



Water Quality Work Group Meeting

July 30, 2020

Location: Zoom (online only)

Minutes

Attendees: Marco Alebus (NJDEP), Francisco Artigas (MERI, STAC), Helena Andreyko (HRF), Dan Birkett (EPA), Brett Branco (Brooklyn College-STAC, co-chair), Elizabeth Butler (EPA), Lisa Congiu (NJDEP), Rosana Da Silva (HEP), Philip DeGaetano (IEC), Mick DeGraeve (NJHDG/GLEC), Jason Fagel (NYSDEC), Brent Gaylord (EPA), Sam Gordon (HRF), Helen Grebe (EPA), Roop Guha (NJDEP, co-chair), Clay Hiles (HRF), Wayne Jackson (EPA), Michele Langa (NY/NJ Baykeeper), Tom Laustsen (NJHDG), Amanda Levy (NYCDOH), Jim Lodge (HRF-STAC), Keith Mahonney (NYCDEP), Rosella O'Connor (EPA), Rob Pirani (HEP), Evelyn Powers (IEC), Clay Sherman (NJDEP), Isabelle Stinnette (HEP, RWG), Stan Stephenson (EPA), and Judy Weis (Rutgers-STAC)

Next Meeting: October 8, 2020

1) Overview of Agenda, Introductions, and Minutes Approval

Roop Guha and Brett Branco provided an overview of the agenda which focused on metals, looking to identify and address monitoring gaps, and share preliminary assessments of metal monitoring. April 2020 minutes were motioned for approval by Mick DeGraeve and seconded by Jim Lodge. Minutes were approved.

2) Recap of the Environmental Monitoring Plan Recommendations

Rosana Da Silva provided a brief review of the [2018 Environmental Monitoring Plan](#) and the three tools, but with a focus on metals, PCBs, and PAHs in the Harbor Estuary. The monitoring recommendations and research needs were identified through the technical work groups and committees that make up HEP. The outcomes of the EMP detailed support for reinstating and fully fund EPA's Regional Environmental Monitoring and Assessment Program (REMAP) for benthic and toxic monitoring as well as expansion of the spatial and temporal extent of PCB monitoring.

Mick DeGraeve asked how COVID-19 has impacted monitoring programs in the estuary this year and whether there will be impacts to the amount of data collected or funding of those programs. Rosana indicated that from the last work group meeting, many programs were put on pause and the amount of data will certainly be less than previous years. The uncertainty of the current economy and the likelihood of budget cuts will also have a significant impact on monitoring programs, though unclear what that will look like. Roop Guha shared that many NJDEP monitoring programs were placed on hold, including NJDEP's expanding monitoring into the Lower Bay and Raritan, but beach monitoring has been ongoing. Jason Fagel noted NYSDEC's freshwater monitoring programs continue, but are running out of funds to continue while marine monitoring is completed by local partners. Tom Laustsen shared that PVSC has begun to pick up monitoring, starting this month, and will be working with USGS to sample E. coli, fecal coliform, caffeine, and other biomarkers in the Second and Third Rivers. Amanda Levy updated the group that NYCDOH has been sampling beaches since Memorial date for baseline data and are running their

weekly samples. Evelyn Powers noted that IEC began sampling in mid-June and has set up satellite labs. IEC's pathogen monitoring program with citizen science groups began this month.

3) Sediment Contaminant Survey of the Lower Raritan River

Francisco Artigas presented on the USEPA funded spatial metals monitoring his team completed in the estuarine portion of the Raritan River. The first step was to identify the status of metals monitoring in the Lower Raritan. The monitoring for the project was conducted in 2017, about ten years from the last time the waterbody was monitored for metals in 2006. There were seven historical sites and MERI added 13 new sites distributed over 14 transects for a total of 33 samples. The goal was to capture the spatial distribution in the river using visual statistical analysis and evaluate the trend over time. When compared to the REMAP data, the general patterns were the same, but you are seeing lower levels for most sites with the exception being P2. The data shows that 30-60% of the biota would have some effects from chromium, lead, PCBs, and OCPs while mercury is more severe. Future studies will need to conduct research at finer resolutions where this 2017 data set can provide a baseline (available in the WQX). The next step is to link the data to potential sources (e.g. brownfields and superfund sites) to show a relationship.

Judy Weis asked if the data is showing increased levels after 2006 and whether methylated metal was measured. Francisco noted that for the most part the data shows a decrease, but could be due to the analysis method or natural deposition. Mercury does show an increased level and this is concerning as it is more toxic. Future monitoring should include methylated mercury. Mick DeGraeve asked if resources were limited to do a companion biota sampling, would literature be sufficient in the region that could inform on the biota relationship to the compound concentrations? Francisco noted that as the river is tidal and dynamic, literature would only provide some indication of that relationship but wouldn't be enough to suggest a relationship. Roop Guha asked if there has been any interest in this research? Francisco noted that after the 2005 conference, there has been very limited interaction and nothing outside of these seven sites. Jim Lodge and Elizabeth Butler asked if superfund site data was looked at? Francisco noted that they did look at it, but data was not available in the riverbed. He suggested sampling tidal creeks would be necessary to see if these concentrations are connected to nearby superfund sites.

