

**Interstate Environmental Commission
Technical Advisory Committee Meeting**

EPA Region 2 Headquarters

March 21, 2017

Participants: *Evelyn Powers (NEIWPC-IEC District), Jessica Bonamusa (NEIWPC-IEC), Peter Linderoth (Save the Sound), Rick Winfield (EPA Region 2), Jason Fagel (NYSDEC), Philip DeGaetano (HRWA), Shawn Fisher (USGS), Beau Ranheim (NYCDEP), Bob Elburn (NYSDEC), Jill Lipoti (IEC Commissioner), Stan Stephenson (EPA Region 2), Mark Tedesco (EPA Region 2), Kathryn Drisco (EPA Region 2), John Kushwara (EPA Region 2), Armondo Alfonso (NJDEP), Biswarup Guha (NJDEP)*

Calling in: Matt Lyman, Heather Radcliffe (NEIWPC), Richard Friesner (NEIWPC), Patricia Sesto (IEC commissioner), Scott Friedman (Industrial Economics, Inc.)

I. -II. Welcome and Opening Remarks

- Evelyn Powers welcomed everyone to the second TAC meeting and all participants introduced themselves. There was representation from all 3 states, as well as local, regional and federal agencies and organizations.

III. Re-cap of Notes from November 1st, 2016 Meeting

- November meeting re-cap: Two major areas discussed in November were the need for citizen science assistance and support and coordination and Analytical needs. IEC is developing a pilot pathogen monitoring effort, building on the HEP-coordinated effort where two groups monitored water and collected samples and analyzed them in our laboratory. More details are provided below.
- Needs regarding Analytical Capabilities: Near-shore monitoring (especially for pathogens), Microbial Source Tracking (MST) techniques to identify sewage source (human vs. other animal) Also discussed IEC's volunteer pathogen monitoring program, as well as our Passaic pathogen track down. The need for more continuous Dissolved Oxygen monitoring, the challenges with placement of and retrieval of continuous DO sensors was discussed as well as sediment loadings, and how they all affect each other.

IV. FY2017 106 Current Workplan Activity Updates and Discussion

- *Compliance Inspections:* Since the November meeting, the FY17 workplan, submitted in mid-October, was conditionally approved. We are unsure when the final approval will come. IEC is continuing with its standard compliance inspections, on a smaller scale. Inspections are developed with state input, and involve wastewater treatment plant inspections, industrial facilities (e.g. power plants) inspections, as well as pump station, MS4 and Industrial inspections. All 12 CT WWTP plant inspections requested for FY17 have been inspected as of now (March)

and 9 of 12 requested CT industrial plants have been inspected as well. IEC also recently received a list of industrial plants and pump station from NYSDEC Region 1 for inspection. The goal in the upcoming months is to have all inspections done before the monitoring season (which is April/May through October).

- *Coordinated Volunteer Pathogen Monitoring Program:* IEC is in the last stages of producing a QAPP for the 2017 volunteer pathogen monitoring program. Last year, Baykeeper and Gotham Whale participated in a similar program through a HEP grant. IEC, EPA and DEC discussed developing a volunteer monitoring program, which is coming to fruition this year. Groups interested include NY/NJ Baykeeper, Freshkills Alliance and New Jersey City University. The goal for the pilot is to have four groups spread between NY and NJ. IEC will do analysis for Fecal Coliform and Enterococcus to represent both EPA recommended recreational water quality criteria and current state recreational water quality indicators in use in the area. It will also be a good way to compare how changes in criteria might affect these waterbodies' ability to meet new standards. Due to the short holding times stipulated by the methods, it is anticipated that pilot will focus on New York Harbor, but is certainly open to groups throughout the IED. There was a question about differing groups of citizens needing differing levels of support: groups who participated last year were a good example of this, as one group involved NY/NJ Baykeeper with a lot of experience and the other, Gotham Whale, needed much more support. This year, IEC is streamlining the process by doing the lab work for the citizens. IEC is also plans to do a comparison study between IDEXX and membrane filtration Enterococcus methods. This is a secondary goal. It was mentioned that in microbiology, there is variability inherent between samples or even within the same sample. Frequency of sampling will also conform to geo mean methods. The goal is five surveys in 30 days with one run targeting post wet weather, if possible. The Unified Water Study has a well-run training program: they suggested that all training for citizens of all levels be hands on, and that lines of communication between citizens and IEC must remain open. Cell phone numbers are important. Training must not be too technical, but must also not be too simple, otherwise it can alienate the least and the most experienced, respectively. There were also suggestions to require training, and to have all returning citizens still come back for refresher trainings. A central location for a drop off point might help with holding times as well: A staff member has a cooler and citizens from various locations drop their samples off with the staff member, who then takes the samples to the lab. It was also suggested that metadata is key, and that all sampling citizens should take as much metadata as possible.
- *Pathogen Trackdown along the Second River and lower Passaic River:* Wrapped up FY16 pathogen track down Phase I. It was a total of 39 sites along the Second River and the confluence between the Second River and the Passaic. There seems to be three hotspots that Phase II will focus on. Stan Stephansen: Still tracking microbial sources, and trying to work out how to work with municipalities, and to maybe work with nonprofits and the community instead of slapping the municipalities with violations. EPA also doesn't have the MST results yet, and they're still catching up now. In Phase I they sampled 5 times a month, with an adaptive management approach—adding and dropping sample locations monthly based on results. Phase II will have more targeted sampling PR01 and PR02, on the Passaic River at the confluence with the Second River are public access or recreational sites (a boat house and a park, respectively); might be beneficial to get some citizen samplers involved. Might also work with other, non-

