



NJ Water Monitoring Coordinating Council

Measuring What Counts for Clean & Plentiful Water

January 23, 2008
MEETING MINUTES

Attendees

Leslie McGeorge, Rick Kropp, Alena Baldwin-Brown, Randy Braun, Gary Buchanan, Bob Connell, Becky Cosgrove (for Bill Simmons), Danielle Donkersloot, Tom Fikslin, Jack Gibs, Mike Kennish, Ed Konsevick, Al Korndoerfer, John Kushwara, Judy Louis, Karl Muessig, Caitlyn Nichols (for Boris Rukovets and Howard Golub), Mike Serfes, Bob Tudor, Eric Vowinkel, Paula Zevin

Absent

Lisa Barno, Kirk Barrett, Lisa Galloway Evrard (for Chris Obropta), Jawed Hameedi, Nancy Immesberger, MaryAnne Kuserk, Diana Morgan (for Joan Ehrenfeld), Steve Nieswand, Nick Procopio, Bob Reiser, Ed Santoro, Mike Weinstein

Guests

Manisha Patel – Rutgers University EcoComplex
Lee Lippincott – NJDEP/DSRT

Guest Speakers

Herb Buxton – USGS NJ Water Science Center
Jeff Fischer - USGS NJ Water Science Center
Roland Hemmett – USEPA Region 2
Ron MacGillivray – DRBC
Tom Vernam – NJDEP/WM&S

➤ **Council Business**

- Minutes from the 5/30/07 Council meeting were approved as amended.
- Potential new Council member – Manisha Patel, the new Lab Director at the Rutgers EcoComplex, attended the meeting. She will consider becoming a Council member.
- NJ Water Monitoring Inventory: Leslie McGeorge and Alena Baldwin-Brown announced that the NJ Water Monitoring Inventory will be moving into the Design phase of development during the spring. They provided the Council with the current list of fields that the Inventory is expected to contain. Council members were interested in whether or not the inventory would/could contain (for a particular “project”) the # of sampling stations, the lab performing the analyses and a contact name/info. Leslie & Alena promised to keep Council members apprised of outcomes from this phase of development. Alena also announced that she is planning to present a poster on the Inventory at the National Water Monitoring Conference in May.
- June Meeting Technical Session Topic: It was decided that **Water Quality Data Management** would be the technical topic for the June Council meeting. Several Council members agreed to contact potential speakers/organizations including: Leslie – Dwane Young (EPA), Eric – Steve Tessler (USGS), Bob Connell – Jawed for a NOAA speaker, and Mike Kennish – a Rutgers

speaker. Ed Konsevick offered MERI's interactive web-based data dissemination system. There was also a suggestion for David Legates (U. of Delaware) to speak on DEOS.

- DRBC Federal-State Monitoring Workshop: Bob Tudor & Tom Fikslin announced that DRBC was hosting a Federal-State Monitoring Workshop on March 19. Attendance was to be by invitation only and invited attendees had been sent a spreadsheet, in Dec, regarding monitoring gaps that they were asked to complete & return prior to the workshop.
- Volunteer Monitoring Summit: Danielle Donkersloot briefly recapped the Summit (held Nov 28 & 29 at the Cooper River Boathouse in Pennsauken), including the fact that lots of information was provided to and exchanged among the volunteer monitoring community. Additionally, she announced 2 upcoming workshops: 1. Feb 1 & 2 – data interpretation, and 2. Mar 25 & 26 – macroinvertebrate identification and assessment.
- National Monitoring Network – Delaware River Basin Pilot Update: Bob Tudor provided an update regarding the progress in developing the Delaware River Basin Pilot for the National Monitoring Network. Development of the inventory of current activities, performance of a gaps analysis (comparing inventory to design), and estimation of costs for current & needed monitoring are goals of the pilot. Bob shared information gathered to date, including a chart of which organizations are monitoring what parameters in the DE River Basin, a schema of how the proposed data management system might look as well as a cost estimate for current monitoring and filling gaps.
- Delaware Estuary IOOS Proposal: Bob Tudor reported that the proposal was submitted to NOAA on December 3. Its focus is on migrating from discrete to real-time monitoring in the estuary. If it is selected for funding, work would commence in August of 2008. [NOTE: proposal was not funded; if FY09 funding becomes available, proposal would be among those considered for funding.]
- NY Bight IOOS Proposal: Bob Connell reported that this proposal had also been submitted to NOAA. This 3 year project, if funded, would focus on ocean data acquisition & management, model/forecasting, and development of a product-generating system in the areas of coastal inundation and water quality. [NOTE: proposal was not funded; if FY09 funding becomes available, proposal would be among those considered for funding.]

➤ **National Water Monitoring Council Meeting/National Water Monitoring Conference**

Leslie & Eric Vowinkel provided a summary of the National Council meeting that was held in December in San Diego. Updates focused mainly on planning for the 2008 National Conference (May 19-22 in Atlantic City). Eric, Leslie, Danielle Donkersloot and Jawed Hameedi are members of the Conference Planning Committee. Eric reported that the conference agenda was taking shape but that the Planning Committee is/was still looking for session moderators. Anyone interested in moderating a session should contact Eric. Eric also mentioned that the Planning Committee was considering holding an event on Wednesday evening, possibly at the Atlantic City Aquarium [NOTE: this event did not materialize]. Danielle is helping to plan the field trips – she reported that suggestions for various field trips were being finalized; current ideas included a sailing trip on the AJ Meerwald, a trip to Delaware Bay to observe horseshoe crabs, a water monitoring trip in the Pinelands, a canoe trip through Wharton State Forest, and a canoe trip through the Pinelands. Any additional suggestions should be sent to Danielle.

