

Continuous Monitoring Subcommittee

IEC Shared Waters Workgroup and HEP Water Quality Work Group

November 11, 2020

Location: Remote Meeting

Minutes

Attendees: Greg Alber (NJHDG/PVSC), Jim Ammerman (NEIWPCCLISS), Jessica Bonamusa (IEC), Aimee Boucher (EPA), Elizabeth Butler (EPA), Rosana Da Silva (HEP), Carrie Ferraro (Rutgers), Mike Flood (EPA), Roop Guha (NJDEP), Jim Hagy (EPA), Siddhartha Hayes (HRPT), Court Huston (USGS), Peter Linderoth (Save the Sound), Matt Lymanm (CT DEEP), Sara Malone (Rutgers), Esther Nelson (EPA), Katie O'Brien-Clayton (CT DEEP), Jim O'Donnell (UConn), Neel Patel (NYCDOHMH), Evelyn Powers (IEC), Beau Ranheim (NYCDEP), Dan Rearick (NYSDEC), Mark Ringernary (NPS), Chris Schubert (USGS), Melissa Sinisgalli (PVSC), Tristen Tagliaferri (USGS), Jim Vasslides (BBP), Jackie Wu (Randall's Island Park Alliance), and Cheryl Yao (MERI)

Next Meeting: TBD

Introductions and Agenda Overview

Rosana Da Silva welcomed the group and reviewed the agenda.

Recap of Meetings and Accomplishments

Evelyn Powers recapped the past year, where focused efforts included: identifying the goals/needs of practitioners in the region; information sharing; the development of the survey and online mapping tool; identification of gaps and how we could fill those in the Upper New York Bay, East River, and the Arthur Kill/Kill van Kull; discussion around COVID-19 impacts to existing programs and sharing resources like SOPs to continue monitoring safely; and biofouling tips and tricks from everyone.

Rosana Da Silva shared the [continuous monitoring map](#) and the efforts by this group to pull this information together. The map displays locations of continuous monitoring and some information as to the equipment used at the site. Chris Schubert noted that some of the USGS NJWSC sites may be missing or displayed as NJDEP sites. Sara Malone suggested that it may be helpful to add a link for each site. Roop Guha mentioned that all NJDEP continuous monitoring stations are on the following website: <http://njdep.rutgers.edu/continuous/>.

Next Steps: Rosana will update the spreadsheet for each program and share it with each member for your review.

Review of the Draft Biofouling Guide

Rosana Da Silva shared an initial outline of the biofouling guide, intended to be a field guide for current and future staff participating or leading continuous monitoring programs. The outline includes sections for field considerations, equipment, taping, screens, guards, and wipers. Jim Hagy added that he has deployed DO sensors in salt/brackish water for much longer, up to several months with WetLabs' Water

Quality monitor systems that can be added to the guide. Chris Schubert suggesting replacing taping with Surface Treatment or something analogous, that would cover paint, paste treatments, etc.

Next Steps: Rosana will share a draft of the biofouling guide for final input by the group.

Group Discussion: Planning for 2021

- **USGS:** Tristen Tagliaferri shared that their operations and maintenance efforts during COVID was not terrible. The biggest challenge were sites that required boat access and how many people can be on the vessel. Modification was to go out on kayaks to keep separate and re-service sites monthly in the summer.
- **LIS Unified Water Study:** Peter Linderoth shared that their monitoring was delayed by a month and while groups were able to do the work, no volunteers were able to participate. The groups are on target to continue 2021 and may move one station to a different location. One change they are looking forward to is getting a new conductivity sensor from Onset.
- **NYCDEP:** Beau Ranheim stated the DEP didn't have much disruption to the program, but found more episodic episodes in the beginning. There has been a delay in moving forward with both projects and groups that indicated interested in initially wanting a logger. Efforts to develop a public portal is slowing down this process. Although the back end is in place, the front-end of the portal needs to be worked on. DEP will continue efforts into 2021 though is unsure as to whether it will continue from there.
- **Rutgers:** Carrie Ferraro stated that her team is struggling with their mooring for maintenance and calibration. They typically would use the university vessel or teaching cruises to conduct the maintenance. They are currently trying to find someone who is planning to go out on the Raritan that could help pull the mooring out for service. Sara Malone echoed Carrie's update. The mooring is at the tidal reach of the Raritan in New Brunswick. If you have a boat in the area, we sure could use some assistance. Please let us know if you can help: Raritan@ejb.rutgers.edu.
- **Randall's Island:** Jackie Wu shared they are still doing monitoring every two weeks and planning for to install HoBo loggers next year, in partnership with Hudson River Park Trust.
- **HRPT:** Siddhartha Hayes shared his group is interested in trying to monitor the tide pools off of Pier 26. Will likely use HoBo loggers to compare to the HRECOS site. The relocated HRECOS site took more time than anticipated to installed and calibrated, this largely due to the limited number of staff time available.
- **HRECOS:** Dan Rearick will be continuing to support HRECOS. It has been difficult to get out to do swaps due to limited number of staff and when you would be available to come into the office. Staff continue to put into place social distancing, masks, driving separately to sites as part of the new COVID-19 protocols.
- **MERI:** Cheryl Yao updated the group continues to monitor within the Hackensack. Social distance, masks, driving separately are the common new protocols that have been put into place. Will continue to monitor, but the sensors are a challenge as they need to replace the sensors and are seeking funding to be able to switch them out.
- **UConn:** Jim O'Donnell shared the buoys were left out for longer than had initially been planned for. Jim expected a lot of biofouling, but instead had other issues such as the loss of equipment, sensors mostly, and trying to quantify the cost of loss. Social distancing was easier on larger vessels than the smaller vessels. Will be going out in January, and will reach out to Rutgers of whether or not can assist.

Hiring Practices/On-boarding

A short discussion was held around hiring practices and on-boarding during the pandemic. Largely partners are conducting zoom interviews. When out in the field, putting social distancing steps in place such as driving separately and limiting the number of people on vessels. Peter Linderoth shared that for the Unified Water Study, they were able to put together online modules. Peter anticipates keeping the modules as a method for new staff to refer to as well as sharing with new groups. Mark Ringernary asked if these training models are available for access. Peter indicated they are online.

New Equipment

Eureka is looking to create a FIB for continuous monitoring. Beau Ranheim indicated that he has a unit, but it is not continuous. He has had mixed results largely due to the functionality. It takes six samples at a time and the reagents are specific. The colorimetric indicator takes between 3 to 20 hours. At the three-hour mark, it can tell you if it is less than a million. The tech looks promising, but will see how it goes. Roop Guha asked the cost. Beau suggested that they roughly cost about \$20,000, depending on currency exchange, for each and that includes the entire sensor ready to deploy. Beau also shared that NYCDEP may try these sensors as well: <http://www.clearwatersensors.com/>. Roop also shared this company which won USEPA's low-cost continuous monitoring challenge in 2017: http://www.systea.it/index.php?option=com_k2&view=item&layout=item&id=244&Itemid=171&lang=en

Group Priorities and 2021 Goals

Rosana Da Silva asked the subcommittee the following questions: Are these meetings a good use of your time and do you find them helpful? Is the frequency still meeting your needs? Would you like to hear more from practitioners across the country? Is there an urgent issue that we should focus on?

In general, the subcommittee agreed that they are interested in learning from other experts and programs and see that the online format allows for more engagement to see what everyone is doing, new equipment, and best practices. Quarterly meetings are preferred and everyone would like this subcommittee to continue.