



**Long Island Sound Study
Water Quality Monitoring Workgroup Conference Call
Meeting Minutes**

Monday, September 12, 2018 10:00 AM-11:30 AM

Participants:

Jim Ammerman (Chair)—Long Island Sound Study (LISS)/New England Interstate Water Pollution Control Commission (NEIWPCC)

Cassie Bauer-- New York State Dept of Environmental Conservation (NYSDEC)

Charles DeQuillfeldt— NYSDEC

Richard Friesner--NEIWPCC

Lorraine Holdridge--NYSDEC

Peter Linderoth—Save the Sound (STS)

David Lipsky—New York City Department of Environmental Protection (NYCDEP)

Matt Lyman—Connecticut Department of Energy and Environmental Protection (CT DEEP)

Jon Morrison—United States Geological Survey (USGS)

Jim O'Donnell—University of Connecticut (U Conn)

Leah O'Neill—United States Environmental Protection Agency (USEPA)

Evelyn Powers—Interstate Environmental Commission (IEC)/NEIWPCC

Beau Ranheim--NYCDEP

Paul Stacey—Footprints in the Water

Mark Tedesco--USEPA

Advance Agenda and Notes

Agenda

1. Summer monitoring update, did hot weather intensify late season hypoxia? (A very preliminary analysis of the LIS seasonal hypoxia was attached.)
2. Plans for an upcoming CT DEEP-IEC meeting on revisions of the annual monitoring report. What is most important? Who is audience? Should other data be included? Can the report help update important indicators? Other questions and comments.
3. Plans for further discussions on developing a data management system. How do we move forward on this needed effort? Local vs. National databases. Short-term and long-term needs. Role of the modeling initiative. Other relevant examples.
4. Determining a baseline for the Nonpoint Source Tracking Tool that NEIWPCC will be developing.
5. Other topics of importance.

1. The meeting started with an update on current monitoring efforts. Matt Lyman mentioned that participants in Dr. Maria Tzortziou's NASA-supported remote sensing project on Long Island Sound were onboard CT DEEP survey cruises measuring surface reflectance as well as using a flow-through FIRE (fast repetition rate fluorometer) unit to continuously monitor phytoplankton parameters in surface water. Beau Ranheim noted that the same group was also working with his surveys. Matt described the summer weather as unusual and said that there were

significant summer phytoplankton blooms but no jellyfish or ctenophores until very recently. Paul Stacey mentioned that temperatures in the Gulf of Maine were the highest since 2012.

The day before the workgroup call, Jim Ammerman had sent out a brief update on August weather and LIS hypoxia, based on the information available at that time. NOAA weather data showed that many New England states, including Connecticut, had record warmth in August, whereas regional precipitation was more variable. At the time the largest area of hypoxia from the CT DEEP surveys was only 21 square miles (54 square kilometers), from the July 30-August 2 survey. During the August 7th IEC survey of the western Sound, every station had bottom water oxygen values below 3.5 mg/l and most were hypoxic (<3 mg/l). Just prior to the call, Matt Lyman sent out a preliminary map of the August 27-29 survey, with a hypoxic area of 70 square miles (180 square kilometers). This was subsequently refined to 52 square miles (134 square kilometers) on September 17, 2018 when the final survey report was released.

Other preliminary information sent out before the meeting from the LISICOS buoys at both the Execution Rocks and Western Sound location showed a decline in bottom oxygen from early June through the end of August interrupted by periodic ventilation events. Beau Ranheim said that NYC DEP's monitoring indicated that conditions were similar to last year with few extremes. Peter Linderoth briefly described the embayment monitoring efforts of the Unified Water Study which involved 19 groups and 33 embayments working under their approved QAPP. He noted that they had found significant hypoxia or anoxia in at least one stations at several locations around Long Island Sound, including Niantic River, Eastchester Bay, and Northport Harbor. Overall, despite the hot and wet summer weather, hypoxia in 2018 appeared relatively mild, though as Paul Stacey noted, the important indicator in terms of the impacts on organisms is the hypoxic area times the duration of hypoxia, as has sometimes been expressed in the "BADD Index".

