

Continuous Monitoring Subcommittee
IEC Shared Waters Workgroup and HEP Water Quality Work Group

May 19, 2020

Location: Remote Meeting

Minutes

Attendees: Amanda Levy (NYCDOH), Aimee Boucher (EPA), Beau Ranheim (NYCDEP), Bob Schuster (NJDEP) Carrie Ferraro (Rutgers), Cherly Yao (MERI), Chris Girgenti (RIPA), Chris Schubert (USGS), Dan Rearick (HRECOS), Emily Nering (EPA), Esther Nelson (EPA), Evelyn Powers (IEC), Greg Alber (NJHDG/PVSC), Jackie Wu (RIPA), Jason Fagel (NYSDEC), James O'Donnell (UConn), Jim Ammerman (NEWIPCC-LISS), Jim Hagy (EPA), Katie O'Brien-Clayton (CTDEEP), Melissa Sinisgalli (PVSC), Neel Patel (NYCDOHMH), Peter Linderoth (Save The Sound), Roop Guha (NJDEP), Rosana Da Silva (HEP), Sara Malone (Rutgers), Siddhartha Hayes (HRPT)

Next Meeting: August 27, 2020 (remote only)

1. Introductions and Agenda Overview

Rosana Da Silva welcomed the group and reviewed the agenda.

2. Program Overview: The Long Island Sound Integrated Coastal Observing System (LISICOS)

Jim O'Donnell, UCONN's Department of Marine Sciences, presented on the LISICOS project which started back in 2000 with buoys and piloting gliders. Sensors are measuring ~1 m below the buoy (surface), mid depth, and ~2m off the bottom (~1m when at low tide). pCO₂ and pH sensors have been the most problematic. Newly added sensors include nitrate and PO₄. The program runs on a 1M budget with combined funding sources from NOAA, LIS Study, NERACOOS, Sea Grant, NSF, DOT, DOH, and from UConn. Goals of the stations are to understand the extent and duration of hypoxia in the Sound. Interestingly data shows that east winds spike DO levels at the bottom. Nutrient data has been collected, but additional funding is needed to conduct the analysis. Typical issues found with biofouling, though Jim recommends using copper and painting equipment with anti-fouling paint (typically used on vessels) have helped; in addition, Jim has wrapped equipment with plastic wrap which also helps.

3. Program Overview: Unified Water Study Tier II Continuous Monitoring Program

Peter Linderoth, Save The Sound, shared that there are over 100 embayments in the LIS and the Unified Water Study is a means to fill in the gaps (collect imperial data and engage a range of participants). Program was designed to engage a number of partners from volunteers to academic, NGO, and government agencies. The study is funded by LIS and provides equipment and funding to partners. The program runs from May through October and a scaled back the number of indicators (use to do everything); Tier 1 indicators are being monitored at all sites while Tier 2, which includes continuous monitoring of temperature, salinity, dissolved oxygen and atmospheric pressure, only incorporates a subset of the embayments (hope is to rotate Tier 2 sites around the embayments). Similar to HRECOS, all groups are listed in a QAPP and are trained – QAPP is critical to the success of the project. A pre and post deployment reading is completed prior to calibrating equipment. As these are shallow water systems, biofouling is the greatest issue. Data processing is most time consuming (QA/QC process); data is released via spreadsheets to keep simple and shared with partners, but disqualified data is removed as 'blanks' for

the public. The program is looking at adding additional water level loggers and expanding spatial extent of the project.

4. Program Discussions and Questions

Jim Hagy suggested that it may be easier to combine the ATM pressure and conductivity data with DO using a script, like R, rather than reimporting the data piece by piece back into the HOBO software. Jim also suggested that, for Peter, the DO data that does not have salinity data may still be retained, it just may not be reported as mg/L.

Chris Schubert asked how the teams take photos of the sensor package post deployment. Peter shared that the group uses a shared drive which is used to grab pictures from data sheets to understand what the biofouling looked like.

Chris Girgenti noted that the program boundary goes down the East River main stem. Are their plans to expand the study west of the Bronx River? Peter indicated that in addition to the Bronx River Alliance currently participating in the study, there are efforts to incorporate Flushing Bay into the study in 2021 but it must remain within the LIS/Upper East River boundary to get LISS funding.

5. Impact of COVID-19 on upcoming Continuous Monitoring Programs

Evelyn Powers opened the floor to the group to talk about how groups are addressing their program activities during this current pandemic and what changes are being considered. HEP and the Hudson River Foundation are working on gathering resources to inform on SARS-CoV-2 and the environment.

Peter Linderoth shared that they have delayed their monitoring activities to June. All training has been transferred online, which was a massive challenge as they had to create videos. Silver lining is that the videos are useful and they may re-record some to improve upon them. They are limiting volunteers to two people per boat and assigning equipment to specific staff members/volunteers to use in addition to PPE (gloves, masks, hand sanitizer, etc.).

Jim O'Donnell noted that UConn is following UNOLS guidelines for Ship operations.

Esther Nelson noted that NYSDEC DOW has developed some draft SOPs. Bob Schuster noted NJDEP is also working on drafting SOPs. Katie O'Brien-Clayton stated that while they don't have continuous monitors, the CT DEEP program is working to develop SOPs to maintain social distancing, masks, only one person per vehicle, cleaning equipment, etc. The SOPs are having to go through the Health and Safety Office for approval. We're borrowing a lot from USGS SOPs. Chris Schubert noted that USGS has some SOPs for CSOs/pathogen monitoring in place for the Bronx/Harlem Rivers UWFP work and look into sharing those at a future meeting. It would be helpful to gather SOPs and share them with the group as folks prepare their own SOPs.

Rosana Da Silva shared an upcoming webinar that EPA will be hosting, specifically on the research that EPA is leading regarding SARS-CoV-2 in the Environment. Flyer will be shared, but the meeting will be held on Wednesday, May 27, 2020 from 2:00 to 3:00 PM ET.

Amanda Levy shared the Water Research Foundations recorded conference that had great information as well: <https://www.waterrf.org/event/virtual-international-water-research-summit-covid-19>

6. Group Priorities and Next Meeting agenda topics

Rosana Da Silva shared that the survey has been updated with additional responses provided since the last meeting. The updated survey presentation will be shared via email and everything in red is indicative of newly added items. The map has also been updated to include new stations (LIS) and is available by [clicking here](#).

Esther Nelson suggested a future topic could be on QAQC lessons learned and willing to aid in coordinating the meeting.

The group also suggested future topics to focus on maintenance and data management.