



NJ Water Monitoring Coordinating Council

Measuring What Counts for Clean & Plentiful Water

February 9, 2011
MEETING MINUTES

Member Attendees

NJDEP – *WM&S*: Leslie McGeorge, Alena Baldwin-Brown, Marzooq Alebus, Danielle Donkersloot, Debra Hammond, Al Korndoerfer, Bob Schuster, Tom Vernam *NJGS*: Karl Muessig, Ray Bousenberry *OS*: Judy Louis

USGS - Eric Vowinkel, Jack Gibs, Bob Reiser

DRBC – Bob Tudor, Tom Fikslin

EPA R2 - John Kushwara, Randy Braun, Paula Zevin

IEC - Caitlyn Nichols (*via webex during Technical Session*)

NJ Pinelands Commission – Nick Propocio (*via webex during Technical Session*)

NJ Water Supply Authority – Todd Kratzer

Rutgers (Coop Extension Service) –

Rutgers (IMCS) –

Passaic River Institute/Montclair U. – Kirk Barrett

Meadowlands Environmental Research Institute – Joe Grzyb

NOAA –

Monmouth County Health Dept –

Stony Brook-Millstone Watershed Association –

Musconetcong Watershed Association – Nancy Lawler

NJ Harbor Dischargers – Ashley Pengitore

Guest Speakers/Discussion Leaders

Marc Ferko – NJDEP/OQA

Rob Karl – Brick Township MUA

Carol Lynes – EPA Region 2

Paul Morton – NJDEP/WM&S

Donna Ringel – EPA Region 2

Debra Waller – NJDEP/OQA

Guests

Tom Atherholt – NJDEP/OS

Tom Belton – NJDEP/OS

Jill Lipoti – NJDEP/WM&S

Lee Lippincott – NJDEP/OS

Joe Maggio – Brick Township MUA

Jim Nickels – Monmouth Univ/Urban Coast Institute

Paul Schorr – NJDEP/DWS

Jim Vasslides – Barnegat Bay Partnership

John Yagacec - DRBC

➤ **Council Business**

- Minutes from the 09/22/10 Council meeting were approved.

- Member Announcements: 1. *New and Replacement Members* – The NY/NJ Harbor Dischargers, as represented by Ashley Pengitore, have also officially joined the Council. Ed Konsevic retired from the Meadowlands Environmental Research Institute. Joe Grzyb has replaced Ed as MERI's representative on the Council. Bob Connell retired from NJDEP; Bob Schuster is serving as his replacement on the Council at this time. Tom Vernam has joined the Council from DEP's Bureau of Freshwater & Biological Monitoring, replacing Al Korndoerfer who has now retired. 2. *DEP Assessment & Data Flow Application for EPA Grant* – Paul Morton & Debra Hammond reported that DEP has applied for an EPA grant which, if awarded, would assist with enhancing water quality data assessment and data flow capabilities. Grant awards are expected to be announced in August. 3. *Delaware Estuary Science Summit* – Tom Fikslin provided a brief summary of this event which was held Jan 31-Feb 2. Tom, Bob Tudor, Eric Vowinkel and Bob Schuster attended the Summit. Presentations from the event are available on the Partnership for the Delaware Estuary's website (<http://www.delawareestuary.org/index.asp>). 4. *MARACOOS* – Eric Vowinkel provided an update on the Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS) and its evolution from MARCOOS and MACOORA. It is one of 10 regional associations in the US focused on ocean observing, and encompasses 9 states and 4 major estuaries from Massachusetts to North Carolina. Additional information can be found at: <http://maracoos.org/>. 5. *DRBC Draft Rules on Natural Gas (Marcellus Shale) Drilling* – Tom Fikslin announced that a February 24 Public Hearing, at the War Memorial in Trenton, on the rules was scheduled. He also provided a brief summary of the intent of the rules. Danielle Donkersloot mentioned a recent National Council-sponsored webinar by the Alliance for Aquatic Resource Monitoring (ALLARM), from Dickenson College, on the same subject (Marcellus Shale Monitoring) that she reported was very well received. In response to interest from Council members, DRBC will provide a brief presentation on the water monitoring-related aspects of the DRBC rules at the next Council meeting. Danielle will also invite ALLARM to provide an abbreviated version of their webinar. [NOTE: ALLARM has accepted the invitation] 6. *Montclair University's International Symposium on Sustainability Science* – Kirk Barrett briefly summarized this sustainability-related symposium that was held at Montclair University Oct 25-27. Marzooq Alebus, who moderated one of the breakout sessions at the symposium, also provided some positive feedback. Kirk encouraged Council members to peruse the symposium synopsis which is available online at: <http://csam.montclair.edu/sustainabilitystudies/conferences/>.

