



# Across the Board

A newsletter of the  
Methods and Data Comparability Board

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*The Methods and Data Comparability Board (MDCB) is a partnership of water quality experts from federal agencies, states, tribes, municipalities, industry, and private organizations. The Board, and its parent organization, the National Water Quality Monitoring Council (NWQMC) are subcommittees of the Advisory Committee on Water Information (ACWI). ACWI was chartered under the Federal Advisory Committee Act (FACA) in 1997. The National Council and the Methods Board are multi-agency committees charged with developing a voluntary, integrated, and nationwide water quality monitoring strategy. The Board's goal is to identify, examine, and recommend water quality monitoring approaches that facilitate collaboration among all data-gathering organizations and yield comparable data and assessment results.*



## National Environmental Methods Index



*Use NEMI to "ferret out" methods for assessing environmental quality!*

### **Use NEMI first...**

***On October 31, 2002, in a letter cosigned by Diane Regas, EPA Deputy Assistant Administrator for Water and Bob Hirsch, USGS Associate Director for Water, EPA and USGS formally announced the public release of NEMI.***

Developed by the Methods Board, NEMI is a free clearinghouse of environmental monitoring methods. It contains method summaries of lab and field protocols for regulatory and non-regulatory water analyses. It is searchable over the web at [www.nemi.gov](http://www.nemi.gov), providing up-to-date methods information through a standard Internet connection and browser. NEMI provides a mechanism to compare and contrast the performance and relative cost of analytical, test, and sampling methods for environmental monitoring.

Since April 2002, there have been nearly 22,000 visitors to NEMI. NEMI provides an opportunity for users to offer feedback and share their experiences or to solicit further information. One NEMI user made the comment, "This is great, such a resource tool you cannot truly imagine. Office or field response help is available at the touch of a keystroke!!! If the database could hold known interferences and method "quirks" for easy reference, that would be incredible." Another NEMI user says, "Very good resource! Are there plans to add methods for sediment and tissue analysis?" (Editors note: Yes, there are plans to add methods for sediment and tissue analysis.)

To facilitate the addition of new methods, NEMI's Steering Committee is developing new online data entry forms and a data entry manual. The manual provides step-by-step guidance on using the online forms. These tools have undergone initial testing and should be available in the very near future, so get your methods ready!

NEMI epitomizes the successful application of collaboration and partnership. NEMI is a powerful tool in the quest to work smarter and to be more efficient. We invite each of you to add NEMI to your own toolbox. It will facilitate method comparison and help ensure that consideration of analytical methods is a more active part of your program planning and implementation. With NEMI, you can compare methods at a glance and find the method that best meets your specific needs. ***We are beginning to compile NEMI "success stories."*** ***Please let us know how NEMI has helped you to work smarter -- give us your feedback online at the NEMI site, [www.nemi.gov](http://www.nemi.gov)!***

A strategy from the National Methods and Data Comparability Board

**Activities**

**Develop and deliver products in the short term while...**

**...thinking and planning strategically in the long term.**

**Vision**

## **In the works...current and future products**

The Methods Board functions through a series of workgroups in order to address specific areas of water monitoring and comparability. Each workgroup develops their individual projects and products within the group and collaborates with other workgroups to ensure that all are thinking and planning strategically.

Below is a summary of the Board's workgroups. The table on page 4 provides contact information for workgroup chairs. For more information about Board projects and products, please visit the Board's website: <http://wi.water.usgs.gov/pmethods/>

### **Biology**

The mission of the Biology group is to identify, compile, and develop a framework for characterizing and comparing biological methods for water monitoring using population assessments, molecular biomarkers, and toxicity assays. The workgroup is currently working with WI Department of Natural Resources to implement a comparability study of two bioassessment methods for benthic macroinvertebrates. This project will result in a report that addresses how to judge comparability between the two methods.

### **Performance Based Systems (PBS)**

The mission of the PBS workgroup is to define the dimensions of a performance-based system for field protocols (chemical, microbiological, and biological) and laboratory analyses. The workgroup also prepares guidance on implementing PBS for both ambient and compliance monitoring. The PBS COD pilot paper, in which two COD methods were evaluated, was submitted to the journal *Environmental Science and Technology* (ES&T) earlier this year and is going through the peer review process. The PBS workgroup anticipates publication sometime in 2003. The PBS group is exploring the idea of organizing a workshop on PBS in 2003. The workshop would focus on the history of PBS, how it works, success stories, what we've learned, key issues and controversies, brainstorming, etc. The workshop will foster creative dialogue to synthesize the pros and cons of the issues, and create a blueprint for moving forward. The workgroup is also developing a paper that deals with assessing methods and data comparability.

