NJ Water Monitoring Coordinating Council

Measuring What Counts for Clean & Plentiful Water

September 12, 2008
MEETING MINUTES - REVISED

Attendees
Leslie McGeorge, Alena Baldwin-Brown, Kirk Barrett, Bob Connell, Tom Fikslin, Jack Gibs, Mike Kennish, Ed Konsevick, Todd Kratzer, Rick Kropp, Al Korndoerfer, MaryAnne Kuserk, Judy Louis, Diana Morgan (for Joan Ehrenfeld), Karl Muessig, Manisha Patel, Bob Reiser, Boris Rukovets (for Howard Golub), Bob Tudor, Eric Vowinkel

Absent
Randy Braun, Gary Buchanan, Danielle Donkersloot, Lisa Galloway Evrard (for Chris Obropta), Jawed Hameedi, Nancy Immesberger, John Kushwara, Nick Procopio, Steve Nieswand, Ed Santoro, Mike Serfes, Bill Simmons, Mike Weinstein, Paula Zevin

Guest Speakers/Discussion Leaders
Debra Hammond – NJDEP/WM&S
Josh Kohut – Rutgers/IMCS
David Legates – Univ. of Delaware
Paul Morton – NJDEP/WM&S
John Yagecic – DRBC

Guests
Marzooq Al-Ebus – NJDEP/DWM
Ray Bousenberry – NJDEP/NJGS
Bridget McKenna – PVSC
Ashley Pengitore – PVSC
Dibs Sarkar – Montclair State University
Paul Schorr – NJDEP/DWS
Dan Van Abs – NJ Highlands Council

- **Council Business**
  - Minutes from the 6/11/08 Council meeting were approved.
  - Water Quality Data Exchange Project: Paul Morton provided an update on development of the overall NJ Water Quality Data Exchange System, including the NJ Water Monitoring Inventory. Testing for the Inventory is expected to occur late-fall – early-winter. Todd Kratzer (NJWSA), Kirk Barrett (Montclair/PRI) and Ray Bousenberry (NJGS) volunteered to be part of the Inventory testing. IMCS also indicated that they will populate the Inventory & possibly participate in testing. His presentation is available on the Council's website.
  - Delaware Estuary Pilot Project Update: Eric Vowinkel provided an update on the demonstration project including the enhanced nutrient monitoring as well as the carbon, sediment and real time monitoring enhancements (inc a new site at Delran and upgrades to all sites to include turbidity).The Delaware River at Trenton site was also upgraded to a USGS NASQUAN site

which will supplement the existing NAWQA site and NJDEP and DRBC monitoring. His presentation is available on the Council's website. Bob Tudor also mentioned that a proposal to fund wetlands condition assessment, as part of this project, was submitted to EPA [NOTE: this proposal was subsequently funded by EPA]. Tom Fikslin also mentioned that he would be presenting the overall DE pilot project was being presented at the Annual Monitoring Conference at the San Francisco Estuary Institute in October and that he would be willing to share the presentation at the next Council meeting.

