Water Quality Work Group Meeting

May 3, 2022

Location: Zoom (online only)

Minutes

Attendees: Marco Alebus (NJDEP), Rob Buchanan (NYC Water Trail Association/BOP, CAC), Lisa Congiu (NJDEP, NJ co-chair), Rosana Da Silva (HEP), Philip DeGaetano (IEC), Mick DeGraeve (NJHDG/GLEC), Mike Dulong (Riverkeeper), Jason Fagel (NYSDEC), Brent Gaylord (EPA), Biswarup (Roop) Guha (NJDEP), Siddhartha Hayes (HRP River Project), Paul Hauch (NJDEP), Wayne Jackson (EPA), Lingard Knutson (EPA), Michele Langa (NY/NJ Baykeeper), Tom Laustsen (PVSC), Hildegaard Link (Rutgers), David Lipsky (NYCDEP), Jim Lodge (HRF), Kaitlin Penner (NYSEFC), Robert Pirani (HRF/HEP), Evelyn Powers (IEC), Susan Rosenwinkel (NJDEP), Clay Sherman (NJDEP), Shino Tanikawa (NYC Soil & Water Conservation District, NY co-chair), and Judy Weis (Rutgers, STAC)

Next Meeting: August 2, 2022, at 10:30AM via Zoom

1. **Overview of Agenda, Introductions, and Minutes Approval**

Shino Tanikawa opened the meeting, provided an overview of the agenda, and introduced the February minutes. Minutes were motioned for approval by Mick DeGraeve and seconded by Phil DeGaetano.

2. **Intended Use Plans Overview – New York State and New Jersey**

Kaitlin Penner, NYSEFC, shared treatment plants, non-point source, estuary conservation and management plans and other examples that are considered eligible projects under the Clean Water State Revolving Fund. Financial assistance may vary between five-year, short-term loans or long-term loans up to 30-years. IUPs are prepared annually, for both clean water and drinking water, and projects eligible for funding are scored and listed. Kaitlin shared NYS's scoring criteria and indicated that the Estuary Program CCMPs are captured in the scoring. Draft IUPs and the scoring are made available for public comment. This year, projects to be considered for the list are due by June 17th and an online application is available here. Kaitlin highlighted the needs survey, especially stormwater management, and if you have engineering reports or scopes/costs, EFC would like to hear from you. Kaitlin added that criterion specific to HEP's CCMP is included from abating CSOs, beach closures, hypoxia, odor programs, HABs, and floatable debris. To receive loan funding, the project must be on the annual list and must have an engineering report and a smart growth assessment form. Kaitlin highlighted the estimated 2022 allotment for NYS as part of the BIL (numbers do not reflect the base funding).

Paul Hauch, NJDEP, provided an overview of NJ's effort of the IUP which has been drastically different from the past. NJDEP focused efforts to increase public engagement through three workshops, videos, social media, public hearings, and website updates. Like NY, NJ provides up to 30-year loans. Projects for

both submission to the IUP and loan applications are accepted on a rolling basis. Rolling awards are provided to fund projects once they are ready. Drafted IUPs were shared in December 2020/January 2021 and focused on underserved communities and reaching new stakeholders that have not accessed funding in the past, leading to over 500 participants across the three workshops. This year, the DEP shared two draft IUPs for public comments and will be responding to comments received from 33 individuals/organizations. Paul provided an overview of the scoring criteria that the Department reviews and the supplemental BIL funding that will be distributed in CSO abatement/affordability, water quality restoration, energy and water efficiency, emerging contaminants, and overflow/stormwater projects.

Phil DeGaetano asked, how do NY and NJ's scoring deal with overlapping management plans, for example, HEP, LIS, and the Barnegat Bay? Kaitlin indicated that NY would allot whichever plan provided the greatest points to the project. CSOs have the highest priority so that is where the greatest points would be assigned. Paul indicated that would be treated the same in NJ – the points would be allotted if the project falls within a management plan and if listed in various management plans, the project would only receive the highest score, but scored only once.

