

Water Quality Work Group Meeting

April 30, 2020

Location: Zoom (online only)

Minutes

Attendees: Greg Alber (PVSC/NJHDG), Marco Alebus (NJDEP), Helena Andreyko (HRF), Brett Branco (Brooklyn College-STAC, co-chair), Rob Buchanan (BOP/CWQTP), Elizabeth Butler (EPA), Lisa Congiu (NJDEP), Rosana Da Silva (HEP), Philip DeGaetano (IEC), Mick DeGraeve (NJHDG/GLEC), Mike Dulong (Riverkeeper), Jason Fagel (NYSDEC), Shawn Fisher (USGS), Brent Gaylord (EPA), Helen Grebe (EPA), Roop Guha (NJDEP, co-chair), Lingard Knutson (EPA), Jim Lodge (HRF-STAC), Robert Newby (NJDEP), Rosella O'Connor (EPA), Rob Pirani (HEP), Sara Powell (UWFP), Evelyn Powers (IEC), Sheri Shifren (NJDEP), Melissa Sinisgalli (NJHDG/PVSC), Shino Tanikawa (NYC SWIM/NYSSCD), Amanda Tarrier (NYSDOH), Stephen Terracciano (USGS), and Judy Weis (Rutgers-STAC)

Next Meeting: July 30, 2020

1) Member Check-In on COVID-19

Brett Branco welcomed attendees and opened the meeting for us all to check in on how everyone is dealing with COVID-19. How programs are reacting to the state orders and how it may be impacting water quality monitoring? The groups' reaction to recent research of the virus being found in wastewater and what that means. And ultimately, what role could this group provide to guide our citizen scientists/volunteers?

- Rob Buchanan shared that current sampling by the CWQTP is on standby as there is concern for having volunteers in the water. Is this an overabundance of caution? How are we evaluating the safety of volunteers?
- Brett Branco shared that all non-essential research at CUNY is on hold and all labs are closed if they are not dealing with research related to SARS-CoV-2 or if their research involves animals.
- Evelyn Powers shared that monitoring programs are all on standby and as their lab is on CUNY campus, she also does not have access to her lab. The precautions we're all taking for COVID is similar to what must be taken into consideration for sampling (eg PPE), but there may be a coordination issue with labs being closed or obtaining the supplies/equipment needed.
- Greg Alber noted that PVSC has suspended sampling since mid-March until the restrictions placed by the Governor are lifted. Mick DeGraeve noted that NJHDG is monitoring influent for SARS-CoV-2. Samples show fragments of the virus though unclear as to its viability. Cultured assays are needed to test for viability and understanding of its decay rate. The ability to find fragments in wastewater may be more important to epidemiologists.
- Rob Buchanan stated that in the future, there may be more interest in looking at public health in WWTP. It would be helpful for this group to also talk about how agencies and citizen scientists can work together. He also mentioned Cold Springs Harbor Lab is monitoring

wastewater effluent where DNA analysis is being done on preliminary samples taken by citizen scientists (steps that can be safely done by citizens).

- Robert Newby clarified that you can take rRNA to make DNA through rt-qPCR. BioBot is currently working on this and surveillance on the virus is happening across the world. Rob shared a few resources that is most helpful in sorting through what we currently know about the virus and what we don't know: <https://www.cdc.gov/coronavirus/2019-ncov/php/water.html> <https://www.waterrf.org/event/virtual-international-water-research-summit-covid-19>. It is known that the virus sheds in the stool, but it is unknown if it is contagious at that stage and whether it would survive in wastewater. Jim Lodge shared the following link that provided a good overview of knowns/unknowns: https://mohawk.substack.com/p/covid-19-in-sewage-of-the-mohawk?utm_campaign=post&utm_medium=email&utm_source=copy

2) Overview of Agenda, Introductions, and Minutes Approval

Brett Branco provided an overview of the agenda. February 2020 minutes were motioned for approval by Shino Tanikawa and seconded by Rob Pirani. Minutes were approved.

3) Summary of National Beach Grant Requirements

Helen Grebe discussed the adopted 2000 BEACH Act and the 2014 edition of guidance offered which included a website to display data, schedules, standards, monitoring and Beach Action Values (BAVs). This was based upon New Jersey's beach program, but provides flexibility to allow for states to adapt. Both New York and New Jersey often close beaches, something EPA does not enforce. BAVs can be made per beach/site or state wide.

