



## Meeting Notes – National Water Quality Monitoring Council (Council) July 29-31, 2014

(Agenda and list of participants on pages 5-6, presentations and recorded meeting posted on Council website at: <http://acwi.gov/monitoring/>)

### Actions, Decisions and other Information

1. **Council Updates** – Gary Rowe gave an update on the current Council membership. Future directions and focus of the council were discussed in the Council Roundtable Discussion (item number 14).
2. **Future Council meeting dates:**
  - Late October, 2014: Web Meetings (series of shorter calls spread over 1-2 weeks, main purpose to get work group updates)
  - Late January or Early February, 2015: Winter Council Meeting, face-to-face meeting, location to be determined
  - April 2015: Web Meeting
  - August 2015: Web Meeting
3. **Decision:** Upon a motion duly made (Steve Wolfe), seconded (Greg Pinniak), and carried, the March 31, 2014 Council Meeting minutes were approved and will be posted on the website (Kim Martz).
4. **Report on 2014 National Monitoring Conference-** Jeff Schloss, NALMS, presented on the results of the electronic survey sent to conference participants. 218 surveys were completed, with “good” to “excellent” reviews for many parts of the conference, including the oral presentations, conference communication, and posters. Suggestions from the surveys included forming smaller groups for the Networking Session, improving moderator communication, and improving the timing of registration on the website.
  - **Action:** Jeff Schloss will send out survey results to Council
5. **Conference Planning Committee-** Jeff Schloss, NALMS, updated the council on the progress for finding a venue for the 2016 National Monitoring Conference. He is currently communicating with conference venues in Tampa, FL, Hartford, CN, Portland, ME, and Providence, RI; the Tampa venue looks to be the most likely candidate for the 2016 Conference. Alice Mayo, EPA, presented on takeaways from the 2014 Conference Wrap-up call and discussed things that could be improved for the 2016 Conference. (See presentation—Things to do differently in 2016 for details).
  - **Action:** Council members are invited to send Jeff Schloss suggestions for other East Coast conference locations
  - **Suggestion:** Try merging the National Monitoring Conference with the River Rally or NACWA conference in future years. Gary Rowe mentioned that a non-profit group formed and funded by conference proceeds to take over most conference planning duties freeing up Council members to work on other Council priorities. Jeff Schloss noted that a separate group did do conference planning the first two National Monitoring Conferences but the Council felt they did not have enough control of Conference content and the Council took over planning for subsequent conferences.
6. **National Network of Reference Watersheds** – Jeff Deacon, USGS, gave an update on the progress made on the FY2104 Workplan. Most of the workgroup’s goals were met this year and the workgroup is still working to refine the National Monitoring Network website and develop a plan to link to the Water Quality Portal. The workgroup shared its plans for FY2015, including incorporating additional watersheds from Alaska, Hawaii and Puerto Rico, refining the aesthetics of the website, beta-testing the new website, refining the Core Watershed Criteria, and developing a network user guide. (See presentation – [NNRW\\_07\\_29\\_2014](#)).
  - **Action:** NNRW Workgroup will send out website for beta-testing to Council members when it is completed
7. **Water Quality Portal (WQP)** – Charles Kovatch, EPA, and Jim Kreft, USGS, gave an update of the WQP FY14 accomplishments, including, a major rework of the WQP services and website, adding new data partners, and refining the map display. Plans for FY 15 include improving data sharing, increasing requirements to use WQX, identifying additional data partners, and developing summary and/or analytical tools. (See presentation – *“Water Quality Portal Summer 2014”* for details).

