**Water Quality Work Group Meeting**

New York-New Jersey Harbor & Estuary Program

April 11, 2018 10:30 AM –1:00 PM

Location: Hudson River Foundation

**Minutes**

Attendees:

Phil DeGaetano (WQWG Chair), Biswarup Guha, Dwayne Kobesky, Marzooq Al-Ebua, Susan Rosenwinkel (NJDEP), Charlie Dujardin (NJHDG/GLEC), Greg Alber, John Pietrykoski(NJHDG/PVSC); Rob Pirani, Rosana Da Silva (NYNJ HEP/HRF), Mike Dulong (Riverkeeper), Dan Van Abs (Rutgers/JWW), Judith Weis (Rutgers/STAC Co-Chair), Alan Cohn, Keith Mahoney, Pinar Balci (NYCDEP), Shino Tanikawa (NYC SWIM/CAC), Rob Buchanan (NYC Water Trail Association), Jason Fagel (NYSDEC), Rick Winfield, Rosella O'Connor, and Stan Stephansen (USEPA)

Guests: Don Conger, Fred Pocci (NHSA), and Tom Newman (NJHDG/PVSC)

On Phone – Michelle Langa (NYCDOH), Debbie Mans (NJDEP), Holly Shear and Joe DiMura, (NYSDEC)

Next Meeting: Wednesday, June 20th from 10:30 AM – 2:00 PM

1. **Welcome, Introductions and Overview of Agenda (Phil Degaetano - 15 min.)**
   Phil DeGaetano opened the meeting and introduced Rosana Da Silva who started this week as the water quality manager for HEP. Rosana comes from her previous role at the Rutgers University Cooperative Extension Water Resources Program with experience in public outreach, education, and implementation of green infrastructure projects working in partnership with CSO communities, wastewater treatment plants, and NJDEP. Rosana will serve as the point person for the group working with Phil and HEP/HRF.

   Phil reviewed the agenda with the group which focused on a series of presentations regarding CSO event public notification systems. The goal is to identify the commonality between the two states and how advisories are being received by the public so that HEP can identify how to advance the CSO notification improvement identified in the Action Agenda.

2. **Public Notifications of CSO Events / Preparation of Water Quality Advisories (75 min.)**
   *2.1. "CSO Public Notification" by Susan Rosenwinkel, Acting Chief, Bureau of Surface Water Permitting, NJDEP*
   Susan provided an overview of NJ's CSO status (21 communities, 210 permitted outfalls, and 9 POTWs). In the northeast region of the state there are 7 communities and 7 POTWs with 179 outfalls. On July 1, 2015, the state issues new CSO permits (25 individual

permits) and NJDEP is taking a multidisciplinary approach to work with permittee holders through quarterly meetings on the improved NMC and the LTCPs.
Public notification requires signs to be displayed at every outfall in both English and Spanish languages. Requires permittees to post flyers, send brochures, and signs that notify and educate the public. The permit also requires a hotline or website for the public to access information regarding CSO events. Passaic Valley Sewerage Commission (PVSC) and the NJHDG developed a model-based platform for the public and North Hudson Sewerage Authority developed a real-time monitoring tool of their outfalls.

A CSO supplemental team is required to participate throughout the LTCP development and good discussions have been held in those meetings. PVSC has a regional team with 8 communities participating, while others are just getting started. There are three steps in the LTCP requiring public participation:

A. Characterization, monitoring and modeling (understanding the problem)
B. Evaluation of alternatives (7 strategies required to be evaluated, includes green infrastructure, sewer separation, increase storage, POTW expansion, I/I reduction, end-of-the-pipe treatment, bypass of POTW secondary treatment)
C. Implementation schedule (project costs and timelines, not to exceed 30 years)

NJDEP has made available DMR data on each individual outfall displayed on an online map for the public.

*2.2. SPRTK/NY-Alert: Public Notification of CSO Events by Holly Shear, NYSDEC*

Holly provided an overview of the Sewage Pollution Right to Know (SPRTK) and as of May 2013, untreated/partially treated sewage is require to be reported to the state by the municipality and in November 2016, wet weather discharges are reported to the state within 2 hours of discharge discovery.

