



WSCAC Meeting

January 13, 2015-10:00 AM

Location: MWRA Facilities in Southborough

Members in Bold in Attendance:

Whitney Beals, WSCAC Chair, NE Forestry
Elie Saroufim, Boston Water & Sewer
Martha Morgan, Nashua River Watershed
Dona Motts, MA League of Women Voters
Bill Fadden, OARS,
Kurt Tramosch, NEWWA & Wayland Wells

Andrea Donlon, CRWC
Gerald Eves, Trout Unlimited
Michael Baram, BU & CLF
Paul Lauenstein, NepRWA
Martin Pillsbury, MAPC
Travis Ahern, MWRA Adv. Bd.

Non –Members in Attendance:

Lexi Dewey, WSCAC staff
Heidi Waugh, WSCAC staff

Lisa Gustavsen, DCR-DWSP
Jonathon Yeo, DCR-DWSP
Dave Coppes, MWRA

Andreae Downs, WAC
Jennifer Howard, DCR-DWSP
Bernadeta Susianti-Kubik, DCR-DWSP
Mark Johnson, MWRA

WSCAC Business

Members and non-members introduced themselves to begin the meeting. Whitney Beals then entertained a motion to approve the November meeting summary; the summary was unanimously approved.

Lexi Dewey informed the committee that Terry Connolly of Ware, Massachusetts, is interested in joining WSCAC as a representative for Ware which is a watershed community. Terry will also be a substitute for Trout Unlimited. Upon review of his experience, the Executive Committee recommended that the committee approve the appointment. Whit entertained a motion to approve the nomination and Terry was unanimously voted onto the committee.

Spot Pond Tank and Pump Station

Dave Coppes, Director of Water Works for MWRA, began by providing a topical overview of his presentation: the area served by the Spot Pond and redundant pump station project, the need, design, and build of the project, and the operational challenges faced by MWRA. As the project is complex, Dave expressed that learning how to harness the capabilities and flexibility of the project will be a process.

To orient the audience, Dave displayed a map of the communities that will be served by the project. Included in the Northern Intermediate High Pressure Zone, which is served by Gillis Pump Station and fed by the Bear Hill Tank, are parts of Winchester, Stoneham, Woburn, Wakefield, Reading, and Wilmington. The Fells Service area is also included in the project: Melrose and the remainder of Wakefield. There is also the Northern Low Area, which includes parts of Chelsea, Everett, Malden, and Medford.

Dave then addressed the need for the project. The Gillis Pump Station has both capability and flexibility; however, it has limited redundancy. Creating redundancy would therefore be extremely valuable to the system.

Dave then described the low service system area. Located in the 'Boston Basin,' the low service system requires a step-down in pressure as the area is located below the grade at which MWRA normally serves water. Even though MWRA only operates one low service system, it is as if there are two distinct systems: the 'Northern Low' and the 'Boston Low.' The Boston Low is supplied by Shaft W of the MetroWest tunnel located in Weston, and Loring Road Tanks with 20 MG of storage. The Dorchester Tunnel and the City Tunnel Extension have shafts that have the capability to serve the low system, as does Nonantum Road, which comes off of the high system. Each source is equipped with pressure reducing valves to step the pressure down to the lower service system. There are two existing east and west supply lines that used to take water from the old Chestnut Hill Pump Stations and pump it up to Spot Pond; these old cast iron lines are the backbone of the northern part of the low service system.

The total demand for the entire low service system area, Dave stated, is on the order of 40 MGD. The system has 20 MG of storage, all located in the Loring Road Tanks. As MWRA's goal is to have one average day of storage, more storage is required for the low service system. At present, the storage is configured to serve the 'Boston Low' and the older backbone lines are designed to pump the storage to the 'Northern Low.' The idea of the project therefore, was to create more storage located near the 'Northern Low' service area.

Dave stated that there were two problems and one solution: The need for Gillis Pump Station redundancy and the lack of storage for the low service area. The Spot Pond Water Storage Facility and Pump Station project including a 20 MG storage tank with two separate cells and a pump station for the areas served by the Gillis Pump Station was setup as a design/build project and was awarded to Walsh Construction Company in November of 2011. Construction is currently underway.

