMI framework in four different communities, Shrewsbury, Amherst, Danvers/Middleton and the Dedham/Westwood Water District. They are going through the initiatives and determining how it impacts their communities. Staff will take what it learns from this effort and use that information in writing the regulations. Drafting of the regulations will happen over the course of the next year.

Mr. LeVangie noted that DEP has \$1.2 million to issue grants to implement plans for mitigation and minimization. Proposals need to be submitted to DEP by December 17. It is for public water systems and municipalities, with extra credit given to partnerships between municipalities or environmental groups to do some of these measures.

Ms. Card said with this initiative, DEP is trying to carefully strike a balance between water supply needs and environmental protection. Staff also views this as an opportunity for MWRA and the communities that may be looking for an alternative option.

D. COMMITTEE REPORTS

Executive Committee – Katherine Haynes Dunphy

❖ ACTION ITEM: 2013/2014 MWRA ADVISORY BOARD LEGISLATIVE PACKAGE

Mr. Favaloro noted that a full presentation was made last month on the Advisory Board's Legislative Package. Staff is seeking a vote to move forward with the finalized Legislative Package to be filed in January.

Staff has met with a firm to add some "meat" to one of the initiatives being brought forward on economic development. The study would focus on water and sewer infrastructure and its impacts on economic development in the Commonwealth. Staff has already begun to do some of the groundwork.

A motion was made **TO APPROVE THE 2013/2014 MWRA ADVISORY BOARD LEGISLATIVE PACKAGE**. It was seconded. The motion passed, with J.R. Greene opposed. [Mr. Greene was specifically opposed to Item 4, *An Act to Eliminate Duplicate Payments for the PILOT Program.*]

❖ PRESENTATION: 2012 ANNUAL WATER AND SEWER RETAIL RATE SURVEY – Matthew Romero, Manager of Policy and Finance

Manager for Finance and Policy Review Matthew Romero offered preliminary retail rate information that has been received from the communities. Proofs will be sent out to the communities before the actual document can go to print so these numbers are not yet final.

In FY12, the MWRA final wholesale assessments increased by 3.49%. The average MWRA community household charge ranged between \$865 and \$1,298. The range is based on what the Authority typically sees in the system of 60,000 gallons up to the American Water Works Association standard of 90,000 gallons. The Advisory Board uses the 90,000 gallon standard to track the rates across time. On a monthly basis, the average increase was between \$72 and \$108 per month. The average retail rate increase was about 3.5% and over the ten-year period from 2001 to 2011, there was a 73% increase in retail rates at the 90,000 gallon standard. This averages out to about a 5.6% increase on an annual basis across that ten-year period. The Consumer Price Index average had an increase of about 2.5% on average over that same period.

For FY13, the final wholesale assessments for MWRA increased 3%. The range for household charges on an annual basis was \$897 to \$1,346 and on a monthly basis \$75 to \$112. The average community retail rate increase is 3.8% currently; to put that 3.8% increase in perspective, this is the second year in a row that 27 communities had no increases. From the ten-year period 2002 to 2012, retail rates reflect a 70% increase, for an average annual increase of 5.4%. In terms of dollars from 2002 to 2012, there was an increase of \$552 on average for combined water and sewer residential costs in the MWRA system.

In 2012, water costs averaged \$512 across the system for communities receiving wholesale water from the MWRA. In 2012, the MWRA sewer costs averaged \$874 across the system.

Finance Committee – Bernard Cooper

❖ **STATUS UPDATE OF THE JOINT MWRA/MWRA ADVISORY BOARD LONG-TERM RATES MANAGEMENT COMMITTEE** – Rachel Madden, Director of Administration and Finance

Mr. Favaloro stated at the Advisory Board's urging the Authority convened a Long-Term Rates Management Committee that consisted of two representatives for the Advisory Board (Katherine Dunphy and John DeAmicis), Advisory Board staff, members of the Board of Directors (Andrew Pappastergion, Joel Barrera and Jim Hunt) and Authority staff. The committee met twice and took a pause to go back to membership to provide a sense of what has come forward.

Director of Administration and Finance Rachel Madden stated that the ultimate goal of this Committee was to take a look at the MWRA's rate projections through 2022, look at the tools available to manage those rate increases and ultimately try to give some direction on the appropriate levels and where the released reserves should be utilized.

Between FY13 and FY22, there is a projection of increases totaling \$333 million, or nearly a 60% increase.

The committee urged the Authority to control its costs. The Authority does self-generation of electricity, reduced its vehicle fleet, level-funded direct spending and reduced its head count. One of the greatest drivers of direct spending is Wages and Salaries. The Authority has taken some dramatic steps to lower its headcount since 2001, reducing 373 persons. Direct spending is not what is driving the rate increases.

Debt service is driving the rate increases. Currently, the MWRA has \$5.8 billion of outstanding debt and the annual debt service for FY13 is \$360 million.

What tools does the Authority have to whittle this debt down? Debt Service Assistance used to be available, but has dropped off. Since 2006, staff has defeased \$257 million worth of debt. This has been in an effort to apply a multi-year rates management strategy and through this effort the MWRA has avoided the lure of just throwing a defeasance at one fiscal year to get to a zero but then paying the price during the next year.

