



Water Quality Work Group Meeting

November 19, 2019

Location: Hudson River Foundation

Minutes

Attendees: Roop Guha (NJDEP, co-chair), Brent Gaylord (EPA), Brett Branco (Brooklyn College, co-chair), Elizabeth Butler (EPA), Evelyn Powers (IEC), Jim Lodge (HRF), Keith Mahoney (NYCDEP), Lisa Congiu (NJDEP), Marco Alebus (NJDEP), Mick DeGraeve (NJHDG/GLEC), Rob Pirani (HEP), Rosana Da Silva (HEP), Shino Tanikawa (NYC SWIM), Jeff Fischer (USGS), Melissa Sinisgalli (PVSC), Mike Flood (EPA), and Shawn Fisher (USGS)

By Phone: Amanda Levy (NYCDOHMH), Bob Schuster (NJDEP), Charlie Dujardin (NJHDG/GLEC), Chrissy Remein (Riverkeeper), Darvene Adams (EPA), Jason Fagel (NYSDEC), Neel Patel (NYCDOHMH), Paul Morton (NJDEP), and Wayne Jackson (EPA)

Next Meeting: TBD, likely February/March 2020

1) Welcome, Introductions, and Overview of Agenda

Roop Guha opened the meeting and announced the approval of the submitted bylaws by the Management Committee. September minutes were reviewed and approved by the committee.

Several changes were made to the draft agenda, including the removal of three presentations. The first being NYCDEP's CSO Notification Pilot Program, for which the NYCDEP greatly appreciates the input and feedback received from HEP and other partners during the development of the waterbody advisory pilot. They were looking forward to the meeting and providing an update on the next phase, but NYCDEP's Sewage Pollution Right to Know (SPRTK) CSO reporting is subject to a recent litigation and are now unable to participate in the meeting. The second presentation removed from the agenda is Dr. Philip Orton's Storm Surge Barrier presentation. Unfortunately, due to glitches and network issues, Dr. Orton and his Ph.D. student were unable to complete the modeling work in time for today's meeting to share how closed surge barriers may affect estuary conditions. This presentation will be postponed till the next WQWG meeting. Lastly, a shared document from the MAG (Management Advisory Group) on the system-wide modeling was shared with the WQWG. Due to MAG members still deliberating on the scope of questions (meeting on Nov. 21), we will hold off until the MAG is prepared to share a more refined plan for input by the WQWG and other estuary programs.

2) HEP 2019 Conference Overview

Shino Tanikawa shared that the conference was a success with engaging conversations in the morning. The focus of this conference was restoration, though one of the workshops did look at water quality and stormwater management in connection with restoration. John Butler of Van Cortlandt Park Alliance provided an overview of the Tibbetts Brook daylighting project. Beth Roessler of NYSDEC's Hudson River Estuary Program shared the Trees for Tribes program that looks at planting trees to create riparian buffers. Tobiah Horton of Rutgers Cooperative Extension Water Resources Program shared on his demo-reuse

project that took down a home by hand and then recreated the space with green infrastructure and passive recreation by the community. John McLaughlin of NYCDEP shared on the progress of wetlands in Alley Creek and the current monitoring efforts. In addition, John McLaughlin stated the Jamaica Bay LTCP is an all green plan and is looking at ribbed mussels as a way to remove bacteria. Currently in its pilot phase, they are finding a 30% removal of bacteria in the lab from the ribbed mussels. The Hudson River Foundation has supported a grant project that also explores the beneficial use of ribbed mussels.

3) Next Generation Water Observing System

Jeff Fischer introduced the Next Generation Water Observing System program to the group and notified that the lower Hudson-Raritan Watershed was submitted as a proposal for consideration. The program seeks to utilize new technology to improve data collection in the region and allow the collection of high-density data to enable the best use of models to improve decision making processes. The goal is to provide real-time field and remote-sensing data to build upon existing networks to answer questions. Several million dollars will be invested to roughly 10 medium sized watersheds throughout the country that can improve understanding of water quality across the country. Delaware River Basin was the first pilot.

Jeff provided an overview on the pilot program, the different tools used, some of the new technologies that are being tested, and the variables that USGS will be using as guidelines for selecting proposals for the program around the different regions. The Hudson Raritan Watershed proposal (includes just below Albany, NY to Raritan Bay) includes looking at riverine/tidal flooding, sea level rise, water availability and use (domestic, agriculture, power generation), nutrients, HABs, bacteria, sediment, and legacy/emerging contaminants. If chosen, the project would be fully funded by USGS and USGS would organize a large meeting to identify stakeholders to be part of the project. In Delaware, USGS invited the estuary programs, nature conservancies, and other groups USGS has worked with. Continuous monitoring for pathogens is something that the national folks are exploring and the group agreed this would be of interest due to the number of CSOs in the Harbor Estuary. Bob Schuster indicated that there is a continuous unit deployed that is collecting for all nutrients piloted in the Passaic River, but it is at a microscale with a 1-hour interval for 3 weeks of data. The pilot will be testing the phosphate and nitrate first, but the unit has been used by other researchers in the Chesapeake Bay.