- **Suggestions:** Bill Willber suggested gathering data from volunteer groups linked with states. Jeff Schloss noted that many universities may have data to contribute from their water-quality work. Nancy Schultz recommended extending training sessions on the WQP to tribal groups.
8. **Sensors Workgroup**—Dan Sullivan, USGS, gave an overview of the water sensors website, QA matrix, deployment guide, and draft data elements. Dan recommended hosting a sensors workshop (one-time or semi-annual) that could train users in hands-on protocols for consistent data collection. The workgroup is planning on updating the website (see presentation “[Sensors Summer 2014](#)” for more details). Denice Shaw, EPA, also discussed the EPA Nitrate Sensor Challenge, which will help to develop affordable nitrate sensors over the next three years. The Council is invited to participate in a requirements and specifications workshop that will take place in September, 2014.
  9. **Methods and Comparability Board**- Dan Sullivan, USGS, updated the Council to many major accomplishments that NEMI had in FY14, including the launch of NEMI 4.0, linking to the WQP, Biodata, development of the NEMI Protocol Library, and review of NEMI user analytics. The board is continuing to improve data management tools and is looking to entering new protocols, perhaps from the state level. The methods board is currently discussing the possibility of allowing non-published methods to be included in the database (see presentation “[MDCB\\_update\\_Aug2014](#)” for more details).
  10. **National Monitoring Network**—Hugh Sullivan, EPA, talked about the status of the National Monitoring Network. Recent efforts have involved talking with the Governors’ South Atlantic Alliance to try to get the network set up; however, nothing has progressed recently. The group is looking to re-solidify what the network is and how it is run.
    - **Action:** call for information and revitalization of NMN will be coming out in late August/early September
    - **Action:** update national inventory of monitoring networks
  11. **Water Information Strategies Workgroup:** Mary Skopec, Iowa Department of Natural Resources, and Leslie McGeorge, New Jersey Department of Environmental Protection, reviewed activities of the WIS group in FY14. Products include a fact sheet on the Water Quality Indices/Report Card questionnaire project and templates for “What My Manager Needs to Know” fact sheets. This group is actively looking for a co-chair (see presentation “[Water Information Strategies Webinar 073114](#)” for more details).
    - **Action:** Mary Skopec will send out available WIS tools to the Council
    - **Action:** post results of QW indices project and “What my Manager Needs to Know” on WIS webpage
  12. **Collaboration and Outreach Workgroup** – Candice Hopkins, USGS, presented a general overview of workgroup activities including webinars, social media, and newsletters. Plans for FY15 include updating the Council website and increasing our presence on social media (see presentation “[C\\_O Workgroup Updates](#)” for details). Webinar topics were discussed by all on the call; future webinar topics included:
    - o a modified version of Brian Pellerin's talk
    - o a how-to on the WQP
    - o a how-to on using long-term monitoring data for management
    - o Ohio River nutrient trading plan
    - o the use of smart-phone apps to help with citizen science
    - o a NEMI update, and “R” workshops
    - **Action:** **Deadline** for Fall 2014 issue of “**National Water Monitoring News**” newsletter is **September 5, 2014**. Send articles to Candice Hopkins, chopkins@usgs.gov
  13. **Presentations**
    - Kris Stepenuck, Water Action Volunteers, gave a presentation on findings from her research on assessing volunteer water monitoring impacts on natural resource policy and management. Findings include survey results from 345 volunteer monitoring programs, many of which have had success at achieving natural resource policy and management success (see presentation “[Volunteer Stepenuck](#)” for more details).
    - Jeff Deacon, USGS, explained plans for web-based annual reporting of USGS stream and river water-quality data. Data from the USGS National Fixed Site Network (NFSN) that will be made available through webpages that will help to deliver information more quickly than through a formalized report. An example webpage was demonstrated to the group and feedback was given on the example graphics and webpages.

- Dwane Young, EPA, presented on continuous monitoring data standards and the challenge of storing continuous data. EPA is currently developing a continuous monitoring data strategy for storing continuous data; WaterML2 is an example of a model that is capable of storing continuous data and metadata. Other related activities include ACWI's Open Water Data Initiative and EPA-led "experiments" on sensor data sharing (see "[NWQMC\\_Sensor\\_Data\\_Standards](#)" for more details).
- Brian Pellerin, USGS, discussed continuous monitoring for nutrients. Sensor technology now allows for the measurement of a wide range of constituents with direct or proxy measurements in intervals of seconds to hours. Currently available water quality sensors were reviewed and used to discuss the possibility many products, including real-time "watches" and a nationally-consistent, real-time, continuous nutrient monitoring network (see presentation "[Continuous Nutrient Monitoring](#)" for more details).
- Erik Host-Steen, Hach Hydromet, led a discussion on facilitating public-private partnerships. At the Cincinnati panel session, users expressed frustrations at cost limiting implementation and the fitness for use is often not quite right; this is often due to a small and fragmented market and mixed or unclear applications. Erik challenged the Council to help facilitate communications of needs and have and possibly host a business case workshop (see presentation "[NMC Public Private Partnership Panel Report Out July 30 2014](#)" for more details).