> **Action:** For those interested in following up with Kaitlin or Paul, please reach out to them via email at Kaitlin.Penner@efc.ny.gov and Paul.Hauch@dep.nj.gov.

3. **NYCDEP Long Island Sound: Hydrodynamic and Water Quality Modeling Support (HWQMS) Project: An Integrated Systemwide Initiative**

David Lipsky reviewed the HWQMS project and reminded everyone that it has been co-funded by EPA through a Cooperative Assistance Agreement and consists of three major components: Development of an improved LIS hydrodynamic and water quality model, assist water quality managers to make science-based decisions, and become the new living resource model. The integrated modeling framework will include all three models (hydrodynamics, sediment transport/water quality, and sediment bed/flux) and interact with ecological models to improve management decisions. David provided background on the LIS TMDL (58.5% in nitrogen load reduction) and the grid sizes available in SWEM developed in the 1990s. Limitations were noted on the model by Jim O'Donnell which included spatial resolution, underestimation of primary production, inaccurate parameterization of benthic fluxes, and others. NYCDEP has invested $1B to upgrade wastewater treatment plants to meet the 2000 LIS TMDL goals, and while progress has been made there is still more to complete.

For the HWQMS, a scope of services was informed by a Technical Advisory Committee, which included several members of the Water Quality Work Group. NYCDEP contracted with HDR to undertake the HWQMS project and started in September 2020. David provided an overview of the six objectives and tasks that HDR will be advancing and highlighted tasks during the meeting. David indicated that for a preliminary calibration of the model, the team will be using the calendar year 2005-2006 for the Model Evaluation Group (MEG) to review before completing a full calibration using long-term data from 2003-2018. NYCDEP has had an initial meeting to develop high level goals that will help to build out and design

the Graphical User Interface (GUI) and inform on the tool's interface, data acquisition needs, and preliminary users.

David shared who sits on the MEG, which is an independent peer review group, and about their charge with sharing peer review results to the Modeling Management Advisory Group (MAG), which is convened by the EPA with members representing various government agencies. The MEG has already provided significant input to the QAPP and the Model Selection and Setup Report. David's presentation included overall regional management goals for the long term model to inform the basis for future applications in the NY/NJ harbor portions of the domain, considerations for calibration and validation of the system, and identify future refinements that may be needed. The MAG will be reviewing a data gaps report to inform what additional data will be needed to improve the model outputs. Coming up this year, the project team will be advancing a sensitivity analysis and in early 2023, a hydrodynamic model pre-calibration memo for peer review will be drafted.

Lisa Congiu asked, as David mentioned earlier, if point source discharges did not have a significant impact on achieving TMDL targets (whether by increasing their loading or saying it is zero), what are some explanations as to why there has been a statistically significant downward trend in hypoxia over the past few decades? David noted that Jim O'Donnell's paper provided a good overview and showed the trend has been improving. While HDR will be adjusting the model so that its prediction closely meets the measured data, the work Jim completed suggests that the original estimates of modeled respiration were correct, but adjustments made to that had created other problems in the model. It has taken a long time to agree on the statistical significance, but the team is also discussing whether the measured parameters are the right ones.

Phil DeGaetano asked, why are no new monitoring activities being taken to replicate the data rich 2005-2006 period? Phil added that calibrating a new model with a 15-year old data set does not seem ideal and asked whether any new data calibration is planned. David shared that there had been a lot of monitoring work in the LIS since the '80s and NYCDEP or HDR were anticipating collecting additional data, but the selection of 2005-2006 data was actively discussed by the LIS STAC. While there is interest in collecting more data, the funding provided by NOAA to support current/flux data collection in the LIS has not been replicated. Phil noted that there were other data collection projects occurring at that same time which would have made it a data rich year. David added that calibration/validation will be completed for a longer period (2005-2014), and the 2005-2006 year is being used for the preliminary calibration because of the completeness of the dataset. Evelyn Powers shared that one of the stated objectives of the NJDEP-IEC harbor monitoring network, which began in 2021, is to gather additional data to verify the model (although not calibration).

