NY/NJ HARBOR & ESTUARY PROGRAM

Water Quality Work Group Meeting

September 5, 2019

Location: Hudson River Foundation

Minutes

Attendees: Brett Branco (Brooklyn College), Carol Stein (EPA), Charlie Dujardin (NJHDG/GLEC), Dan Gurdak (EPA), Don Conger (NHSA), Frank Kiplinski (NJDEP), Greg Alber (NJHDG/PVSC), Helen Polanco (HRPT), Isabelle Stinnette (HEP), Jim Lodge (HRF), Joe Mannick (NJDEP), Judy Weis (STAC), Keith Mahoney (NYCDEP), Lisa Congiu (NJDEP), Mick DeGraeve (NJHDG/GLEC), Pinar Balci (NYCDEP), Rick Balla (EPA), Rob Pirani (HEP), Rosana Da Silva (HEP), Shino Tanikawa (NYC SWIM), Stan Stephensan (EPA), and Sue Rosenwinkel (NJDEP)

By Phone: Amanda Levy (NYCDOHMH), Anand Kumaraswamy (NYCDEP), Brent Gaylord (EPA), Elizabeth Butler (EPA), Evelyn Powers (IEC), Jason Fagel (NYSDEC), Maria Colon (NYCDOHMH), Virginia Wong (EPA)

Next Meeting: November 19th, 2019 at 10:30 AM

1) Welcome, Introductions and Overview of Agenda

Brett Branco opened the meeting, welcomed participants, and reviewed the agenda.

- Brett indicated that minor comments were received on the bylaws and they were all accepted. We will be submitting the bylaws next week for Management Committee approval.
- Isabelle Stinnette announced HEP's annual conference will take place on November 1st at the US Customs House. Registration to be forthcoming. The conference will be focused on habitat, but topics in relationship to water quality will be included.
- Amanda Levy announced that all NYC public beaches will be closed this Sunday, September 8th. Private beaches will be closed by September 15th. Monitoring will be concluded for the season.

2) Contaminants of Emerging Concern: Microplastics (WQ-C-3)

Judy Weis presented on the complexities and overall research needs on microplastics. Last spring, Rutgers University held a two-day conference and presentations were submitted to an open-access journal. Microplastics differ in shape, chemistry, size, density, and color and should therefore be discussed as a suite of contaminants. Non-standardized collection methods make comparisons difficult across regions and environments. Microfibers are most abundant type of microplastics in the environment but are often under sampled. Research efforts should look at addressing: What shapes are likely to pass through the species' guts? Why do some species eat microplastics more than others? If microplastics are not passing through tissue, are they introducing other contaminants when passing through the digestive tract? Research should also expand in source elimination, particularly for microfibers, as well as microplastics in terrestrial and sediment environments and species.

Helen Polanco reported out on current research being undertaken by Hudson River Park and Brooklyn College along two nearshore sites to understand the relationship between CSO outfalls and in channel concentrations. Relationship between precipitation and microplastic concentration is visible, but other variables need to be considered. The project does not account for microfibers as the lab uses tap water to clean samples and tap water also contains microfibers. HRPT will be collaborating with NOAA in a polymer study to look at toxicology.

As part of the Hudson River Foundation's Hudson River Fund cycle for 2019, Jim Lodge indicated one of the nine awardees will be focused on microplastics. Over the course of two years, the researchers will be looking at categorizing types/sources of microplastics, association between freshwater and treatment plant outputs (not taking wastewater effluent), microfiber uptake by organisms, and toxic uptake.

A discussion followed the presentations touching on the need to further understand atmospheric transport as inhalation may be more important than swallowing in terrestrial environments. Majority of research is focused on the aquatic spectrum. Ecological studies are also poorly understood. Microfibers are the most numerous type of microplastics that are being found predominantly in fresh water, salt water, air and sediment samples. Efforts are needed to obtain buy-in from industries to reduce additional inputs of microplastics and methods to capture microplastics (i.e., washing machines). Conducting a health impact is difficult as there is no control sample therefore understanding pathways and sources would aid in policy changes.

3) Harbor-wide Water Quality Report (WQ-D-1)

Rosana Da Silva provided an overview of the harbor-wide water quality report and highlighted some of the findings in the technical memorandum by GLEC. The technical memorandum will be shared with the WQWG and STAC later this week and HEP is requesting for comments. The technical memorandum is not the public-facing document, but will be used to develop the public-facing report.

> **Action(s):** All comments on the Harbor-wide Water Quality Technical Memorandum due to Rosana by September 25th.