Next Steps: Liz Butler to look into superfund site data in the Raritan for riverbed data to explore connections to MERI's 2017 Raritan River dataset.

4) REMAP Update and Discussion

Helen Grebe shared that since Darvene Adams retirement earlier this year, she has picked up where Darvene left off. It is the intention of the EPA to run a fully funded [REMAP](#), though sampling is likely only going to happen next year (2021) as our window is diminishing. EPA has run some problems which has delayed the process, this includes the need to purchase a new boat that has the space necessary to collect and run samples. Helen noted that she has a number of questions that would be helpful to get answers from this group as to what are the needs of the region: Do we sample at the same sites from 2013 or do we want to focus on 30 sites with rotating basins per year? If we rotate out basins, do we want to focus in Newark Bay? What water quality parameters are most important to the group? For metals – total metals and recoverable? Dioxin? Toxicity? Benthic macro vertebrae? Although important, the benthic macro vertebrae sample is very expensive and additional funds would be needed to cover costs. In addition, funds are needed to upload and writing of the report will be needed.

Brett Branco and Roop Guha echoed that the group would be suited to work with Helen to address her questions and provide guidance or support to the REMAP effort. Rosana Da Silva suggested perhaps developing a survey would be best to be able to aggregate partner responses. Isabelle Stinnette asked about invertebrate methodology and randomization of samples? Helen noted that they were considering using the same stations as the 2008 and 2013 REMAP sites and using the same method as 2013. Isabelle noted that a different method has become more popular and would be beneficial to consider to be assessed against other datasets. Brett Branco, Jim Lodge, and Evelyn Powers provided further discussion for supporting a charter boat (CUNY, Monmouth University, or IEC's vessel) to collect samples. Elizabeth Butler asked why they are considering a focus on Newark Bay given that there is significant data here due to the superfund site? Helen noted that both Rick Winfield and Darvene Adams were focused on Newark Bay. Jim Lodge echoed that Newark Bay does have the most data and that the great advantage of REMAP was that it was harbor-wide. Isabelle Stinnette noted that the interest may be due to the fact Newark Bay is the most contaminated in the region.

Next Steps: Brett Branco, Jim Lodge, and Evelyn Powers to regroup with Helen regarding solutions to accessing a vessel and funds to support REMAP sampling.

Helen Grebe to provide questions to Rosana Da Silva to support a short survey that will aid EPA in developing their QAPP for REMAP.

5) Nominees for 2021-2022 Co-Chair Vote

Roop Guha highlighted the group's bylaws with the goal of having overlap between the two chairs. Roop shared that he will be ending his term as co-chair at the end of the year and introduced Lisa Congiu as a nominee for the NJ chair. Lisa has a decade of experience in the environmental field. She currently works as a Research Scientist in the Water Quality Unit in NJPDES at NJDEP. Her undergraduate and graduate studies and research focused on the aquatic sciences, with a niche in mercury biogeochemistry. The bulk of her early professional career was in remediation consulting, with core practice areas in 3D visualization modeling, chemistry data processing, zero valent iron bench scale testing, and bioremediation. Mick DeGraeve echoed Roop's comments that Lisa would be a fantastic chair for the group. Lisa Congiu shared her excitement to be nominated and fulfill the role of co-chair. Mick DeGraeve approved Lisa's nomination and Jim Lodged seconded.

Next Steps: Lisa Congiu's nomination will be submitted to the Management Committee for final approval.

6) Partner Updates

- Rosana Da Silva shared a sneak peek of the visualization of the data for the Harbor-wide Water Quality Report. We will be running, via email, a 30-day review period for comments on the public-facing draft. Given COVID-19 and understanding organizations may be going through a furlough process, if more time is needed to review, please indicate as soon as possible so that we may adjust our timelines.
- Rosana Da Silva also shared that in the [last Tidal Exchange newsletter](#), the small subcommittee highlighted key resources to inform on SARS-CoV-2 within the water and wastewater information via a subcommittee.

- Isabelle Stinnette shared the recent success of the Restoration Work Group with the Army Corps signing of the [Chiefs Report for the Hudson Raritan Estuary Ecosystem Restoration Study](#). This study includes 20 sites suitable for restoration with local partners and is in the WERDA bill, currently in the House and the Senate. Projects include tributary connections, shoreline stabilization, oyster restoration, and wetland restoration efforts across New York and New Jersey.