



WSCAC Meeting

Location: MWRA Facilities
Southborough, MA
October 13, 2015 – 10:00 A.M.

Members in Bold in Attendance:

Whitney Beals, WSCAC Chair, NE Forestry
Elie Saroufim, Boston Water & Sewer Commission
Martha Morgan, Nashua River Watershed
Dona Motts, MA League of Women Voters
Kurt Tramosch, Wayland Wells
Terry Connolly, Town of Ware & Trout Unlimited

Andrea Donlon, CRWC
Gerald Eves, Trout Unlimited
Michael Baram, BU & CLF
Paul Lauenstein, NepRWA
Martin Pillsbury, MAPC
Bill Fadden, OARS

Non-Members in Attendance:

Lexi Dewey, WSCAC staff
Andreae Downs, WAC
Israel Alvarez, MWRA

Heidi Waugh, WSCAC staff
Steve Estes-Smargiassi, MWRA
Georgeann Kerr, DER

Quinapoxet Dam: Dam Removal Investigation-Georgeann Kerr, Division of Ecological Restoration

Georgeann Kerr introduced herself to the committee and provided a brief overview of the Division of Ecological Restoration (DER). She stated that DER focuses on restoring aquatic ecological systems that have been degraded by human stressors. DER is pro-active and non-regulatory; proponents interested in specific projects approach the Division and the Division then coordinates and facilitates the restoration project.

Georgeann explained that the MWRA and DCR approached DER about the Quinapoxet Dam in West Boylston as a potential dam removal project. The Quinapoxet is one of three thousand dams in Massachusetts. The vast majority of dams in the state are non-utilitarian.

Paul Lauenstein asked, in respect to size, what constitutes a dam? Georgeann replied that some of the dams are quite small; structures with engineered integrity are counted as dams whereas piles of rocks are not.

Kurt Tramosch questioned if beaver dams are included in the count. Georgeann said that DER does not look to do beaver control.

Georgeann returned to her discussion surrounding the necessity for dam removal projects. Dams that serve no purpose – in terms of the need to control water flow – interrupt flow, prevent wildlife from migrating upstream, and impede sediment from moving downstream. The impediments can alter water temperature and create low levels of dissolved oxygen.

She then discussed the process of understanding the Quinapoxet Dam. During the site investigation, it was determined that the dam was mostly likely installed as an incretion dam: the river was widened and flattened to allow river sediment to slow down and spread out. DER has been unable to find a management plan that includes sediment removal. From DER's present-day perspective, the rationale for the initial dam construction is not entirely understood, and the dam serves no deliberate purpose.

Georgeann said that water quality from a drinking water supply protection standpoint is of utmost importance to the team. DER estimates that the project could potentially remove 5000 cubic yards of material; that would necessitate that testing be done on one sample per 1000 cubic yards. DER anticipates additional sampling.

Kurt asked if any excavated sediment may encapsulate contaminants from the railroad, as the project runs along a stretch of the Rail Trail. Kurt asked if DER is testing along the rail with this possibility in mind. Georgeann said the construction would be extremely targeted and any sediment excavation would occur directly in the riverbed. DER desires minimal excavation.

Georgeann then addressed species concerns and the issue of fish passage. There are several warm water lake species, freshwater stream species, and migratory species including a variety of trout and land-locked salmon. There is a fish ladder on the north end of the dam but it's location makes it ineffective for passage. The colder water exiting the aqueduct on the opposite side is more attractive to fish and consequently, they never find the ladder.

Georgeann reviewed preliminary concept designs with the committee. Next steps for the project include reviewing conceptual designs, identifying additional data collection needs, permitting, and fundraising.

Kurt questioned if DER has looked to see if there are private wells or public water supply wells that will be affected by reducing groundwater levels. Georgeann said she doesn't believe there are – that was one of the first due diligence topics addressed during the investigatory process.

Bill Fadden asked if the Quinapoxet Dam Removal Report is finalized and available online. Georgeann stated that yes it is finalized, but it is not online. She will try to provide the WSCAC office with the report.

The committee thanked Georgeann for her presentation.

MWRA Energy Program and Carbon Footprint-Steve Estes-Smargiassi, MWRA

Steve began by stating that five threads would be present throughout his discussion:

1. Energy use and energy efficiency
2. Green energy
3. Greenhouse gas inventory
4. Efficiency in terms of money
5. Transparency and reporting

Steve said that he and his colleagues continually conceptualize different methods for conveying MWRA's progress in energy efficiency to the MWRA Board and the general public. He discussed several of the reports that the MWRA produces to communicate this information, both internally through the quarterly Orange Notebook and externally through the MWRA website. Steve reviewed the Orange Notebook, and shared several examples. Of all of the energy used by MWRA in FY15, 31% was green energy – either offsetting MWRA's use or sold to the grid.

Steve informed the committee that in November, MWRA will bring a construction contract to the Board of Directors for the redundant Wachusett Aqueduct Emergency Pump Station. This project will allow the Authority

to move water from the Wachusett reservoir to Carroll Water Treatment Plant if the aqueduct is out of service. The new pump station will address the elevation difference by pumping water up to the treatment plant. Currently, in an emergency situation water could flow under the plant to Boston but it would have to be treated with chlorine, not ozone and UV. Once constructed, the Authority intends to operate the new pump station on a day to day basis, at net-zero in terms of energy use.