Rob Buchanan asked whether New York has or has not adopted a BAV? Jason Fagel responded that the NYSDEC WQS for BEACH Act waters have been adopted, but we are waiting on USEPA approval for them. Jason also notified that due to COVID-19, NYSDOH could not present today but would like to later this year. Roop Guha noted that the BAV does not have to be adopted. Evelyn Powers asked whether EPA approves specific methods or does the guidance remain EPA 1600 or "other culturable method for beach sample analysis.

4) New Jersey Beach Monitoring and Notification Program

Sheri Shifren presented on the Cooperative Coastal Monitoring Program for the 600 New Jersey beaches (outside of the Harbor Estuary) and NJDEP's plans to add environmental coastal monitoring into the Raritan Bay and Bayshore areas as part of the CCMP. Sites have been identified based on known recreational activity, but are not registered as a bathing beach. Sheri informed that local health departments are the boots on the ground for taking samples on Monday with a single sample max of 104 cfu/100mL. Bathing beaches have an online system for closures, but environmental sites will only have an advisory once the sampling begins (planned for this year but may be pushed to next year due to COVID-19). Rivers and bays are typically impacted for ~36 hours after a rainfall event. Beginning on May 18th, aerial surveillance will begin through October and will include North/Northwest NJ to expand HAB surveillance.

Rob Buchanan and Shino Tanikawa asked for clarification on why Monday testing is not closer to the weekend to capture potential for storms later in the week and whether CSO triggers precautionary

closures. Sheri indicated that the ocean beaches are not influenced by CSOs but are affected by rainfall where predictor tools can be used to understand potential impacts to inform on closures or advisories. In addition, EPA has approved a qPCR method for site-by-site samples where samples are taken on Monday to capture the high population's use of the waterbodies and after 24 hours, results are available Tuesday to inform on closures/advisories. Rob Buchanan raised his concern that Monday/Tuesday testing may lead to fewer weekend closures and are less protective of recreational users. Philip DeGaetano asked whether bathers are submitting a report of actual illnesses associated with bathing. Sheri indicated that the NJDEP website does have a report submission option, but no reports have been submitted. Often speaking to surfers, who are usually in the water, rashes or ear infections have been mentioned in the past. The self-reporting of potential illness would be most effective in informing source tracking.

Next Steps: Invite NYSDOH to present on NY's beach monitoring program for later this year.

5) Assessment of fecal contamination distribution and sources in the Bronx/Harlem Rivers

Shawn Fisher presented on the recent findings of fecal contamination in the Bronx/Harlem Rivers to look at distribution and sources (e.g. relative ratios and transport across the river, correlate boat wakes, and near-shore). Data was distributed in charts displaying the western, center, and eastern channel of the Harlem River. First year of sampling only one sample was taken per site and in 2019, two samples were taken per site. The results indicate that there is a resuspension of fecal indicators and follows the trend for TSS. Human and K-9 fecal indicators were most significant sources in the Harlem River. Not surprising, CSO impacts were seen in the data analysis for the Bronx River. Data collected here provide a baseline and urban gradient regarding the possible correlations between elevated indicator bacteria and sources of fecal contamination. With matching funds from USGS, plans to continue work in the Harlem River. Rob Buchanan noted that 2020 may not be the best year for wake studies as tourism will likely be low, but this could also be a means to show tourism impacts.

6) Partner Updates

- Brett Branco and Roop Guha informed the group that they are each in their 2nd year as co-chair and per our bylaws, we are looking to stagger chairs roles. We are looking for volunteers that would like to serve as a co-chair beginning in 2021 for either NY or NJ. Please contact Roop, Brett, and/or Rosana if you are interested and would like more information as to the responsibilities of the chair.
- 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. Any comments on the visualization, please do so in the next two weeks.
- Evelyn Powers reported out on the March 24th Continuous Monitoring Subcommittee where NYCDEP and NJDEP reported out on their programs. A survey has been distributed amongst practitioners and a map was generated to understand gaps (available for view by [clicking here](#)). Next meeting is scheduled for May 19th as a Zoom meeting.
- Jason Fagel noted that a new HRECOS coordinator has been hired and due to start in May.
- On behalf of Jim Lodge, Rosana Da Silva noted that it would be helpful to have the WQWG act as a clearing house for SARS-CoV-2 water and wastewater information via a subcommittee. Rob Pirani indicated that this should not be the official source of information, but would be helpful for the HEP network as well as for the Foundation.