



# NJ Water Monitoring Coordinating Council

## Measuring What Counts for Clean & Plentiful Water

October 3, 2012  
MEETING MINUTES

### Member Attendees

**NJDEP** – *WM&S*: Leslie McGeorge, Alena Baldwin-Brown, Bruce Friedman, Debra Hammond, Helen Pang, Vic Poretti, Bob Schuster *NJGWS*: Karl Muessig *OS* – Judy Louis, Nick Procopio

**NJDHSS** – Doug Haltmeier

**USGS** – Bob Reiser, Jack Gibs

**DRBC** – Bob Tudor, Tom Fikslin

**EPA R2** –

**IEC** – Caitlyn Nichols

**NJ Pinelands Commission** –

**NJ Water Supply Authority** – Todd Kratzer

**Rutgers (Coop Extension Service)** – Lisa Galloway Evrard

**Rutgers (IMCS)** –

**Montclair University** –

**Monmouth University/Urban Coast Institute** –

**Meadowlands Environmental Research Institute** –

**NOAA** –

**Monmouth County Health Dept** –

**Barnegat Bay Partnership** – Stan Hales

**Stony Brook-Millstone Watershed Association** – Alyse Greenberg

**Musconetcong Watershed Association** –

**NJ Harbor Dischargers** – Ashley Slagle

**Brick Township MUA** –

### Guest Speakers/Discussion Leaders

Ron Baker - USGS NJWSC

Kevin Ball – NJDEP/DWQ

Dean Bryson – NJDEP/WM&S

Daniel Kuti – NJDEP/DWQ

Paul Morton – NJDEP/WM&S

John Yagecic - DRBC

### Guests

Brian Henning – NJDEP/WM&S

Ron MacGillivray – DRBC

Erin McCollum - Stony Brook-Millstone Watershed Association

Callie Oblinger – USGS

Jeff Reading - NJDEP/WM&S

Amy Soli – Stony Brook-Millstone Watershed Association

- **Council Business** (Copies of the agenda, minutes and most of the information updates and presentations are available on the Council’s webpage, under “Meeting Information” - <http://www.state.nj.us/dep/wms/wmccmeetinginfo.html>)
- Minutes from the 05/30/12 Council meeting were approved.
- 2013 NJWMC meetings are scheduled for: February 6 (snow date – February 11), May 22, September 25
- Information Updates, Presentations and Announcements:
  1. Technical Session Theme Suggestions for upcoming NJWMC meetings – Stan Hales suggested that, for the February 6 meeting, the NJWMC and the Barnegat Bay Partnership (BBP) co-host a technical meeting focusing on Barnegat Bay. Council members agreed. The Council Steering Committee will pursue development of the agenda for this meeting with BBP.
  2. Information from Sept NWQMC Meeting – Leslie McGeorge briefed the NJ Council on key information from the National Water Quality Monitoring Council’s September Teleconference. These included: the new National Water Quality Portal and its features, availability of NEMI-SAMS (National Environmental Methods Index – Statistical & Assessment Methods) prototype and the types of queries of statistical methods for water analyses that can be performed, objectives & approach for the new Council-led National Network of Reference Watersheds for streams, and a national water quality indices questionnaire (being conducted by NJDEP’s WM&S) to survey and benchmark the development & use of composite indices/report cards nationally. Leslie requested that any NJWMC members who use indices and/or report cards and who would be able to provide their information to the questionnaire, to please contact her or Brian Henning, a scientist on her staff. Council members suggested that the following organizations &/or resources have composite indices worth investigating: the Pinelands Commission, the WEF website, the EPA Coastal Condition Reports, the National Federation of Regional Associations, and the EPA/NOAA Eutrophication Workgroup.
  3. 2012 NJ Water Monitoring Summit – Alena Baldwin-Brown and Leslie McGeorge, along with other Planning Committee members, summarized preparations for the 2012 Summit, scheduled for Nov 28 and 29 at the Rutgers EcoComplex, in Columbus, NJ. The NJWMC is a co-sponsor of this event with the NJ Watershed Watch Network and DEP. In addition to Alena and Leslie, other NJWMC members on the Planning Committee include Debra Hammond, Danielle Donkersloot, Vic Poretti, Bob Reiser, Nancy Lawler, Meiyin Wu and John Kushwara. A draft list of sessions (and session coordinators), including a section on QAPP training, was shared. Caitlyn Nichols offered to join the Planning Committee and coordinate the Sensors Session, which was lacking a coordinator. [Note: the two-day Summit was held and included 7 Plenary and 43 platform presentations. There were also 9 posters presented as well as a QAPP training session, and a data access session. Approximately 120 people participated each day. Presentations have been posted on the Summit website at [http://www.state.nj.us/dep/wms/2012\\_summit.htm](http://www.state.nj.us/dep/wms/2012_summit.htm). There is also a link to this information from the Council’s website, under “Events”.]
  5. WQDE Update & Data Review – Paul Morton provided an update on the NJ Water Quality Data Exchange System (WQDE) which included a breakdown of how many and which organizations have been submitting water quality data, for how many locations, as well as how many and what types (e.g., water, biological, tissue, etc.) of results are available. The information now in WQDE comes from a total of 29 different organizations and includes 125 projects, 11,322 monitoring locations, and 1,346,670 results. Of the results, 95% are chemical/physical (e.g., DO, temp), while 2% are biological (e.g., fish). WQDE receives approximately 70 submissions per month. He also detailed expected enhancements in the new release of WQDE (NOTE: expected now in early 2013) such as: supporting larger file sizes, faster processing times, zip file uploads and downloadable error reports with all errors. In addition, Paul emphasized the need for and importance of data checks.
  6. Flood Water Quality Monitoring: NJ Monitoring Plan Development – Dean Bryson (DEP/BFBM) shared a draft strawman proposal for developing an inland flood water quality monitoring plan for NJ which was born from the events surrounding Hurricane Irene and Tropical Storm Lee, in 2011, as well as from the flood monitoring-related technical session information presented and discussed at the May 30 NJWMC meeting. The draft proposal contains potential partners, monitoring locations, parameters for which to monitor, as well as procedures for initiation/frequency/duration of sampling.