Following a description of the project's physical layout, Dave informed the committee that the project would be landscaped. Upon the completion of construction, the area will be restored to a meadow habitat.

Paul Lauenstein then asked what the elevation is of the storage tanks at the Spot Pond facility. Dave replied that the overflow elevation is 195, Boston city base. Kurt Tramosch then commented that Dr. Abel at the Weston Observatory has suggested that there are faults in the New England area that predate our historic record of earthquakes; earthquakes may therefore be greater than anticipated, such as the Connecticut earthquakes. Kurt questioned what sort of earthquake protections are in place in the facility. Dave conceded that he does not know the specifics, yet he affirmed that the project meets any and all design requirements imposed on such a facility. Mark Johnson added that New England is

classified as a seismic Zone 2; he does not know if regulations for seismic zones are ‘up to snuff’ with the latest information from Weston, but the project is designed to current standards.

Paul asked what type of security measures are in place for the Spot Pond facility. Dave replied that similar to the Fells Reservoir, hatches over the water tanks will have intrusion and a secondary means of preventing someone from accessing the facility. The pump station is equipped with card access and cameras; there will be cameras around the entire site. There will also be fences to signify that the area is off-limits to public access. Additionally, Dave believes that a contaminant warning system will be installed. He noted that they progressively increase and enhance security measures with every new project.

Dave continued the presentation by displaying an artistic rendering of what the Spot Pond facility is expected to look like upon completion. Michael Baram then asked how the tanks will be cleaned. Dave replied that the industry practice is to have the tanks inspected every three to five years. Previously, MWRA has contracted with divers to vacuum storage tanks and they have also hired remote robotic suction devices. MWRA has the capability to empty the tanks and clean them manually, however this requires the tanks to be refilled and the water treated. Dave explained that it is easier to spray a diver with hypochlorite and have him clean the tank, so that is the preferred method.

Bill Fadden asked if the two tanks are segregated. Dave said that yes, they are completely separable and have the capability to be operated independently. He continued to explain that each tank has interior baffle walls for water quality purposes; the water flows through the tanks, around the baffles, in a serpentine manner. The water enters the tank on one end, and leaves on the other end to ensure freshness.

Kurt questioned if biofilms or organic buildups are ever a problem in MWRA storage tanks. Dave said that they do see a lot of dead algae and organic matter in the tanks; the matter is removed when the tanks are cleaned. Kurt asked if growth is more inactive than active. Dave said that maintaining a chloramine residual in the tanks suppresses growth.

Dave then turned the discussion to the installation of the tank overflow pipe that was installed in March of 2014. The pipe had to cross Woodland Road in Stoneham. Due to the high volume of traffic on the road, the contractor dug a jacking pit on each side of the road. Construction workers then installed the pipe under the road by jacking the pipe, removing the soil, and repeating the process until the pipe was fully connected. At its deepest point, the pipe is about twenty-five feet underground. While completing this portion of the project, two mobile pump stations were activated to service the area that is regularly served by the Gillis Pump Station.

Bill questioned if each town typically has their own pumps to access the MWRA supply. Dave said no, not in all cases. Some communities have to pump and some do not. Paul asked about the pumping capacity of the pumps. Dave answered that it is about 5 mgd per pump.

The presentation continued with photographs of the new pump station’s interior. Dave then discussed the low service piping tie-in on Ravine Road. The road was closed for six weeks. He noted the extensive number of valve chambers on Ravine Road due to the high, intermediate-high, and low service piping. Bill asked if the pipe break incident in 2010 had any impact on the type of coupling used for this project. Dave explained that the coupling that failed in 2010 was a split sleeve. The coupling installed on Ravine Road is a solid sleeve coupling.

Dave then addressed operational challenges. Staff must determine the best way to optimize their operation of the complex system while paying close attention to issues such as nitrification. Due to the fact that the pump station has a vast number of tools to monitor and address water quality concerns, the challenge now for MWRA is to determine which tool to use when. Dave considers it an opportunity to experiment and modify their practices in order to develop the most effective system possible.