Another tool employed is the \$5 billion refunding of outstanding debt for a present value savings of \$250.1 million. Staff has also restructured debt and moved it out into future years to provide some relief; however, there is a cost to restructuring in that the longer you push it out, the more you pay for it. Staff actively manages this to try to shave the increases down as the years get closer.

The tools that remain are the use of surpluses that are a result of the benefit of current low interest rates. Use of rate stabilization and bond redemption funds are also used to manage the rates.

Another huge tool that is coming is the release of reserves based on changes to the MWRA's bond indenture. There will be about \$112 million released by approximately FY16. Some of those funds are cash. The largest portion, at \$67 million, is from the debt service reserve. Those were originally bond proceeds so there are limitations on how these funds can be used. When those reserves are released, they have to be applied to the debt they were issued for. The Community Obligation Revenue Enhancement and Renewal and Replacement Reserves were cash funded so the

Authority has the opportunity to have discretion on how that \$45 million can be applied to help manage the rates.

The Rates Committee challenged Authority staff to do a gap analysis based on what it would take to get rate increases to a consistent 3.5% increase through 2022. In the out years, there would be a huge gap that staff would have to close.

Staff proposed the following scenarios: Scenario 1: All Released Reserves (\$112 million) would be used to pay off debt; Scenario 2: Rate Stabilization and Bond Redemption at higher levels than the \$12 million threshold and use them over five years and all reserves released would be used to pay off debt; Scenario 3: Use a portion of the cash reserves released to pay off the pension liability early and redirect budgeted pension payments (2017 to 2024) toward the Other Post-Employment Benefits (OPEB) liability. All bond and remaining cash reserves released would be used to pay debt. Scenario 4: Rate Stabilization and Bond Redemption used over five years, pension paid off, and redirect budgeted pension payments (2017 to 2024) toward OPEB. All bond and remaining cash reserves would be used to pay debt.

Even after the reserves release, there will still be huge gaps. For example, in 2017, even after applying \$25 million of the reserve release, there would still be a \$44 million gap to get to a 3.5% rate increase. Even with all the scenarios presented, there is no one solution that is a “magic bullet.”

Operations Committee – Lou Taverna

❖ UPDATE: TOPICS FOR NOVEMBER 13TH MEETING IN NEWTON

Mr. Favaloro reported that an Operations Committee meeting was held last week on the topics of sewer metering and wholesale water rate methodology. Both of these are significant topics that will impact the communities; community participation and input is important.

❖ HURRICANE SANDY FACTS AND FIGURES

MWRA Executive Director Fred Laskey stated that the weather forecast is a driving force for the Authority. The sophistication of the modeling for the forecasts has improved dramatically. The Authority used to get information three to five days out but now staff is able to get information eight to ten days out. The MWRA participates in National Weather Service briefings as the storms get closer and also has its own forecasting service that breaks down when it will rain in specific timeframes for staffing purposes. Wind and rain are important elements to the Authority.

If heavy rain is predicted, the first thing staff does is look at where the reservoirs are in terms of fullness because it takes the longest amount of time to draw them down. Staff can't control the Quabbin because it is so large but we stopped the transfer from Quabbin to Wachusett and began dumping water out of the Wachusett. Water was released from the Sudbury and Chestnut Hill systems as well.

As the storm comes closer, critical equipment is tested and fuels and chemicals are topped off. Also, staffing requirements are reviewed to ensure that the appropriate staff is available to handle any issues. Portable pumps are pre-positioned in areas that have been known to flood.

The Authority has a tiered approach to its community communication system. Email updates are sent out to the communities in stages. Staff has the ability to send out information to various

departments, including water, sewer, DPW, emergency preparation people and then the Chief Executive of the community. The Chief Executive is only contacted if there is a hurricane warning. Additional updates are sent out if there are major issues. The Authority's web page is also updated on a regular basis. The weather forecast is posted on the home page and regular updates are provided. MWRA is also on Twitter.

The Authority has an Emergency Operations Center at its Chelsea facility that is sophisticated and flows and elevations are tracked from this location. During Hurricane Sandy, the rain was not as much of an issue as the wind.

During the storm, the MWRA did have a lot of problems with power outages; however, the Authority had its generators up and running and the loss of electricity was not an issue for the water or sewer treatment plants.


There was some physical damage with a roof blowing off of a building at Deer Island and about 100 trees that came down that needed to be cleared out to get into the MWRA facilities; a lot of the trees were in the MetroWest area.

The total cost of the storm for the Authority was about \$300,000, of which \$107,000 was for overtime at Deer Island, Clinton, metro operations and western operations. The diesel fuel consumed was about \$106,000. In a storm, staff activates the large generators at Deer Island to run in tandem with the grid. If the wind is over a certain speed and the flows are over a certain elevation, the generators are turned on because of the potential for a power failure. The actual fuel used was \$148,000 but the MWRA avoided \$51,000 in costs for buying electricity from the grid. The Carroll Water Treatment Plant was also taken off the grid, which was a good thing because it lost power for an extended period of time. The fact that staff had pulled the treatment plant off the grid and was already on the generators made it seamless. It was \$75,000 to repair the roof at Deer Island and a pump was rented for Clinton; the MWRA may be buying a pump for that location.

E. ADJOURNMENT

A MOTION WAS MADE TO ADJOURN THE MEETING AT 1:13 P.M. It was seconded and passed by unanimous vote.

Respectfully submitted,



William Hadley, Secretary