Steve then addressed several options the Authority can use for revenue. One practice the MWRA follows is demand response. On high demand days in the winter and summer, the utility company, ISO New England, pays the MWRA to go offline. The Authority uses their generators for supplying power instead. MWRA is able to do this at Deer Island and the Carroll Water Treatment Plant. Steve addressed the question of demand charges – a charge placed upon a commercial customer by the utility during peak time periods. The MWRA can save more than one million dollars at Deer Island by switching from the grid to their generators during times of peak demand. This allows the Authority to avoid a demand charge. This switch is also helpful to the region in general, as it reduces the risk of a blackout or brownout.

Steve then turned to the topic of tracking at Deer Island. The Authority tracks the flow at Deer Island which allows them to predict future flows and set an energy budget. This year the price was under budget. Steve attributed this to the weather, increased efficiency and lower energy costs.

Steve's next point focused on greenhouse gases. Up until this year, the MWRA has outsourced the calculation of their greenhouse gas emissions. The Authority applied for a fellow through the Environmental Defense Fund to conduct an inventory of their greenhouse gas emissions. The fellow, Lia Cairone from Columbia University, completed a ten week internship over the summer that gathered comprehensive data on the MWRA's energy use as well as other factors that contribute to greenhouse gas emissions. A report of the findings will be posted on the MWRA website this fall. The summary of Lia's fellowship can be found [here](#).

Steve reviewed several of the report's findings. He stated that twenty-two percent of the MWRA's greenhouse gases relate to the fact that they discharge nitrogen to Boston Harbor which becomes nitrous oxide in the atmosphere. Steve does not know the solution to this problem at present; in the future, society may determine a way to capture nitrogen closer to the source, thereby decreasing the release of nitrous oxide. He stated that at this point, it is more or less out of the MWRA's control.

Kurt asked a question about greenhouse gases generated by pelletizing sludge – can anything be done to minimize it? Steve said he does not know. He said this is one reason for conducting an inventory: to ask yourself the “what else can be done” questions. He said the MWRA must consider relative investment strategies as they identify target areas to focus on.

Steve moved to the topic of energy upgrades. The MWRA spends an enormous amount of effort on doing what they need to do – running their organization – efficiently. Some efficiency projects are simple, such as replacing parking lot lights. Other projects are more complex, such as removing unnecessary mixers from the Carroll Water Treatment Plant. The Authority saves over \$200,000 a year from making this efficiency adjustment. Steve also noted that the Authority maintains about thirty-five acres of green roofs.

Steve concluded his presentation by stating that Fred Brandon, Assistant Director of Engineering, would brief WSCAC next month on redundancy alternatives to the city tunnel. He mentioned that Spot Pond covered storage is nearing completion. One tank is now in service and the leak in the second tank is being repaired. Staff is integrating many of the new pumping options available through the new pump station at Spot Pond.

Steve's presentation will be posted shortly on the WSCAC website.

WSCAC Business and Updates

Lexi reminded the committee that she had sent information regarding Ashland's Draft EIR. She will continue to follow Ashland's process and send updates to committee members.

She informed members that Heidi attended the MassDEP Listening Session in Springfield and that a DCR Listening Session was taking place later in the day at the DCR facilities in West Boylston at 6:30 PM. She mentioned she would be attending the EEA Listening Session in Worcester on October 19th.

Andreae Downs noted that she attended the MassDEP session in Boston. The general message of that meeting was that the review was good and attendees are looking forward to what MassDEP comes up with.

Lexi noted the importance to MWRA of MassDEP adopting EPA's Revised Total Coliform Rule into their regulations before April of 2016 to avoid EPA becoming the enforcement authority and MassDEP losing water primacy.

Kurt asked if anyone at the listening sessions spoke to the issue of early retirement and staff shortage at MassDEP. Heidi replied that no one from MassDEP spoke to it; attendees, however, sympathized with the agency and expressed frustration about the relationship between regulatory compliance and reduced staffing.

Lexi informed the committee about the public hearing held at the Blue Meadows Conference Center by the Committee on Environment, Natural Resources, and Agriculture. Although most of the bills discussed at the hearing did not pertain to water supply, H735 addresses conditions on water supply registrations. The bill states that no conditions will be placed upon existing registered amounts. WSCAC will continue to monitor this bill. Lexi stated that WSCAC went on record in support for H656 and H657 – two bills regarding funding for water infrastructure.

Lexi then discussed the DCR DWSP Forestry Tour held on October 12th in New Salem. The tour of the marked lot was well attended by a diverse group. Lexi expressed her appreciation for the thorough quality of the tour and stated that the tour itself, as well as the level of attendance, was encouraging. Kurt asked if there was any discussion around green certification. Lexi replied that it was not discussed, but she will bring it up at the next Executive Committee meeting.

Next month's meeting, scheduled for November 10th, will include a presentation on MWRA redundancy options for the city tunnel. Lexi thanked everyone for attending. The meeting was adjourned.