microbial indicators of human sewage such as Ammonia, Fluoride, Optical Brighteners or surfactants. Other methods and parameters suggested: Caffeine and Acetaminophen.

Request for Proposals

- IEC released an RFP soliciting proposals to contractors to do a report on IEC's 25-year monitoring Long Island Sound. It was released in early January, with proposals due on Feb 17. Five complete proposals were submitted. Multi-agency review team selected a contractor, Industrial Economics, Inc. They are based in Cambridge, MA, and they do environmental assessments and environmental economics.
- Scott Friedman, from Industrial Economics, Inc., gave an overview of the proposed project. They are going to construct a relational database management system. It is a powerful tool that will allow data to be linked and queried across multiple datasets and can go into an ArcGIS geodatabase. Additional data can be added in the future, and it can show spatial and temporal trends in hypoxia. It will also include other factors affecting trends in hypoxia. End products will include the report, a presentation, analysis and the geodatabase. The project is slated to get started in May, and it will take about a year; all phases of the project are projected to be finished in spring 2018. The work plan will include suggestions and comments from the TAC. Suggestions from TAC at meeting include:
 - Correlate changes in point source loading patterns (specifically carbon) and hypoxia in Long Island Sound. Scott Friedman said that if they have that data easily available they can do correlations and regressions.
 - Annual summaries of loading, binning of analysis within periods where there has been changes in loading, and changes in management actions.
 - They could also look at trends in the larger Long Island Sound dataset, e.g. CTDEEP data. This might not be in the capacity of the project to expand beyond the given dataset but will explore further.
 - A series of hypotheses should also be included into the QAPP and tested.
 - Binning could be performed in terms of economic trends, not just loading. Does more development and more impervious cover affect the dissolved oxygen in Long Island Sound?
 - GIS animation feature for the 26 years of hypoxia would be interesting as well.

IEC Water Quality Regulations – Harmonizing Standards with States

- NJ – working on revising standards, but no estimate on time frame. There were two stakeholder meetings. Primary contact standards will align EPA 2012 recreational criteria (SE1 and FW2 waters). They are not looking at dissolved oxygen.
- CT – CT's standards were last approved in 2014, so they should be working on new ones.
- NY-working on revisions, including the possible adoption of EPA RWQC. Need to do regulatory impact assessment. Possible sometime this year.
- IEC has FY17 workplan item to review and revise, if warranted, water quality regulations, but may not be practical or timely with the states standards in flux. A matrix of regional WQ standards is maintained and updated as appropriate. Phil DeGaetano, working with NYSDEC,

prepared an analysis of IEC water quality standards and how they compare to those of the states, which was forwarded to the states for comment in FY16.