The committee thanked Dave and Mark for their presentation.

Illegal Off-Road Biking

Jonathan Yeo introduced Lisa Gustavsen, the Assistant Regional Director of the Quabbin/Ware Region for DCR's Department of Watershed Protection. Lisa informed the committee that illegal off-road biking, a public access recreational issue, is occurring in the Ware River Watershed. Lisa explained that she intended to brief the committee on the issue and DCR's efforts to manage the activity.

Lisa provided an overview of DCR's Watershed Protection regulations (350 CMR 11.00) and highlighted section 11.09, the General Rules and Regulations for the Protection of Watersheds and the Watershed System. Within this section, it is explicitly stated that organized sport activities are prohibited, except by written permission. Additionally, bicycling is only permitted in designated areas - areas determined by DCR. She then discussed DCR's Public Access Management Plan. The document is designed to help guide users of the land and water to determine the types of recreational activities that are permitted and those that are prohibited. In respect to bicycling, the document states that it is only allowed on watershed management roads: over 200 miles of well documented and interconnected, mostly unpaved, roadways.

Kurt questioned where the Rail Trail was located within the Ware River Watershed, as he considers it a point of access to the greater watershed area. Lisa agreed that the Rail Trail does enable access to the watershed. Upon locating the trail on the map, Lisa continued to state that DCR has specifically documented that trail clearing, trail marking, and any advertising on DCR land is prohibited. Lisa explained that single track bikers have been clearing land for the purpose of trail making. Due to the limited number of Ware River Watershed staff, (responsible for over 25,000 acres of land), controlling public access is extremely difficult.

Lisa then noted that payment in lieu of taxes (PILOT) is made annually to towns within the DCR's Ware River Watershed. The current annual payment estimate is over 1.1 million dollars paid for with funds from MWRA ratepayers.

DCR staff Jennifer Howald and Bernadeta Susianti -Kubik then directed the focus of the presentation to the fieldwork aspect of addressing single track biking in the watershed. Jennifer explained that bikers have electronically documented their trail network and posted the network online. In order to gain a better understanding of the issue, Jennifer and Bernadeta began walking the off-road trails through the watershed. In addition to using GPS on the trails, they identified trailheads that shoot off of the Rail Trail. Through their efforts, they have discovered an extensive trail network that includes trails through a number of Natural Heritage habitat areas.

Jennifer displayed photographs of trail blazing and damage to trees within the watershed. In addition to trees and tree roots being cut and notched, embankments have been constructed; such construction leads to erosion. Evidence of bikers riding through wetlands has been gathered, as well as evidence of bikers destroying new growth in regenerating forest areas. Bridges have also been installed.

Jennifer then detailed the steps that DCR has taken to address the issue. They have increased signage that clearly identifies biking as a prohibited activity. They have posted 'trail closed' signs on trail heads and made efforts to educate the public on their policies. DCR is working with the Wachusett Greenways, a group involved with the Rail Trail, to remove online maps of the illegal trail network.

Lisa informed the committee that the Rutland Middle School Mountain Bike Club has been using the Ware River Watershed for illegal biking activities for the past ten years. Senator Brewer wrote a letter to William Pula, Regional Director of the Quabbin and Ware Watersheds, asking that DCR collaborate with the group. DCR is working to get the group off of the illegal trails and onto their roads. Jonathan added that there are many areas of park systems that are setup for off-road biking. Specifically, Leominster State Forest is about twelve miles from the Rutland Middle School and allows this type of activity.

Jonathan then provided a comparison of the Quabbin and Ware Watershed system with other unfiltered water supplies in the United States. No unfiltered system allows off-road mountain biking. Furthermore, a number of watersheds, such as the Cedar Reservoir Watershed in Seattle, Washington do not allow public access. Jonathan listed a number of cities in New England, such as Worcester and Springfield, which have very restrictive public access regulations with respect to their reservoirs and filtered water systems. In comparison, DCR allows a tremendous amount of public access to their unfiltered system.