Roop Guha asked whether there was any discharger data in the 2005-2006 period to generate the loadings of the period. David noted HDR is trying to acquire all available data. While there are different monitoring discharge frequencies, HDR is looking to gather data from the 1MGD plants throughout the Harbor and CT. David added that HDR should have already contacted NJDEP with a request. Roop noted that back in 2005-2006 there may not be enough data in terms of frequency to be able to develop loadings for the

preliminary calibration and shared his concern that distinct species of Carbon and other data needs from the period may not be readily available as it was not part of their permit requirements. This would lead to another data gap that would affect assumptions when it comes to the loadings.

4. **American Infrastructure Investment and Jobs Act Update**

Rob Pirani provided an update on the American Infrastructure Investment and Jobs Act (a.k.a, Bipartisan Infrastructure Bill or BIL) funding for the National Estuary Programs and outlined the process/timeframe for decision making. While HEP has not yet received official EPA guidance, staff have drafted a first year workplan that was distributed to the Management Committee and will later be shared with the Policy Committee for approval. HEP anticipates that the match will likely be waived, at a minimum for year one of the five years, and funding is anticipated to be available this fall. Rob outlined the considered framework crosses HEP's Action Agenda, Administration Priorities/Congressional Intent, and the Program's capacity/added value. Two key actions for Water Quality, B-2 and E-3, are clear choices that meet the intended framework and Rob provided a brief overview of possible projects to support in year one. Rob asked the Work Group whether there are additional considerations for HEP's five-year framework and/or specific opportunities for partnerships.

Shino noted that workforce development, particularly for GI maintenance, and how this funding could help advance those efforts, would be important. Rob noted that this is a topic that HEP has heard from NYCDEP, City of Newark, and elsewhere in the estuary. One way staff was considering supporting/advancing this could be through the proposed RfP where, in addition to the implementation of GI, also provide workforce development. Rosana Da Silva also shared that the Jersey Water Works is kicking off a Water Workforce Taskforce this summer to look at the water workforce, which will include GI, but will be much broader in discussing with community colleges the idea of updating curriculum to track students into the field. Hildegaard Link asked if other colleges could be involved in that, and Rosana indicated she would connect Hildegaard with Jersey Water Works. Phil DeGaetano also noted that it is not just the training, but operation and maintenance for both green and gray are critical.

Rob noted the question around who is responsible for maintaining green infrastructure and if folks have thoughts around one-off job training opportunities/maintenance agreements that HEP could provide. Hildegaard indicated that she did not think NYC Parks were terribly eager to do this, and that guidance documents and how to's are helpful, but also information on how to put together a team may be more critical. Like the wastewater treatment plants guidance, courses, etc., a document on how to create a team and the curriculum/training needed would go a long way to engage our agencies to advance GI workforce development. Shino indicated it would be helpful to talk to Forest for All Coalition and other partners who are already doing this work to identify the need and added that there is also a great deal of advocacy needed to increase funding for maintenance. Shino shared we still must do work to maintain our gray infrastructure, how is green any different? Where HEP can add value is bringing in entities already doing the workforce development to do the work. Hildegaard added that NYC could be a model, but we should poke at that a bit as green infrastructure is not specific to wastewater treatment plants – could we create a new or different model that would make it easier for utilities to adopt?

Mick DeGraeve asked what the likelihood is for this new funding to assist the local wastewater utilities to monitor water quality in the harbor and the tributaries. The NJHDG are trying to keep up with NYC, but it does become burdensome and staffing difficult. Rob indicated that the short answer is yes, but one thing we are to be mindful of is making those connections to water infrastructure investments/policies. Hildegaard added that making data available to the public, via a dashboard, may be another way to spin it to inform citizens on water quality and shared that CUNY Brooklyn College participates in exploring this idea.

5. **Partner Updates**

Judy Weis has co-edited a new book with contributions from environmental scientists and from the textile industry examining the problems/solutions to microfiber pollution. The book is available here: https://www.routledge.com/Polluting-Textiles-The-Problem-with-Microfibres/Weis-Falco-Cocca/p/book/9780367760755/.