

Long Island Sound Study

Water Quality Monitoring Workgroup Phone Meeting

Meeting Summary

Monday, March 7, 2016 11AM-Noon

Participants:

Jim Ammerman (Chair)-LISS/NEIWPCC
Charles DeQuillfeldt-NYSDEC
Robin Jazxhi-IEC/NEIWPCC
Peter Linderoth-Save the Sound
Kamazima Lwiza- Stony Brook U.
Matt Lyman-CTDEEP
Leah O'Neill-EPA
Evelyn Powers-IEC/NEIWPCC
Beau Ranheim-NYCDEP
Jamie Vaudrey-U. Conn.
Bob Wilson-Stony Brook U.

1. Jim Ammerman opened the meeting by briefly describing his background and the mission of the Water Quality Monitoring Workgroup. He listed some of the many tasks it has to address, especially trying to improve coordination and data access for the many different groups monitoring LIS and nearby waters. He mentioned that there had been a lot of recent activity with the release of the LIS synthesis book, the new CCMP, and now the new nitrogen strategy.
2. Peter Linderoth described the LIS embayment monitoring and report card efforts moving forward in collaboration with the University of Maryland Center for Environmental Science (UMCES). He emphasized the importance of collecting comparable and reliable data from different embayments so that they can be compared. He discussed the two different tiers of data to be collected and there was some discussion about the data loggers used for continuous dissolved oxygen measurements. (Individual data logger cost, \$1250.) There is a meeting this coming Friday, March 11, to discuss this effort with selected community groups.
3. Matt Lyman discussed the agreement between CT DEEP and IEC to combine their annual LIS hypoxia reports. This will provide a better integrated picture of LIS hypoxia, particularly at the west end of the Sound. This effort is just in the early stages, but it is likely the maps and GIS work will be done at CT DEEP and IEC will take on other tasks. Once all the data is available at CT DEEP it will simplify production of the report. A question was asked about the possibility of calculating the volume of hypoxia and not just the area. CT DEEP has oxygen data every 0.2 m between surface and bottom, so the volume could be calculated but has not been and would require a significant effort. It was noted that hypoxic area and volume are often correlated.
4. Beau Ranheim described the New York City monitoring effort, some of which dates back to 1906. The current program has 90 stations throughout the harbor, half of which are in embayments. Samples are collected by three different methods, depending on the location; either from a large boat, small boat, or a vehicle. Twenty-three different parameters are measured and New Jersey has a similar program. Some of the data is currently available in Excel spreadsheets but is not interactive. However, efforts are underway to use GIS and make all the data available in a more useful format.
5. Jim Ammerman mentioned the NERACOOS Operational Nutrient Observatory that will be deployed in western LIS. It will have automated sensors for nitrate, phosphate, and ammonium

- and Jim O'Donnell is one of the investigators.
6. Jamie Vaudrey, Jim Ammerman, Bob Wilson, and Kamazima Lwiza all discussed the recently submitted NOAA Coastal Hypoxia Research Proposal (CHRP). It will further develop the use of an FVCOM model for LIS, including high resolution modeling of the exchange processes in the East River, as well as some LI north shore embayments. It will incorporate more biogeochemistry, including direct field measurements of bacterial respiration and related parameters. Measurements of stable isotopes will address the sources of carbon and nitrogen, as either recycled or from rivers or wastewater. Results of this proposal submission should be available within six months and other sources of funding will be sought if the proposal is not successful. There was also a brief discussion of a new research paper from the Chesapeake Bay CHRP project which addresses the question of whether nutrient loading or climate forcing drives the inter-annual variability of hypoxia.
 7. Jim Ammerman mentioned the EPA Nitrogen Strategy which includes alternative endpoints for nitrogen removal, besides just hypoxia. One such endpoint is eelgrass acreage. Charlie DeQuillfeldt mentioned the NYSDEC Long Island Nitrogen Action Plan (LINAP), which was recently presented at three public meetings in Nassau and Suffolk Counties, also included such alternative endpoints. Jamie Vaudrey briefly discussed the past extent of eelgrass in LIS, which had a significant presence in many embayments. Coverage first declined from disease in the 1930s and as recovery was occurring in the 1950s increased nutrient inputs from human activities provided additional stress which eliminated many eelgrass meadows.
 8. The meeting concluded with a brief discussion of future meetings. Jim Ammerman proposed a day long in person meeting in the next 3-4 months in a reasonably central location, perhaps also available as a webinar. He also mentioned the possibility of Bill Dennison from UMCES addressing they group about water quality issues. There seemed to be group support for such a meeting. Jim also mentioned that he will develop more detailed information about current LIS monitoring programs (particularly the major agency programs) and Jamie Vaudrey provided him with a spreadsheet of the citizens' monitoring group survey conducted previously.

Attachments and links (Jim Ammerman attached copies of the papers describing the NERACOOS Operational Nutrient Observatory and the Chesapeake Bay CHRP paper on hypoxia, if you want more details on the continuous dissolved oxygen measurement equipment for embayments, contact Peter or Jim for his spreadsheet.):

EPA Nitrogen Strategy: <http://longislandsoundstudy.net/issues-actions/water-quality/nitrogen-strategy/>

NYSDEC Long Island Nitrogen Action Plan: <http://www.dec.ny.gov/lands/103654.html>