### **National Environmental Methods Index (NEMI)**

The mission of the NEMI workgroup is to foster rapid communication and comparison of critical method parameters for use when selecting or modifying methods and assessing data comparability. The NEMI workgroup has developed a new Internet-searchable database of method summaries after four years of research. Work continues to expand the numbers and types of methods in the database along with additional advanced searching and reporting functions.

### **Nutrients**

The mission of the Nutrient workgroup is to provide information that will allow the end user to utilize nutrient data from various methods. This includes fostering new technologies, and promoting collaboration and cooperation among federal, state and volunteer organizations to achieve consistent collection, analysis and reporting of nutrient data.

The Nutrient group is developing a white paper on selecting nutrient methods using a DQO approach and relating this with EPA's nutrient criteria. The group is conducting a pilot that compares specific nutrient methods and the performance information provided in the methods of various organizations. The group is also evaluating data comparability from pilot data on methods for total nitrogen analysis.

**Let us know what's going on with you...**

**Please let us know about upcoming meetings, conferences, or articles that would be of interest to our "Across the Board" readers.**

**We are particularly interested in articles from state water monitoring councils and other collaborative projects.**

**Contact Corinne Marino at:  
[Corinne.Marino@tetrattech.com](mailto:Corinne.Marino@tetrattech.com)  
410-356-8993.**

## Accreditation

The mission of the Accreditation workgroup is to develop and promote a Board position on laboratory accreditation and field certification. This workgroup also coordinates with external accreditation standard-setting organizations, i.e. NELAC. NELAC (National Environmental Laboratory Accreditation Conference) is a voluntary association of State and Federal Agencies formed to establish and promote performance standards for the inspection and operation of environmental laboratories and for environmental monitoring. NELAP (National Environmental Laboratory Accreditation Program) is the program that implements the NELAC laboratory standards.

The group is in the process of developing a survey to determine how many federal laboratories, and their contractors, performing compliance testing are accredited by NELAC or other authorities. The survey will explore the following questions: *Do labs know NELAP? Have they considered NELAP? Why or why not? What are data quality indicators? What is the performance testing frequency? Date of lab accreditation? Should field personnel and taxonomists be certified?* Once the survey is complete, the workgroup will evaluate the level of accreditation, as well as the costs to labs implementing NELAP or other accreditation.

## Water Quality Data Elements (WQDE)

The mission of the WQDE group is to develop and recommend a core set of data elements for reporting water quality monitoring results. The elements would be voluntarily implemented, and would allow data to be compared regardless of, but recognizing, the purpose of the monitoring activity.

The group is currently conducting pilot projects to test various aspects of implementing the WQDE, and is developing tools and guidance for easier implementation. Partners in this study include the Wisconsin Ground Water Monitoring Council, Milwaukee Metropolitan Sanitation District, USEPA STORET and many others. A biological WQDE group has been formed to develop core data elements for a variety of commonly used biological methods not included in the NWQMC approved WQDE for chemical and microbiological analytes.

## New Technologies

The mission of the New Technologies workgroup is to assess new methods and instruments with important environmental assessment applications and to summarize the key procedures, technical requirements and performance characteristics. The workgroup is currently preparing case studies of Data Quality Objectives and Measurement Quality Objectives for new versus existing technologies. In the case studies, methods for detecting algal toxins and immunoassays have been identified as high priorities.

## Outreach

The mission of the Outreach group is to support and promote the activities of all of the Board's workgroups. In addition, the Outreach group serves as the Editorial Board of "Across the Board" and provides strategic thinking and planning for the Board. The Outreach group has compiled Board information, which can be distributed at conferences, meetings, etc. The committee is the process of updating and creating an annotated inventory of all the Board's products (posters, slide shows, fact sheets, etc.). These outreach tools will eventually become available on the Board's internal website and will be updated on a continual basis.