- *Vibrio Parahaemolyticus* in DE Bay Oysters & Beach Closings – Bob Connell provided a brief summary of both the Avalon syringe-related beach closings in late August-early September as well as the issue of *Vibrio parahaemolyticu*s and the resulting closure of a portion of the Delaware Bay to oyster harvesting during August.
- Emerging Contaminants Subcommittee: Judy Louis & Ray Bousenberry reported that the subcommittee held an initial meeting, developed a draft scope for the group, and the group is currently drafting a white paper which is expected to include policy and research recommendations for areas including sources of contaminants, etc. The next meeting of the subcommittee is expected to occur in October.
- Draft 2008 Integrated Water Quality Monitoring and Assessment Report: Debra Hammond provided an overview of the draft 08 Integrated Report including a summary of the data solicitation, assessment methods, as well as assessment results. A portion of the data used in development of the report were submitted by Council member agencies. The draft report is available for comment on the NJDEP WM&S website - comments on the report will be accepted until October 20, 2008. The final 08 Report is due to EPA in early 2009. It is anticipated that the Water Quality Data Exchange System, when functional, will greatly assist in the development of the 2010 Integrated Report. Her presentation is available on the Council's webpage.
- World Water Monitoring Day: Alena Baldwin-Brown announced that the NJ celebration was scheduled for Oct 16 at the Prallsville Mills in Stockton. Council member agencies who are partnering with NJDEP for this event include USGS, DRBC, and NJ Water Supply Authority. The Delaware River Greenway Partnership is also expected to participate. Other Council member agencies celebrating WWMD include: IEC who was doing monitoring at various locations on Sept 18 (WWMD), as well as the Passaic River Institute who was working with several high schools to do monitoring along the Passaic River.
- Private Well Testing Act: Judy Louis reported that the Private Well Testing Act report had recently been released. She provided a handout of the statewide summary of PWTA results for primary drinking standards and agreed to make a more detailed presentation on the report (& its findings) at a future Council meeting.
- 3rd Annual Passaic River Symposium: Kirk Barrett announced that the symposium is scheduled for Oct 16; keynote speakers include NJDEP Commissioner Jackson, EPA Region 2 Administrator Steinberg and Congressman Bill Pascrell. Council members interested in attending should contact Kirk for additional information.

- **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 Water Quality Data Management/Data Exchange (continued) as well as Continuous Monitoring:

Data Management/Data Exchange (continued from June)

A. *NOAA's Data Access* – Bob Connell (NJDEP/WM&S)

Bob Connell provided a brief overview of the types of coastal data that NOAA has available on its website, ways in which it can be accessed, as well as ways NJDEP has used the data.

B. *Direct to the Web: Meadowlands Environmental Research Institute's Data Management/Data Exchange System* – Ed Konsevick (MERI)

Ed Konsevick shared MERI's online data management/data exchange system which is designed to continuously measure, analyze and disseminate environmental information about the Meadowlands

district. The system is comprised of information from several monitoring programs including a continuous program (est. in 2004, 5 locations, measures temperature, conductivity, salinity, DO, pH, turbidity & depth, measurements are recorded every 15 mins and are averaged into hourly values) and a seasonal program (14 sites – 9 trib, 5 river, 4 seasons, low tide grab samples, measures conventionals, total heavy metals, bacteria, nutrients & solids). Data from each are made available via a web server and Ed showed how each type of data have been used in water quality case studies in the Meadowlands area.

C. *Data Management for NJ's Biotic Index Development* – Mike Kennish (Rutgers/IMCS)

Mike Kennish provided an overview of the project to develop a biotic index for NJ as well as the data management efforts that were taking place within the project. This involves use of existing data bases, sampling information for Barnegat Bay & Little Egg Harbor, existing water quality index information for Barnegat Bay from EPA (via NCA work), existing land cover type for the Barnegat Bay watershed, as well as other information. Data gaps for this project include: seagrass surveys (aerial & *in-situ*), shellfish surveys, biological threshold values, benthic invertebrate sampling for certain timeframes, algal bloom tracking, and testing of relevant benthic indicators. Once data gaps are filled, a multi-metric index for the Barnegat Bay system will be able to be developed.

D. *Rutgers' Coastal Remote Sensing & Continuous Monitoring Data Management System* – Josh Kohut (Rutgers/IMCS)

Josh Kohut detailed the data management system used as part of Rutgers/IMCS' ocean science program. He explained the various components of the Rutgers' system, the IOOS & MACOORA connections, the COOL room where all of the data management activities are centered, as well as provided examples of the each of the various components at work (e.g., CODAR, gliders, satellite imagery, etc.). He also provided information on Rutgers' participation in the National HR Radar Plan (which includes 3 data nodes - one of which is Rutgers'), which is designed to take information from multiple providers, link and share it as a way of creating a system with national applications.