4) LTCP Evaluation of Alternatives Proposed for the Shared Waters (WQ-B-3)

Sue Rosenwinkel shared an overview of NJ's LTCP activities which include an interactive map of CSO outfall information, DMR reports, and submittals by permittees. NJDEP is focused on keeping all permittees on schedule. On July 1st, permittees submitted their evaluation of alternatives and were required to evaluate seven specific controls along with others as applicable. Sue focused on three regional plants: BCUA, PVSC, and MCUA. BCUA, the 4th largest wastewater treatment plant in the state, was given a new permit with more stringent limits and do not have any CSOs. Their report looked at plant expansion opportunities. PVSC, the largest treatment plant in the state, serves a quarter of NJ's population and services 8 CSO municipalities with 114 outfalls. PVSC completed a holistic assessment of the region by looking at the individual municipality reports and proposed three tunnels to delay flow. MCUA, the 2nd largest treatment plant in the state, looked at existing capacity, expansion, storage, and flow bypass. One of their suggestions is to place a force main through the Raritan River from Perth Amboy directly to the plant in order to bypass the limitations caused in Woodbridge. Concerns raised included whether facilities would have the capacity to take in flow if they store it (tanks or tunnels).

Don Conger provided an overview of the NHSA's LTCP system which consists of two facilities, Adams Street and River Road. The focus of the alternatives evaluation was aimed at capacity improvements through storage, treatment, conveyance, and plant expansion. At the Adams facility, blending looks favorable to push flow to the plant of wet weather flow through primary treatment and then pumped up the plant to it's effluent discharge. The Northwest Resiliency Park is being treated as a high level storm sewer system to address CSOs and provide community benefits. A new pier structure with underwater storage is being considered which would provide a park above. WQWG raised concerns about the fill project impacts to

existing habitat (balancing of impacts). NSHA and SUEZ is looking at I/I from which leaking water supply adds to the issues of CSOs. Disinfection is also being considered, PAA is more expensive than chlorine but works similarly to chlorine (chlorine does better as the effluent doesn't have to be as clean to deal with pathogen levels).

Keith Mahonney provided an update on the City-wide and East River/Open Waters LTCP which is currently in progress. There are a number of tools that are being considered, similar to the other 10 LTCPs dealing with the city's 308 outfalls. Green infrastructure at 10% impervious cover as a baseline. NYCDEP looked at optimization of the system using Optimatics parreto for performance and cost factor analysis to identify the most cost-effective solution through pseudo stimulation. The tool helped indicate that the interceptor limits flow while bending weirs offered benefits in addition to in-line or tank storage. Daylighting of Tibbetts Brook is being proposed to reduce CSOs and projects in Central Park and Prospect Park are also being explored to redirect flow. Floatable controls are being looked at under the MS4 permit as "one" program that incorporates outreach and education. Storage tunnels are being explored for the Tier 2 and 3 outfalls that would capture 50% of flow along the shoreline but these would still require land from 4 acres for the shaft to ½ acres for the tunnels.

> **Action Items**: Future topic to consider integrated plans dealing with all issues (CSOs/MS4/WQ and Climate Change) and looking at source control (educating and activating the public).
> NJDEP to consider opportunities for daylighting streams and encouraging municipalities to consider options.

5) No Discharge Zone: Raritan Bay Stakeholder Process (WQ-A-3)

Rosana Da Silva provided an overview of an NDZ stakeholder feedback process that HEP has been working with EPA, NJDEP, and NYSDEC. Between surveys, interviews, and public meetings, HEP is hopeful in collecting insight for the states to consider in their evaluation to petition EPA for the NDZ in the Raritan and Sandy Hook Bay, Great Kills Harbor, and a portion of the Lower New York Bay along the East and South Shores of Staten Island.

> **Action Items:** HEP to prepare report on stakeholder findings by December 2019.

6) Long Island Sound Model Update (WQ-A)

Pinar Balci provided an update on the LIS model that aims to link multiple scales using new data to simulate future conditions, such as sea level rise and climate change. The RfP does not include the ecological models, but NYCDEP is considering amending or issuing a new RfP to add ecological data and is accepting of nested models as long as they speak to one another. Proposal due date is till the end of September with the contract starting in 2020 for an 1825 day contract. Meetings will define models and baseline future conditions to improve the model that can better simulate water conditions. In partnership with NJDEP and EPA, meeting in November with the Model Evaluation Group (MEG) and a consultant will be held to include the NY Harbor as part of the grid. The model domain will be the same SWMM domain and the calibration will need to be further discussed. There will be also be a Model Advisory Group (MAG) that will meet on a regular basis and on a lesser frequency hold larger stakeholder meetings, while the MEG will make sure that the modeling and calibration are scientifically sound.