Revamping and Revising IEC's Website

- IEC will put out an RFP, and would like to reach out to stakeholders to see what they would like to see on the website. IEC could include maps and data on it so it can be a real tool. HEP wants to have a common data source for the harbor – should it be IEC's website? Who should the audience be – managers or recreational users?
- Suggests using story maps for trends at access points, for example.
- Last week's Trash Free Waters meeting talked about maps for where sampling for microplastic studies have occurred around NY/NJ harbor. This would be one place where all the data were available. It could also include other unregulated things that people are sampling for as an informational tool.
- USGS suggested that a "Now Cast" – instantaneous data – could be used to indicate water-quality based on volunteer-collected data and models that correlate with DEC water-quality standards. The programming is already available for developing a model. This doesn't have to be reinvented and can just run in the background. It uses current and historical data and runs projections. May or may not be an appropriate role for IEC.
- Website also should not set up criteria, but it could present data as soon as possible. However, for things like bacteriological data "as soon as possible" has different meanings – data takes a day to process and Tuesday's data won't be the same as Monday's.
- The IEC website could consolidate others' data, or link to other agencies directly. Rutgers hosts a bathing beach website that does this well. It could be a nice model for IEC. However, IEC will not issue an advisory or recommendation.
- IEC might contract out for the development of a website but it also might be nice to be able to have someone in house so IEC could just add content (wordpress?), although this is easier said than done and takes a lot of staff time either way.

Upcoming Monitoring Programs

- Western Long Island Sound program is going to be in its 27th year. Funding is in place for Long Island Sound for summer 2017. The scope is the same as the past few years. IEC already submitted a proposal for FY18. IEC will continue to adopt and support RIBS, and continue to work with DEC to refine that.
- IEC is also looking to join the Unified Water Study, and to expand sampling in Little Neck Bay. IEC is working on a proposal to Long Island Sound Study to fund the extra sampling time and equipment.
- Unified Water Study is facilitating Save the Sound by monitoring embayments in Long Island Sound for ecological health. There are SOPs for monitoring, everything from station selection to time to collect Dissolved Oxygen. There are 20 groups in discussion, and 12 groups sampling this summer. For Chlorophyll analysis for all embayment groups, there is a QC requirement for the sonde equipment: for two samples per run, analysis must be performed in lab. IEC will run the lab analysis for them.

IEC Transition Status Report

- IEC will let the MOU expire and develop a transitional MOU with NEIWPCC. IEC needs match funds to function; in order for IEC to receive funds it needs to show match non-federal money. NYSDEC has outlined specific water quality projects that can be used as match, as well as the municipality of Greenwich, which is doing some infrastructure upgrades (repairing their wastewater treatment plant, inflow and infiltration reductions – being paid for with state tax dollars) that align with IEC’s mission statement. In-kind efforts and programs count as match.
- IEC also has carryover from year to year; it can use FY16 carryover funds for things common to the FY16 and FY17 plans, but FY17 has not been approved yet. The transitional MOU will allow IEC to access money any remaining EPA 106 funds awarded to NEIWPCC for IEC District activities.
- NEIWPCC’s goal: IEC left in good financial footing and with infrastructure in place like an employee handbook etc.
- IEC is submitting an FY18 grant application as IEC; the workplan, incorporating TAC input from today will be presented in June to IEC Commissioners.

Suggestions from the TAC

- Continuous Dissolved Oxygen monitoring locations? Could be revisited. IEC has a list of proposed continuous DO location sites developed with input from NJDEP and NJHDG (circa 2010).
- Jamaica Bay Science resilience institute: possible for match
- Next parameter: Carbon (TOC and DOC); microbial source tracking techniques, antibiotic resistance array. ARA; Carbon analyzer, and a long-term monitoring strategy.
- Suggestion for a subset of the TAC, a small meeting of lab specialists who can meet (Maybe in EPA Edison) and have experience in what has worked in the past for other orgs.
- Reach out to NJDEP for MST advice.
- Long-Term Monitoring Strategy
- IEC reaches out to others for recommendations and experiences when considering new equipment, EPA’s DESA laboratory staff in Edison has been very helpful with demonstrations, method development, troubleshooting.
- Possible look at developing capabilities to analyze unregulated contaminants, such as microplastics.

Next steps

- Developing a workplan to be approved by the commission and EPA for FY18
- Next TAC meeting in Aug to check back in and report to Commission in September.
- Frequency of TAC meetings going forward: previously planned for between 2 and 4; on track to have 3 this year.