#### 14. Council Roundtable Discussion Topics/Ideas for Future Directions

- **Questions posed to the group:** What topics should the Council address in the near term? What topics should the Council address in the medium term? How do we balance current Council work with new issues? Do we need additional work groups?
- **Upgrades to the Water-Quality Portal:** The Council needs to upgrade the WQ Portal to include biological data, as well as Discrete and Continuous water quality data. The WQ Portal should be upgraded so it can be the Nation's primary provider of water-quality data and metadata. The Portal should provide a mechanism to make volunteer monitoring data more accessible to state and federal agencies.
- **Continuous Sensor Data:** work to increase the capability of these sensors and advertise basic standards and protocol that have already been developed. Develop SOP for quality assuring continuous sensor data. The Council should help develop standards for integrating continuous sensor data into the WQ Portal (or its equivalent for continuous data). Standard applications of continuous sensor data need to be documented.
- **Interactive Website that Showcases Monitoring Success Stories/Economic Benefits:** The Council should try to develop an interactive website that highlights monitoring success stories and links the cost of monitoring to the economic benefits of informed policy decisions. Jon Marshack highlighted California's [MyWaterQuality portal](#) which that takes users to additional pages that address key questions such as "Is the water safe to drink?", "Is it safe to swim in the water?", "Is it safe to eat the fish and shellfish?" etc. This type of portal has been used to illustrate the value of monitoring and related grants programs that support monitoring to legislators.
- **Addressing Uncertainty and Confidence in Monitoring Data:** How do we address uncertainty or confidence in data and how do we convey this to decision makers? We need to highlight uncertainty regarding the data and analyses that are used to answer simple questions or show actual data plotted against standards. Use portals to speak with leadership about the value of data that is being collected and the value of additional samples. Perhaps use a website that grades water bodies or a web interface that responds to key water monitoring questions, tying graphics and maps to new reports. If we were to develop simple scorecards, can we really be certain there is a meaningful difference between an "A" and a "B"? There is increased interest in non-point source information to help with monitoring and regulatory decisions. There is a desire for more information to help with monitoring and regulatory decisions; we need new thinking as states grapple with nutrient issues. What is the Council's roll in making relevant nonpoint source information available to the water-quality monitoring community?
- **Gaps in Council Representation:** There is a major gap in ancillary information related to agricultural nonpoint source information. Can the Council get agricultural interests involved in the monitoring community? Apparently lots of local irrigation districts, local coop boards are collecting water-quality data. Can we get them to share their data? It seems to be mostly nutrient data related to nutrient criteria data. In CO they are collecting salinity and Se data. Can we add an agricultural community rep (i.e. non-Federal) such as Soybean or Corn Grower's Association?
- **Census of Water-Quality Monitoring Activities and Contacts:** Could Council foster a Water-Quality Census of who's doing what in each state? Part of rationale is to include list of contacts so folks know who to contact for water-quality monitoring information. Barb Horn noted that we already have the list of contacts for most of the volunteer monitoring community but we don't always know where each group is working and what types of monitoring they are doing. We are also missing updated list of state and federal contacts. It was noted if we undertake such a census we

need to provide incentives for different organizations to provide the information. Sources of information include State Water Quality Monitoring Councils and most states have developed Water Quality Monitoring strategies for groups submitting data; most of these strategies require annual work plans that could be compiled.