NJWMC members suggested adding: continuous monitoring sensors, need for hardening of gauges, coordination with utilities authorities, and a more complete definition of mission/purpose. IEC offered possible lab and/or field assistance. USGS also suggested adding WATERALERT. Dean was asked to send the draft proposal to Bob Reiser (USGS), Doug Haltmeier (DOH), John Yagecic (DRBC), Caitlyn Nichols (IEC) and Ashley Slagle (Harbor Dischargers) for their input and assistance in developing the plan.

7. *Barnegat Bay Update: Monitoring Project and USGS Gauges* – Helen Pang and Bob Reiser provided updates on both the Barnegat Bay monitoring project as well as the new USGS gauges that had been installed in the Barnegat Bay watershed. Helen summarized the intensive sampling events that took place over 2 4-day periods during July and August, deployment of HOBO units at 7 locations along the thermal plume near Oyster Creek, the addition of an air deposition monitoring station on Cattus Island, deployment of 4 continuous real-time buoys, and several other Barnegat Bay-related projects that had been recently funded by WM&S. It was suggested that these new continuous monitors be added to the NJ Continuous Monitoring Inventory, which is a Council product (NOTE: this has been completed). Bob summarized the existing continuous-record hydrologic monitoring station network in the Barnegat Bay watershed. He also detailed the 11 new stream gaging stations and 2 new water quality monitors that had been installed within the watershed for the Barnegat bay project. Summaries and examples were given of parameters being measured and data that had been collected. In addition, he briefly summarized new gauges that had been installed for the Passaic Flood Warning System.

8. *Announcements* – 1. Debra Hammond announced that Stream School was taking place on Oct 9-10 and that there were still openings. Interested participants were asked to contact her. She also announced that the new 2012-2013 Watershed Ambassadors were now on board. Additionally, she announced that the 2012 Lake Watch effort had concluded and that information had been received for 155 lakes. A report on the 2012 effort is being developed. 2. Bob Tudor announced the Delaware Estuary Science Conference, on Jan 27-30, 2013 in Cape May. 3. Bob Tudor also announced the Ecological Flow Goals Project, being conducted by The Nature Conservancy (TNC) and explained the purpose of the project as well as the role of DRBC.

## ➤ **Technical Presentations - Stormwater Monitoring**

### A. *Monitoring and Stormwater Permitting* – Kevin Ball and Dan Kuti (NJDEP/DWQ)

Kevin Ball and Dan Kuti provided an overview of the DEP Division of Water Quality's stormwater monitoring and permitting programs, including the programs' emphasis on pollution prevention, an explanation of who is regulated, types of permits, permit requirements, monitoring requirements, as well as issues the program faces related to the monitoring requirements. They also explained the new philosophy of the program - a strategic watershed permitting approach that identifies and assesses all known impacts using all available data – and then showcased the pilot project that is underway to test the practice.