Shino Tanikawa asked to clarify the proposal approval process. Jeff indicated that it is an internal process going around the country and as for the northeast, the Hudson-Raritan Watershed will be up against the Chesapeake Bay and a New England basin to be selected four to five years from now. Funds would come from USGS to the local Water Science Center. USGS will likely reach out to the Water Science Centers to polish the proposals which allows for better partnership with HEP now to think about what water quality questions do we have that we have no answers to? We can also keep an eye out to the other regions (currently going to the West Coast) that could guide our efforts. USGS is interested in leveraging funds with local entities to expand or continue some of the monitoring programs, which could also be used as a match. The benefit for this area is that we also have the Urban Waters Federal Partnership in the Lower Passaic and in the Bronx/Harlem Rivers. EPA's NARS program has been going on now for 20 years and it would be good for USGS to be familiar with the programs that are existing in the region.

Next Steps: Co-chairs to email the leads (Chad/Brian) to clarify milestones for the next steps that the WQWG should consider. Future meetings will seek to begin documenting water quality questions, data gaps, lack of data to run select models, and other factors that would be beneficial to USGS for the polishing of a final proposal.

4) Water Quality Monitoring Discussion

Building upon the discussions held during the development of the Environmental Monitoring Plan, Roop Guha framed the following presentations and discussions as a means to enable to group go into depth on the monitoring actions that will be taking place. Rosana Da Silva provided an update on last week's Continuous Monitoring Subcommittee of HEP's WQWG and IEC's Shared Waters Working Group. At the first meeting, the group identified gaps and areas where more information would benefit the various programs, including on protocols and metrics to better assess the programs across the shared waters.

Darvene Adams, EPA, highlighted REMAP which is a baseline sediment assessment and trend analysis that occurs on a five-year cycle since 1993, with the last survey completed in 2013. Data from 1993-2003 is available on the WQX portal along with reports on EPA's website, but the 2008 data was not released due to being unusable. 2013 data should be available. 2018 was a missed year, but EPA has plans to conduct sampling in 2020 and reselection of stations or the same stations from 2013 may be chosen. Typically, the top two centimeters of sediment is sampled to look at macroinvertebrate structure and toxics. EPA is drafting a project plan and will share with the WQWG for input. Roop Guha suggested that the benthic community index should be evaluated and allow for the raw macroinvertebrate data to be computed in the index. Bob Schuster asked that with the NARS coming up in 2020, whether there would be a comparability to the NARS index and REMAP? Darvene stated it would be good to look at this planning effort and is looking to leverage funds with the superfunds program to secure the funding needed with in-house staff and contract lab for dioxin testing.

Evelyn Powers, IEC, under the FFY18 and FFY19 has funding to assist with the REMAP design and sampling. Evelyn provided an overview of a volunteer pathogen monitoring program piloted with HEP in 2016 under IEC's QAPP. The challenge of the program is for volunteers to get samples to IEC's lab, but one solution could aim to assist other labs to receive their certification such as those being utilized by NYCWTA. IEC also worked with HRPT and EPA on conducting transects along the Hudson River at Pier 40 this past year and may conduct another transect in 2020 at Pier 40 or other near-shore location. Data from Pier 40 is available on the WQX and was taken during wet/dry samples to look at shoreline variability and water column concentration of pathogens. A partnership with USGS aimed to have a better understanding of wave dynamics was also recently completed, Shawn Fisher provided input. Shawn indicated a final report will be made available through USGS, but would be willing to share results with the group at a later opportunity.

Bob Schuster, NJDEP, provided an overview of NJ's current and planned monitoring which includes three nutrient stations, multiple stations for shellfish harvesting waters, two continuous buoys in the Raritan Bay, and an active role in the NARS. Buoys are removed in the winter and record 15-minute intervals (data is available every hour) and attempt to have them run from March/April through late October. Shellfish monitoring looking at fecal coliform over 10 samples per year, this data is assessed and is compared to other types of conditions such as rainfall and stormwater runoff. Gaps of monitoring and partnership opportunities would be important to discuss to better leverage funds and staff time. Bob also suggested, that similar to the continuous monitoring subcommittee, it may be beneficial to have subcommittees to look at pathogens and another at nutrients to improve monitoring designs and plans.

Keith Mahoney highlighted the phasing of the LTCP sampling efforts to look at a number of parameters in the area and increasing sampling from the Harbor Survey. For the open waters, largely grab samples were used as there are gaps in terms of continuous monitoring where we have unknowns that continuous data would be beneficial to use. Sampling program for the LTCP chased wet weather events to sample between

low and high tide in an effort to calibrate the existing SWMM model and refine the grids. Brent Gaylord asked about waterbody recovery time. Keith indicated it is something NYCDEP is looking at to see how many hours it takes to go below 130 for enterococcus and 1,000 for fecal coliform with a monitoring sampling twice a day for 4 consecutive days of a wet weather event to look at recovery. The program chased bigger rain events that would trigger a CSO event (more than 0.33 inches of rain). Time for recovery data will be available by the draft plan in January 2020.

Next Steps: Future WQWG topics should seek to better align efforts amongst partners and aid in documenting monitoring gaps for the NGWOS proposal. Invite Shawn Fisher back to the WQWG to present in more detail on the relationship between wave resuspension and pathogens.

5) Harbor-wide Water Quality Report

Rosana Da Silva thanked everyone for their comments. Over 100 comments were received, which was fantastic, though also puts strain on the initial timeline proposed. A draft report will likely be communicated via email with hopes of a published document by the spring of 2020.

Roop Guha and Brett Branco closed the meeting. Save the dates will be forthcoming and we anticipate the next quarterly meeting to happen in February or March. Topics for meetings are always welcomed by members, please email either a co-chair or Rosana with your recommendations.