- **Potential New Sources of Water-Quality Monitoring Information and Data for the Council:** Need to inventory and contact that represent new sources of water-quality monitoring data and knowledge to the Council. Potential sources include NOAA (data from regional centers), NADP, USFWS, Agriculture, NGOs, and utility groups.
- **Database of Existing Water-Quality Standards:** Can we compile a database of existing water-quality standards? EPA has National criteria guidelines but these are national criteria; the issue is getting state-level criteria and water-quality standards. Jon Marshack noted California is mapping all water quality standards and beneficial uses, TMDL criteria to a NHD coverage. River Network has tried to map this as well but such an inventory is very hard to keep up to date. What is incentive for folks to provide such data? Can Council incentivize the creation of such a database and locate groups that are willing to pull this information together if the Council acts as the facilitator for doing this. Does the Council have a role in creating demand for this information? Can we build map and graphical tools of the Water Quality Portal so people can pull data and put it into the context of their local or State level criteria. The low-tech solution is set up hyperlinks to documents (pdfs) that list all the state/tribal criteria documents available online. However, we would need to be careful as some (many?) documents may be out of date.

## MEETING AGENDA

### Tuesday, July 29<sup>th</sup>, 2014 – Eastern Daylight Time

1:00 pm – Welcome and Roll Call (Gary Rowe, USGS, Council Co-chair)

1:05 pm – Council Business -- Approval March 31, 2014 Council meeting minutes (Candice Hopkins, USGS, Council's Executive Secretary) See link: [http://acwi.gov/monitoring/ppt/telecon\\_033114/index.html](http://acwi.gov/monitoring/ppt/telecon_033114/index.html)

#### **Report on 2014 National Monitoring Conference**

1:10 pm -- Summary of Feedback and conference wrap-up (Jeff Schloss, NALMS)

#### **Update on 2016 National Monitoring Conference**

1:50 pm – Plans for 2016 Conference (Jeff Schloss, NALMS)

2:10 pm – Additional Feedback/Suggestions (all)

2:20 pm – Break

2:50 pm – Plans for Web-Based Annual Reporting of USGS Stream and River Water-Quality Data (Jeff Deacon, USGS)

3:50 pm – Assessing Volunteer Water Monitoring Impacts on Natural Resource Policy and Management (Kristine Stepenuck, Water Action Volunteers Stream Monitoring Program)

4:35 pm – Reference Site Network Workgroup Update (Jeff Deacon, USGS)

4:55 pm – Adjourn

### Wednesday, July 30<sup>th</sup>, 2014 – Eastern Daylight Time

11:00 am – Welcome and Roll Call (Gary Rowe, USGS, Council Co-chair)

11:05 am – Water Quality Portal (Charles Kovatch, EPA, and Jim Kreft, USGS, of the Water Quality Portal Development Team)

12:05 pm – Continuous Monitoring Data Standards (Dwane Young, EPA)

12:35 pm – Continuous Monitoring for Nutrients: State of the Technology and State of the Science (Brian Pellerin, USGS)

1: 35 pm -- Break

2:05 pm – EPA Nitrate Sensor Challenge (Denise Shaw, EPA)

2:25 pm – Methods Board Update (Dan Sullivan, USGS, Methods Board Co-chair)

3:10 pm – Sensors Workgroup Update (Dan Sullivan, USGS, Sensors Workgroup)

3:55 pm – Facilitating Public-Private Partnerships—Results from Cincinnati Panel Session (Erik Host-Steen, Hach Hydromet, Industry Representative)

4:25 pm – Adjourn

### Thursday, July 31<sup>st</sup>, 2014 – Eastern Daylight Time

**11:00 am** – Welcome and Roll Call (Susan Holdsworth, EPA, Council Co-chair)  
**11:05 pm** – Council Roundtable Discussion: Future Directions (All; Led by Susan Holdsworth, EPA, Council Co-Chair)  
**12:35 pm** – 2015 Conference Planning Committee Update (Alice Mayo, EPA, Conference Planning Committee Co-chair)  
**12:50 pm** – Break  
**1:35 pm** – National Monitoring Network Update (Hugh Sullivan, EPA, Workgroup Co-chair)  
**2:15 pm** – Water Information Strategies Update (Mary Skopec and Leslie McGeorge, state representatives, WIS workgroup)  
**3:15 pm** – C&O Workgroup Update, Future Webinar Topics, and call for newsletter articles (Candice Hopkins, USGS, C&O co-chair)  
**3:40 pm** – Agenda topics and plans for future meetings (Susan Holdsworth, EPA, Council co-chair)  
**3:55 pm** – Adjourn

**Participants:**

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