### B. *Evolution of WM&S' Stormwater Monitoring* – Bob Schuster (DEP/WM&S)

Bob Schuster detailed the history of stormwater monitoring in WM&S, beginning in 1994 with the Toms River Non-Point Source Pollution study. Bob explained the logistics and level of effort initially required when this study was conducted as well as how advances in methods and technology have led to an ability to collect stormwater-related information using automatic samplers with similar precision to that collected manually, thus reducing staff level of effort. This information helps identify potential sources of contamination to target future regulatory sampling and restoration efforts. The protocols for conducting this type of study have been shared within WM&S and with other programs within DEP as well as external agencies.

### C. *The Relation of Water Quality to Land Use in the Drainage Basins of Six Tributaries to the Lower Delaware River: 2002-2007* – Ron Baker (USGS NJWSC)

Ron Baker summarized a project that was conducted to determine the nutrient concentrations and loads in streams in the Lower Delaware watershed and to assess the relationship between them and the land use in the watershed. Six streams (2 urban, 2 undeveloped, 2 agriculture) in the watershed were sampled. (Note: water quality sampling was conducted by DEP's BMWM and BFBM programs)

for this project). Observations were made related to nitrogen (in its various forms), total phosphorus, bacteria and suspended solids, both annually/seasonally as well as at base and storm flow conditions. Higher nitrogen, phosphorus and coliform concentrations and loads were associated with streams in basins with more urban development. Base-flow discharge contributed more loading of nutrients than runoff, but runoff loading was more affected by urbanization. Fecal coliform bacteria and suspended solids were attributable almost entirely to runoff, and concentrations were substantially higher for streams in basins with more urban land use.

*D. NJ Water Supply Authority Stormwater Monitoring – Todd Kratzer (NJWSA)*

Todd Kratzer provided an overview of the ongoing Lockatong and Wickecheoke Creek watersheds automated stormwater monitoring and sampling project. This effort was put in place to develop techniques to reduce stormwater runoff volume and pollutant loads from roadside drainage. In order to determine the effectiveness of these techniques, automated stormwater samplers and precipitation monitors were used to record storm runoff volume and quality prior to and following installation of stormwater controls. The effort was designed to target sediment sources within the watersheds. Five sites were chosen - total runoff and loadings for nutrients and solids were calculated for each storm event. The data are being used to provide site information for model calibration to design stormwater controls, quantify their effectiveness, and to forecast runoff conditions associated with future change(s) in land use. Precipitation data are being compared to measured volumes for each storm event to determine the percentages of runoff and infiltration.

[EDITOR'S NOTE: This presentation was made several days prior to Todd's sudden, tragic passing. The Council wishes to acknowledge his active participation, willingness to share his monitoring expertise and dedication to preserving, protecting and restoring the quality of NJ's waters. This presentation has been posted – posthumously – on the NJWMC website with the review and approval of the NJWSA.]

*E. DRBC's PCB Stormwater Monitoring Project – John Yagecic (DRBC)*

John Yagecic detailed a stormwater monitoring project, conducted by DRBC, which evaluated PCBs in the Delaware Estuary. The project, conducted from 2004-2008, was done to determine if current Delaware Basin stormwater concentrations would be very different from those derived by a consultant (using period of record global literature) during the Stage 1 TMDL phase. The project also sought to assess the importance of the first flush on the consultant-derived stormwater event mean concentration (EMC). The range of stormwater PCB concentrations measured in the basin was consistent with the literature- based Event Mean Concentration (EMC) used in the Stage 1 PCB TMDL. In addition, DRBC identified logistical lessons-learned for stormwater monitoring.

➤ **Action Items**

- Explore the Pinelands Commission, the WEF website, the EPA Coastal Condition Reports, the National Federation of Regional Associations, and the EPA/NOAA Eutrophication Workgroup for possible composite water quality indices – *Leslie and Brian Henning*
- Send draft flood monitoring proposal for comments to Bob Reiser (USGS), Doug Haltmeier (DOH), John Yagecic (DRBC), Caitlyn Nichols (IEC) and Ashley Slagle (Harbor Dischargers) – *Dean Bryson*
- Add new Barnegat Bay continuous monitoring buoys and gauges to NJ Continuous Monitoring Inventory on Council website- *Alena*

➤ **Technical Topic for Next Meeting**

Barnegat Bay (joint technical meeting with Barnegat Bay Partnership)

➤ **Next Meeting**

February 6, 2013 (February 11 – snow date) at Ocean County College