➤ **Technical Presentations** (Copies of all of the following presentations have been posted to the Council's webpage - <http://www.state.nj.us/dep/wms/wmccmeetinginfo.html>)

The Council heard technical presentations on the following related to Emerging Contaminants:

- A. *Emerging Contaminants: Identification, Concerns, Actions* – Roland Hemmett
(EPA Region 2)

Roland Hemmett provided an overview of emerging contaminants, including definitions of and issues associated with emerging chemicals. He detailed that emerging substances of concern include: PBTs, global organic contaminants (e.g., PBDEs), pharmaceuticals & personal care products,

endocrine disruptors and nanoparticles. He also explained the process used at EPA when an emerging chemical is identified, provided a list of those chemicals that EPA's Emerging Contaminant Workgroup is currently looking at, as well as next steps in this area.

B. USGS National Program Efforts in Emerging Contaminants – Herb Buxton (USGS NJ Water Science Center)

Herb Buxton detailed USGS' efforts, nationally, in the area of emerging contaminants. Like Roland, he explained what they are, where they are being found (surface water, ground water, sediment, CAFOs, solid waste, etc), likely sources and USGS' findings from their studies of emerging contaminants. He also detailed specific studies done in Minnesota & Boulder Creek, CO.

C. Emerging Contaminants: Monitoring & Standards Development - Leslie McGeorge (NJDEP/WM&S)

Leslie McGeorge explained how NJDEP handles emerging contaminants with regards to ambient water monitoring as well as surface and ground water quality standards development. She provided not only information on toxic substances from the existing surface water & ground water quality standards, but she also provided an example of the interim ground water quality criteria for perchlorate that had been developed as a result of monitoring for this particular contaminant.

D. Perchlorate Case Study – Potable Water Occurrence & MCL Development & Surface Water Monitoring –Judy Louis (NJDEP/DSRT) & Tom Vernam (NJDEP/WM&S)

Building upon the example provided in Leslie's presentation, Judy Louis and Tom Vernam provided details of specific studies designed to look for perchlorate in potable water and as part of NJ's ambient surface water monitoring network. In the potable water occurrence study, Judy explained that a previous EPA study had found 6 systems in NJ with perchlorate levels >4ppb. A follow-up NJDEP study found 11 water systems and 17 private wells with perchlorate levels >1ppb (highest level found was 23ppb). Based on this information, NJ's Drinking Water Quality Institute has recommended that NJ adopt an MCL of 5ppb. The document, containing this recommendation, is available from the DWQI website: <http://www.nj.gov/dep/watersupply/publications.htm#njdwqi>. Tom provided details on a specific study, performed July-Aug 2007 that looked at 28 sampling locations throughout the state. Reporting Limit used for this study was 0.1ppb. Tom provided a table of all of the sampling results. – as the table showed, the highest level found was 0.91ppb at the N. Branch Rancocas Creek near Ft. Dix.

E. The Effects of Water Treatment on Emerging Contaminants – Jeff Fischer (USGS – NJ Water Science Center)

Jeff Fischer presented the results from a study that was done regarding organic wastewater-related contaminants (OWCs) in NJ streams and their removal at drinking water treatment plants. This study was co-conducted with NJDEP's Division of Science, Research & Technology. The study looked at the occurrence, distribution & concentration of various antibiotics, pharmaceuticals and industrial/household use chemicals in NJ streams as well as point & non-point sources for these chemicals, whether there was a relationship between concentration and anthropogenic sources, as well as the effectiveness of drinking water treatment plants in removing these contaminants. Major findings included: approx. 150 of 220 OCWs were detected in raw water; a variety of treatment processes (e.g., removal with solids, ozonation disinfection, etc.) were effective in removing >80% of OCWs; 29 compounds were detected in finished water – ½ of these were detected <20% of the time; only 5 compounds were detected 40-100% of the time; ozone was more effective than chlorination in removing compounds & reducing concentrations; active carbon filters caught compounds that ozone & chlorine missed; concentrations in finished water were low & treatment processes reduced concentrations between 30-100%; 5-17 compounds were detected in individual finished water samples; 5 compounds were detected >40% of the time; and disinfection byproducts increased in concentration & frequency of detection in finished water.

F. Emerging Contaminants in Ground Water – Mike Serfes (NJDEP/NJGS)

Mike Serfes provided an overview of proposed work to investigate whether or not OWCs are a problem in ground water in NJ. Sources of OWCs to ground water include: septic & cesspools,

wastewater infiltration lagoons, and wastewater reuse. NJDEP is interested in evaluating occurrence & concentrations of OWCs in NJ. Several proposals have been submitted; none funded yet.

G. Monitoring Emerging Contaminants in the Tidal Delaware River – Ron MacGillivray (DRBC)

Ron MacGillivray detailed emerging contaminant work that has taken place in the tidal Delaware River. The 2007 work focused on emerging contaminants at 6 DE River mainstem sites. Results revealed that PFCs were detected at ng/L levels (PFNA – perfluorononanoic acid - had the highest level detected) and that NPL levels do not exceed either the USEPA marine or freshwater criteria. Ongoing activities include continued review and interpretation of data, development of risk communication benchmarks for these contaminants, and mapping of these contaminants in the DE River Basin. In addition to the work that DRBC has done, he mentioned several other agencies who are looking at emerging contaminants in the Delaware River Basin including: USGS (OWCs), EPA (pharmaceuticals & personal care products – PPCP - in fish tissue & biosolids), DE (PBDE in fish tissue), NJ (PBDE in fish tissue), NY (PPCP in the NYC watershed), and PA (PPCP surface water survey, fish consumption technical workgroup).

- **Technical Topic for Next Meeting**
Water Quality Data Management

- **Next Meeting**
June 11, 2008 at Delaware River Basin Commission