Mark Tedesco mentioned the Long Island Sound Tropospheric Ozone Study (LISTOS) which is involves EPA, NASA, and a large number of state and academic partners in a study examining the high levels of ground-level ozone in the Long Island Sound region. (See link at end of notes.)

2. The next item discussed was the preparation of the annual CT DEEP – IEC hypoxia report for 2018. Evelyn Powers earlier requested a meeting to discuss details of the preparation of the report. She noted that the report requires significant effort and does not generate a lot of response so it would be useful to better address the audience and also make it more useful for possible refinements of the monitoring program. Katie O'Brien-Clayton was on a monitoring cruise during the meeting but sent an earlier email suggesting that the audience for the report needed to be better defined. Matt Lyman suggested that the report meeting include only CT DEEP and IEC (as well as LISS) but that data from other monitoring groups, such as NYCDEP, could be referred to in the report. Others agreed with this and noted that the shorter summary version of the reported generated more response and that the audience needed to be more clearly defined. In addition to review by the Water Quality Monitoring Workgroup, Paul Stacey, suggested review of the report by a selected subgroup of the STAC with a deadline for their review. This would address some of the current lack of response to review requests. Matt Lyman seconded this idea of designated reviewers.

3. The third item was a continuation of the ongoing discussion about data management. Jim O'Donnell discussed data management in IOOS and NERACOOS, and noted that while radar data which covers a wide area was shared across different IOOS regions, more localized data is managed with individual regional systems like NERACOOS. NERACOOS uses both THREDDS

and ERDDAP data servers to make data accessible to users. Other data systems such as the Northeast Ocean Data Portal and the WQP/WQX systems were also discussed. Each has different functions and serves different groups. It was suggested that groups that have used these various data management systems be consulted in the process of developing a data management capability for Long Island Sound. Jim O'Donnell noted that the current data management system through LISICOS was very limited though he has moved forward with improvements for his own data. Jim said that there had been increased demands on the data management system, what was originally just meant for monitoring data was now being pressed to provide access to model predictions. Lorraine Holdridge asked about the various data systems and wondered whether the hypoxia graphs sent today could be readily generated from the current data management system, the answer is that they could not. David Lipsky suggested thinking about the issue in terms of a data management portal, a location where different groups could access different information from different systems for diverse needs. Both Jim and David noted that access to both data and model products will be important in the future, especially under the new integrated modeling framework. NYCDEP will want to run the models without needing contractors, which is a different mission than either scientific or public information access. This data management issue will obviously require continuing discussion, short-term improvements, and long-term coordination with the modeling efforts. The idea of a data LIS portal providing access to different management systems for different users is attractive. Some systems will provide data storage which is required for EPA-supported data collections, and others will provide better access and analysis tools. (See database links at end.)

4. The final topic was what year should be used as the baseline year for NEIWPC's Non-Point Source (NPS) Tracking Tool. Richard Friesner suggested either 2000 or today as the baseline, and noted that there was a lack of historical data. Both Lorraine Holdridge and Paul Stacey had concerns about the purpose of the tracking tool as well as the challenges of getting information to put into it. Richard noted that the purpose was for NPS nitrogen reductions to address TMDL progress and the CCMP goal. Both Lorraine and Paul said it was difficult to get states to provide data, and noted that perhaps it should be called an MS4 implementation tool, as MS4s are regulated and have reporting requirements whereas NPSs do not. Success at getting information is more likely when the states are meeting regulatory requirements. David Lipsky asked if Connecticut tracked nitrogen input from forested landscapes. Paul Stacy noted that a previous tracking tool twenty years ago was never used, and the most successful tools were based on land cover.

Links:

LISTOS – Long Island Sound Tropospheric Ozone Study

<http://www.nescaum.org/documents/listos>

Databases

WQP: <https://www.waterqualitydata.us/>

WQX: <https://www.epa.gov/waterdata/water-quality-data-wqx>

Others (thanks to P. Stacey): https://www.waterqualitydata.us/other_portal_links/;

<https://www.northeastoceandata.org/>; <http://www.oceanhealthindex.org/>;

<http://midatlanticocean.org/data-portal/>; <http://neracoos.org/>;

<http://neracoos.org/sentinelmonitoring>; <http://www.oceandataportal.org/> (Note: My browser said this last site was not secure.)