- February 2011 National Water Quality Monitoring Council Meeting, & National Surveys: Monitoring & Assessment Partnership (MAP) – Leslie McGeorge provided a summary from the February NWQMC meeting. Items discussed included a call for ideas for the NWQMC newsletter. Of particular interest are articles regarding unique ideas being implemented by State Councils as well as volunteer monitoring activities. If Council members have ideas for articles, they should send them to Alena Baldwin-Brown [note: NJ submitted an article detailing the events of this meeting, including the WebEx by Dan Sullivan, as an example of National Council assistance to State Councils through use of innovative technology, which is included in the Spring edition (available on the NWQMC website at: http://acwi.gov/monitoring/newsletter/national_monitoring_news_spring2011-042811-final.pdf).] Additionally, the 2012 National Water Quality Monitoring Conference has been set for Portland, OR, in April. The National Council has also endorsed the concept of the development of a national Rivers and Streams Reference Site Collaborative Network. USGS is taking a lead role in developing this concept further with EPA and the states. There were also presentations related to nutrient criteria, the impact of the oil spill in the Gulf of Mexico, Water Statistics & Assessment Workgroup updates, state models for external/volunteer monitoring, a revised integrated strategy for EPA/ORD's water research program, as well as an announcement of a new web-based diatom guide for flowing waters. This information, and more, is available on the National Council's website

(<http://acwi.gov/monitoring/>). Leslie also summarized an effort, related to the EPA/State/Interstate Monitoring and Assessment Partnership (MAP) effort for National Aquatic Resource Surveys (NARS). MAP's intent is to assist in helping each NARS meet its national water quality information objectives, while providing benefit/useful information to the states/interstates. Leslie's presentation is available on the Council's website.

- Water Quality Data Exchange System - Paul Morton provided an update on use of the NJ Water Quality Data Exchange System. He also announced that the EN Brower is being replaced to provide enhanced searchability and retrieval capabilities; the new version is anticipated to be available during summer 2011. Paul, once again, asked Council members to let him know how they want to search information to make WQDE data retrieval functions more useful to all. It was suggested that a link be added from DEP's Data Miner to NWIS (the USGS data storage/retrieval system). A request was also made for a demonstration session on how to download and use continuous monitoring (sensor) data from WQDE. Other training was also requested on general data retrievals from WQDE. Paul agreed to host such sessions for any interested Council members. Paul's presentation is available on the Council's website.
 - Brick Township MUA's Ambient Monitoring Program – Rob Karl, Source Water Supervisor for Brick Twp MUA, provided an overview of both the MUA as well as its ambient monitoring program. In addition to providing drinking water to >100,000 people in Brick, Point Pleasant, Point Pleasant Beach and Howell and providing drinking water and sewer collection service for Brick Township, BTMUA also engages in a source water monitoring program which provides a support function for water treatment operations and allows for assessment of long-term water supply issues/trends. Monitoring occurs at both the Brick Reservoir as well as in the Metedeconk Watershed. Both monitoring efforts are designed to ensure that water quality is acceptable for potable water supply and reservoir storage. A wide variety of parameters are measured and data are entered into WQDE. Rob's presentation is available on the Council's website.
- **Technical Presentations** (Copies of all of the following presentations have been posted to the Council's webpage - <http://www.state.nj.us/dep/wms/wmccpresentations.html>)

Science & Use of Sensors for Regulatory & Non-Regulatory Purposes

A. NJWMC Sensors Discussions & Continuous Monitoring Inventory – Leslie McGeorge (NJDEP/WM&S)

Leslie McGeorge provided a summary of the previous sensor-related technical sessions, presentations and discussions that have taken place within the Council. In addition, she reviewed the rationale behind the development as well as the elements of the Continuous Monitoring Inventory, including how to access it online. Council members were asked for their annual review and update of inventory information (due to Alena by April 15). Paul Schorr (DEP/DWS) had a suggested modification to the spreadsheet which will be explored. Leslie also highlighted current DEP applications of continuous monitoring – both in fresh and marine waters – as well as continuous data availability.