Whit asked what type of enforcement systems are in place. Jonathan replied that there are rangers to monitor the watersheds, the environmental police can be called, and they have the ability to write tickets. He continued to state that the first line of defense has always been public education and that it has functioned fairly well. There are, however, outliers that ignore regulations. The problem lies in catching the outliers.

Paul asked Jonathan what WSCAC could do to help. Jonathan said he would work with Lexi at a later time to generate some ideas; Lexi added that submitting comments may be of use.

Brice-Lemon Estates

Jonathan provided a brief historical overview of the Brice-Lemon proposed residential development project in Rutland. He informed the committee that DCR has taken action against the developer under the Watershed Protection Act. The project will require a variance under the Watershed Protection Act. Moreover, there is an issue with the sewer connection. The Town of Rutland connects their sewer lines to DCR's Rutland-Holden Sewer System that then feeds into the lines of the City of Worcester. Rutland is right at their capacity under the agreement that DCR has with the City of Worcester. Lexi added that there are water constraints as well, as the town is nearly at the limit of their Water Management Act Permit.

Despite the constraints, the developer has already laid thousands of feet of sewer lines and started construction without the proper permitting. The developer has agreed to cease construction, but the

matter is still under great contention. Lexi informed the committee that she would be drafting comments for members to provide feedback. Final comments on the NPC would then be submitted to MEPA. The Secretary's Certificate on the project will be available in early February.

Paul questioned if the developer had committed any violations by beginning construction without the proper permitting. Jonathan replied that the only violation he had committed in respect to DCR was the construction of a detention basin within 200 feet of one of DCR's jurisdictional water resources. The developer and DCR are in disagreement about the exact measurement.

The committee thanked Jonathan for the update.

Tabletop Rail Drill

Lexi asked if Jonathan or Dave could provide the committee with a brief overview of the December Tabletop Rail Meeting held between MWRA, DCR, DEP, and Pan AM.

Dave informed the committee that in addition to these parties, the Holden and West Boylston Fire Departments were present as evaluators, participants, and controllers. Public Health officials as well as Federal Rail representatives were also present for the drill. The drill was the first time these groups have worked together; they were able to develop relationships and tease out tensions between their different priorities in the event of a derailment/spill. For instance, whereas MWRA is concerned with the contamination of the drinking supply, local fire departments are concerned with matters of immediate safety and evacuation. The drill allowed all parties to gain perspective and insight.

The groups have agreed to continue working together and have plans to meet again. MWRA intends to educate local fire departments on the water system so that they can gain a deeper understanding of MWRA's concerns. Jonathan added that future trainings are planned in conjunction with Pan Am for MWRA and DCR staff; the trainings will educate staff on the ways in which railroads work as well as how to interpret content lists and other documents produced by Pan Am.

Lexi questioned if rail safety legislation at the federal level was discussed during the drill. Jonathan and Dave answered that the drill was extremely focused, so it was not discussed. Jonathan commented that rail companies are aware that they need to do more to improve the safety of railways.

Michael commented that he was not reassured by the recap of the tabletop drill. He stated that in reality, responding to an emergency is much more complex and requires more than a compressed tabletop drill. He continued to question why there is no discussion around prevention, such as considering alternative routes.

Jonathan replied that he considers tabletop drills to be a positive and productive simulation. He also stated that there is nothing anyone can do to reroute trains. He said that there has been a focus on track inspection. Dave added that in comments to the federal rail association, they proposed reducing the speed at which trains operate, specifically in reservoirs and watersheds that feed metropolitan areas.

Kurt asked if at any point during the exercise, there appeared a place where pressure could be brought to bear on making the route over the Wachusett Reservoir so discouraging for the railroad that they would not use it for hazardous materials. Jonathan replied no, the railroad selects the best economical route and no leverage came from the meeting to change that.

Paul questioned if there was a set schedule of trainings, and if drills would be an annual activity. Dave replied that there has been discussion about having a field drill in the spring, but there is no set schedule for the long term.

On behalf of the committee, Whit thanked Jonathan and Dave for the report and the progress they are making.

The meeting was adjourned.