There are 634 POTWs, 267 POSSs, 1866 individual notifiers (representatives that provide notification to the agency of event), and just over 4,000 public members receiving notification close to real time of an event. A CSO wet weather advisory may be submitted citywide, but the goal is to get reports in by waterbodies and will require a volume to be reported. The challenge is that CSOs are not monitored and to report the volume there are two options; (1) estimate duration or (2) average volume of discharge (simple math by taking the models/past reports of the volume discharged and divide by number of annual discharges). An email alert would then go out as an "Environmental-Not Otherwise Categorized" message with basic information and any public access notification. Manuals and videos are provided on the website about how to submit reports and send alerts. There are 60 CSO communities with 900 CSOs, capacity to visually verify events is not practical. The state relies on municipalities to know their system and depend on personnel experience. Onondaga County built a simple app that shares probability of a CSO which has been accepted by the public.

State is changing vendor for their alert system and an updated version of the alert system will be live as of June 2018 with NY-Alert. Due to the contract change, the CSO map may be off during this transition but the website will be active with additional information about what has been done thus far. A small grants program for CSO detection, monitoring, and remote communications has provided resources to 10 communities.

Comments:

(1) RE: The limited number of people receiving alerts: NYSDEC sent press releases and although the website has good information, the hope is with the new system to gain more subscribers as well as understand who is signing up. Shino Tanikawa mentioned that through the SWIM coalition, public comment is the process is cumbersome. Holly stated the new system will take care of those issues, but will also require those that previously signed up for the alerts to re-sign up in June (emails will be distributed) and will call out "sewerage discharge notification" rather than "environmental – not categorized."

(2) RE: The volume reported information: How is it being used by the public? Mike Dulong and Rob Buchanan stated the public is less interested in the volume and as reported and would be complicated for the general public to understand the meaning behind it. The public does want to know whether a CSO is occurring. Joe Dimura stated the law does not require new systems and models and this is the reasoning behind the volume display of gallons (actual/estimated) versus rate of flow. Targeted information would be helpful rather than modeling based on data or the "if it's raining, probability of an event is high." NYS (and other utilities) have not tracked users and how they are using data but clear that many are officials from the individual municipalities as well as recreational users.

*2.3. North Hudson Sewerage Authority CSO Public Notification System by Fredric Pocci, Authority Engineer, and Donald Conger, Jacobs Engineering*

Fred provided an overview of the NHSA which serves 4 municipalities and where the Authority owns the system entirely (2 WWTPs, 14 CSO regulators, 10 CSOs, 10 pump stations, and 107 miles of combined sewers).

NHSA worked with Mission Communications to develop a real-time monitoring system which includes a Mission Manhole Monitor, antenna, battery, high and low float. The monitor was installed at the end of the sewer on the dry side where a trip lever will go off when a CSO occurs. This will update the map and highlight the outfall in red (active CSO event), yellow for 24 hours post-event, and green for clear. The system is actively used by NHSA and helpful to also notify when a dry-weather flow is occurring. The map does have some improvements to be made which include a legend and a recommendation of different shapes for color-blind public. The purpose of installing the system on the dry side enables the system to capture whether tidal flow made it over the weir. Public has

responded positive to the system with one resident establishing a twitter-bot to send tweets when a CSO event is occurring.

NHSA invested $20,000 to purchase and install the entire system with an additional investment of $500 per year per outfall for the continued monitoring with Mission Communications. Personnel costs did not increase as NHSA already sent staff to check on solid floatables and netting chambers; checking on the system was just an additional responsibility when staff were on site. Battery is said to last for 5 years, but NHSA has seen it lasting for 2 years. When a wet-weather event is occurring, NHSA does not often go out to visually verify.

2.4. *Preparing Water Quality Advisories for NYC Waterbodies using Advanced Modeling Systems by Alan Cohn, NYC DEP*

Alan provided an update on the CSO advisory system which is based on water quality and receiving water bodies. The team is currently working on their analysis and seeking models to compare. The live map is based solely on 72-hours of rainfall data from weather stations and the resulting CSO prediction models established (does not reflect real-time dry-weather discharges). It runs through a lookup table for the rainfall threshold to trigger if a CSO is likely to occur. If a CSO is occurring, the receiving waterbody turns red and also notifies the viewer the duration of the likely CSO event. NYCDEP also has a water conservation campaign to help reduce CSOs through their WAIT campaign aimed at single family homes where a voluntary text notifies participants when to use less water during a heavy rainstorm.