E. *Delaware Environmental Observing System (DEOS) and Estuary-to-Watershed-to-Ocean Observing System (DEWOOS)* – David Legates (U. of Delaware)

David Legates shared Delaware's two data management/data exchange systems – DEOS and DEWOOS – with the Council. DEOS is a tool for emergency management, natural resource monitoring, transportation & other activities as well as providing immediate environmental condition information in and around Delaware to both decision makers as well as citizens. DEOS is comprised of an environmental monitoring & observing network, an integrated visualization & analysis system, and application systems. DEWOOS, which is an integrated watershed & coastal environmental system that can be applied nationwide, uses a system setup similar to DEOS but is intended for a larger scale audience as well as to link to & enhance the National Water Quality Monitoring Network. It has various data platforms – some fixed, some real-time, and some from moving/drifting stations – which provide data from the Delaware Bay/Estuary area.

<u>Continuous Monitoring</u>

F. *USGS Continuous Monitoring* – Eric Vowinkel & Jack Gibbs (USGS-NJ Water Science Center)

Eric Vowinkel and Jack Gibs provided an overview of the types of continuous monitoring that USGS has, historically, been involved in as well as areas in which they are currently active. Eric showed the USGS WaterQualityWatch website (http://water.usgs.gov/waterwatch/wqwatch/) which offers continuous, real-time water quality of surface waters in the US. He also mentioned that the Methods Board, of the National Water Monitoring Council, is forming a sensors workgroup to look at common methods for sensors – Council members interested in being part of the workgroup should contact Eric. Jack provided some history on why USGS has been so involved in continuous monitoring, its advantages, as well as examples of data uses. In NJ, USGS currently has 26 water temperature, 8 DO & pH, 10 SC and 3 turbidity active continuous monitoring sites. He also highlighted some areas in which USGS is exploring expanding sensor use for new parameters.

G. NJDEP Coastal & Estuarine Monitoring – Bob Schuster (NJDEP/WM&S)

Bob Schuster showcased NJDEP's real-time monitoring network in NJ's coastal and estuarine waters. The network consists of 11 sensors, maintained by NJDEP and Monmouth University. Readings are

done every 15 mins; parameters recorded are DO, temp, pH, salinity, turbidity and chlorophyll a. Data are posted to the web every hour. Specific management/decision needs include public health, fisheries management, and ecosystem health. Uses include seafood safety, water quality trend assessment, freshwater withdrawal impacts on estuarine fisheries, and development of eutrophication indicators. Future expansion of the network is anticipated via use of open source software, data standards, and QA standards.

H. *DRBC Continuous Monitoring* – John Yagecic (DRBC)

John Yagecic spoke to the Council about the use of continuous monitors in the Delaware River Basin. For DRBC purposes, continuous monitor data are used for determining aquatic life use impairment in their integrated assessment. As such, the parameters measured include DO, pH, turbidity, temperature, TDS, alkalinity, and toxic pollutants. Continuous monitoring data are also used in an email notification system that, on a daily basis, retrieves real time water quality observations from 7 USGS monitors in the Delaware River, compares the observations to water quality criteria and, in the event of an observation outside of the criteria, generates an email noting such to a listseve. This system has been operational since August 2006 and its benefits include fast notification of apparent wq criteria violations, faster recognition & repair of monitor malfunctions, real-time visualization of parameter linkages, increased visibility & value of real-time monitors to decision-makers, better communication among interstate waterbody agencies and fewer surprises when preparing the Integrated Assessment.

A draft inventory of Council member agencies' continuous monitoring activities, and a resulting map of monitoring site locations generated from lat/long information provided, was distributed to Council members. Mike Kennish indicated that Rutgers/IMCS had some information to add to the Inventory. Bob Tudor also indicated that the DE NEER buoy information should probably also be added to the Inventory. A final version of the Inventory & map will be posted on the Council website when it is completed. The topic of Continuous Monitoring will be continued at the January Council meeting.

- **Technical Topics for Next Meeting**
  Continuous Monitoring (continued)

- **Next Meeting**
  January 21, 2009 at USGS (Feb 4 – Snow Date)