## **Meet the Board...**



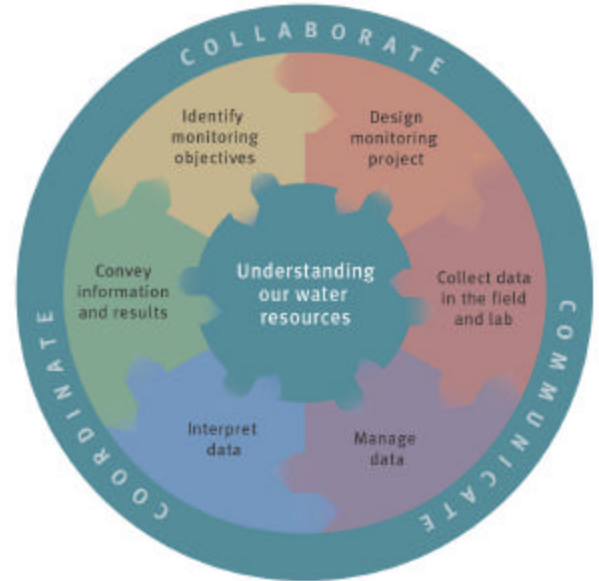
Dr. Geoffrey A. Ekechukwu is a Fish and Wildlife Biologist who currently serves as the National Water Quality Coordinator for the U.S. Fish and Wildlife Service at the National Headquarters Office in Washington, D.C. Born in Owerri, Nigeria, Geoffrey has always been interested in the interrelationships between living organisms and their surrounding environment. As a young man, he was fascinated by the tremendous diversity of life on earth and its capacity for ordered coexistence. These interests led him to pursue his BS and MS degrees in zoology from Arizona State University, Tempe, Arizona. In 1976, he earned a Ph.D in biology with a concentration in ecotoxicology from the University of Nevada – Reno. Geoffrey currently serves on the Methods Board in the Water Quality Data Elements biology workgroup. He believes that water is the fundamental basis for life and clean water is important for the protection, conservation, and enhancement of fish, wildlife, plants, and their habitats. He brings these beliefs and experience, training, and knowledge to work with the Board and Council. Geoffrey enjoys working with the Council and Board as a way to exchange technical and scientific ideas, and to fashion those ideas into useful and innovative tools in water quality monitoring and assessment. He believes that collaboration, cooperation, and coordination are the keys to data comparability in water and other environmental monitoring activities throughout the country and world.

***We will highlight one Board member in each issue of the newsletter.***

## News from the National Council

### 2002 National Monitoring Conference

In May 2002, the National Council held its third National Monitoring Conference, *Building a Framework for the Future*. Close to 450 monitoring professionals gathered at the Monona Terrace Center on the banks of Lake Monona in Madison, Wisconsin. The conference sessions were organized around the newly developed framework for monitoring (right). The Methods Board took the lead on several workshops and sessions, especially those involving collecting data in the field and lab, and data management. Conference proceedings are available online at [www.nwqmc.org](http://www.nwqmc.org). The Council has begun to plan for the 2004 conference. Visit the Council's website shown below for more information.



### Council to coedit next issue of IMPACT

The National Council will be co-editing the September 2003 issue of the American Water Resources Association's (AWRA) journal, IMPACT.

The issue, tentatively titled *Framework for Monitoring: Moving Toward*

*Consistency and Comparability in Water Data and Information in Support of Management Decision-Making*, will focus on the Council's efforts to develop a water quality framework that facilitates communication, coordination, and collaboration in future monitoring activities (see graphic). In preparing the IMPACT issue, the Council hopes to follow a new process - one that permits considerable dialogue among monitoring professionals and results in a set of well-connected papers. By involving a sizable number of experts with a broad range of expertise, the IMPACT issue will represent a high level of consensus on a monitoring framework. The goal of the IMPACT issue is to present a common way of viewing water quality monitoring so that:

1. Disciplines and agencies can more easily collaborate on water monitoring activities and/or share water data and information;
2. Improved consistency and comparability are achieved in the data and information used to support water management decision-making; and,
3. The current strengths and weaknesses of the state-of-the-science in producing consistent and comparable water quality information can be evaluated, documented, and reported.

#### Interested in working with the Board?

For more information about becoming a part of the Board, contact Abby Markowitz [Abby.Markowitz@tetrattech.com](mailto:Abby.Markowitz@tetrattech.com) or Dennis McChesney [mcchesney.dennis@epa.gov](mailto:mcchesney.dennis@epa.gov)

Below are the names and email addresses of the Board's workgroup co-chairs. Please direct workgroup specific questions to the appropriate people.

Name	Workgroup	Email
Katherine Alben	Biology co-chair, New Technologies chair	alben@wadsworth.org
Clifford Annis	PBS chair	clifford_annis@merck.com
LeAnne Astin	Biology WQDE co-chair	lastin@icprb.org
Herb Brass	Methods Board co-chair	brass.herb@epa.gov
Jerry Diamond	Biology co-chair	Jerry.Diamond@tetrattech.com
Chuck Job	WQDE co-chair	job.charles@epa.gov
Ron Jones	Nutrients co-chair	jonesrd@fiu.edu
Larry Keith	NEMI chair	larrykeith@earthlink.net
Dennis McChesney	Outreach chair	mcchesney.dennis@epa.gov
Glen Patterson	WQDE co-chair	gpatter@usgs.gov
Charlie Peters	Methods Board co-chair	capeters@usgs.gov
Edward Santoro	Nutrients co-chair	esantoro@drbc.state.nj.us
Merle Shockey	Accreditation co-chair	mshockey@usgs.gov
Bart Simmons	Accreditation co-chair	bsimmons@dtsc.ca.gov

For a complete lists of Board and Council members, log-on to the Methods Board and NWQMC websites.

**Methods Board website:** <http://wi.water.usgs.gov/pmethods/>

**NWQMC website:** <http://water.usgs.gov/wicp/acwi/monitoring/>