NYCDEP is looking to update this system to shift from secondary to primary contact standards and use daily thresholds instead of the 30-day GM of single sample maximum fecal coliform. The updated model, NYHOPS (New York Harbor Observing and Prediction System) will have higher resolution data, include larger storms, and additional waterbodies. There are 68 waterbodies included in the NYHOPS and includes MS4 loadings that are directly connected and LTCPs to predicate water quality. This model, developed by Stevens Institute, was aimed at becoming an open source data, but NYCDEP has been told that it cannot.

Comments:

Marzooq Al-Ebua, Thomas Newman, and Rick Winfield were interested in learning more about NYCDEP's revised triggering model and how EPA ran SWMM models through the cloud which NYCDEP could also explore to do.

The group recommended including smaller waterbodies/reaches that are actively used by the public through boathouses and programs. NYCDEP does not monitor these smaller waterbodies, but there are citizen science programs that monitor in these waterbodies that could provide informative data to NYCDEP.

Several members were also highly interested in the advisory calculations that the model runs from and NYCDEP is open to further this conversation.

*2.5. A Web Application for Real Time Public Notification of CSOs in New Jersey by Thomas Newman, HDR, consultant to Passaic Valley Sewerage Commission*

Tom highlighted that in order to support the NJ CSO Group, PVSC sponsored the development of a CSO notification website to satisfy the permit requirements for 15 participating municipalities. The notification provides real-time information on if CSOs may be occurring from a municipality to a particular waterbody, based upon observed rainfall conditions gathered from National Weather Service radar maps and the "rule" based on modeling analyses (history to rule-curve of storm intensity and duration for every outfall). The system works only as good as the models used. The model runs on a wide range of conductions and are "checked" by comparing the predictions against what the model would predict for an annual rainfall record. Once the LTCP is completed, the model will be updated and the "rule" will be more reflective of how the system functions.

During a positive result of a CSO, the municipality will turn red. If you search by waterbody, the waterbody being effected will highlight; the map will highlight the municipality and the shoreline that is likely experiencing a CSO event. The model does not take into consideration snowfall and the system calculates hourly results for each outfall. Opportunities to consider include expanding this notification in NJ to work with Public Health Departments and look towards building the model on water quality.

Comments:

People suggested highlighting the whole water body, rather than the municipality and/or half the shoreline.

**3. Update on Long Island Sound Water Quality Modeling (15 min.)**

Pinar Balci provided an overview of the long term goals and objectives of the LIS water quality modeling which focuses on developing a comprehensive integrated model framework to support water management planning and assessment activities in the LIS under one user-friendly platform. Through funding from a cooperative agreement, initial guidance documents were obtained by the NYCDEP team which looked at modeling assessment reports, IEC/CT DEEP Hypoxia reports, CAC priority issues, and the Tetratech technical approach for establishing nitrogen thresholds. A technical assistance committee was identified and formed to consist of experts that will be peer reviewing the draft guidance document (to be released week of April 16th). This will be a scooping document that will generate the development of the models in of phase II B (development of remote/graphical user interface) and phase II C (ecological modeling development) which are not currently funded. Final peer review report to NYCDEP is due in June.

The model grid will include the NY/NJ Harbor but will not be the driving force to build on the LIS SWMM model. Time and budget are the primary constraints for the project. For exploration of an open waters platform, what could be the constraints? EPA could dedicate funding into the next phases and could be helpful for the harbor and LIS to utilize under the same modeling tool.

**Action:** Request for WQWG to review the draft guidance document and provide comments

4. **Proposed NYS Rule on Standards / Classification of New York Bay (15 min.)**

Jason Fagel read the proposed rulemaking to amend the water quality standards regulations and the classification of the Upper and Lower New York Bay. New definitions were provided for coastal recreation waters and primary contact recreation season. The primary contact recreation season is a 90 day rolling GM. NYCDOH has been using a 30 day GM for bathing beaches. Regional upgrades on NY side to meet primary contact standards (cost of $35 million capital funds for increase of disinfection and dechlorination).

Comments:

There was a discussion on the seasonal terms for recreational uses and whether the 90 day GM was rolling or static. Oregon adopted a 90 day GM if there is no water quality data then it goes static.

**Action:** Public comments are due by June 12, 2018 to beachrule@dec.ny.gov