B. Use of Sensor Data for Various Purposes (303(d) Listings, TMDLs, etc) – Debra Hammond & Al Korndoerfer (NJDEP/WM&S)

Debra Hammond & Al Korndoerfer provided an overview of both regulatory and non-regulatory issues related to the use of sensor data for various purposes. These issues include use of sensor data for listing/de-listings of waterbodies on the 303(d) list, TMDL development, as a screening tool for information on possible impairments, as well as the quality assurance requirements for each. These types of issues served as the impetus for this technical session.

C. Webex - Sensors Basics & the ACWI Methods Board: Aquatic Sensors Workgroup & Quality Assurance – Dan Sullivan (USGS Wisconsin & NWQMC Member)

Dan Sullivan, National Water Quality Monitoring Council member and USGS Co-Chair of the Methods & Data Comparability Board, presented an introduction to sensors as well as to the national

Aquatic Sensors Workgroup. The workgroup's objective is to convene a group of experts, nationally, to consider efforts to address challenges in the areas of SOPs not keeping pace with technology and the lack of a central repository for information about SOPs, sensor performance, etc. The workgroup's website (<http://www.watersensors.org/>) offers resources devoted to: quality assurance, field deployment, data elements, data management, glossary of terms, technologies, and other related links. Additionally, Dan presented information related to the future of sensors including an expected increase in the capabilities, reliability and deployment, the establishment of several networks (Mississippi River Basin sediment pilot, Great Lakes, NAWQA), and continued areas of need (data and databases, specifications, data analysis). In FY11, the Workgroup will focus on a NEMI-ACT (National Environmental Methods Index & Alliance for Coastal Technologies) web portal, data management, specifications and data quality objectives. Several members of the NJ Council participate on this workgroup; anyone else interested in joining should contact Dan (djsulliv@usgs.gov).

D. Results of Optical Nitrate Sensors Study – Eric Vowinkel (USGS NJ Water Science Center)
Eric Vowinkel shared preliminary results from a study to test continuous optical nitrate sensors in the field under varying salinity, turbidity, and organic carbon environments. The project also evaluated the accuracy, precision and bias of the nitrate field sensors against traditional wet chemistry lab methods. Preliminary results indicate that: salinity is a factor (not all optical sensors are designed for saline & freshwater environments), turbidity is also a factor and may bias results, no results yet for organic carbon effects based on the experiments conducted as part of this study, and the key to success is calibration of the sensor.

E. EPA's Water Monitoring Method Approval Processes – Donna Ringel & Carol Lynes (EPA Region 2/QA)

Donna Ringel and Carol Lynes presented an overview of the two types of water monitoring that are overseen by EPA: compliance monitoring and ambient monitoring. Compliance monitoring refers to drinking water or NPDES monitoring done to assess compliance with regulations and permits. Ambient monitoring encompasses all other monitoring types (including continuous sensors). Compliance monitoring requires use of EPA approved methods (40 CFR 136). EPA also has an Alternate Test Procedure (ATP) process which allows for demonstration that alternate procedures are equivalent to current EPA approved methods. ATPs often require approval at the National level and, in some cases, also require rule making. Ambient monitoring – regulatory (TMDL, 303(d) list, BEACH Act) and non-regulatory (coastal assessment, research, volunteer monitoring) – does not require use of an EPA approved method but does require a Quality Assurance Project Plan (QAPP). Required elements of an EPA-approvable QAPP as well as the approval process were also presented.

F. NJDEP's Quality Systems Approach to Managing Data – Marc Ferko & Debra Waller (NJDEP/OQA)

Marc Ferko & Debra Waller provided a summary of the DEP quality system that is used to produce and verify good reliable data that can be used for environmental management decisions. The 3 components of the data system are: the DEP Quality Management Plan (QMP), QAPPs, and Standard Operating Procedures (SOPs). The QMP is developed every four years and is approved by DEP management and EPA. Development of and required approvals for a QAPP were reviewed. Quality Control tools, and the need for each, were also summarized. Additionally, examples of concerns associated with using continuous monitoring sensors were highlighted.

- **Technical Topics (and additional presentations) for Next Meeting**
Monitoring (and Research) in Barnegat Bay, Marcellus Shale Monitoring
- **Next Meeting**
May 25, 2011 at the Delaware River Basin Commission