

Across the Board

A Newsletter of the Methods and Data Comparability Board

Vol. 1, No. 2
Summer/Fall 2003

The Methods and Data Comparability Board 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 in 1997 under the Federal Advisory Committee Act (FACA). 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.

NEMI RESPONDS TO TERRORIST THREAT WITH CBR

The success of the National Environmental Methods Index (NEMI) in providing a useful framework for assessing analytical methods is being captured in a companion effort—NEMI-Chemical-Biological-Radionuclide. Mirrored on NEMI, NEMI-CBR presents data on methods that may be applied to identifying chemical, biological, and radiological contaminants emanating from a terrorist attack on water supplies. A core expert group is providing guidance for the effort. Several traditional NEMI fields have been modified to address the particular nature of CBR agents, but NEMI's user-friendly format for finding and comparing methods is intact. In addition, new fields relating to how rapidly an answer may be obtained, and how specific a method is for the requested analyte or organism, have been added. Typically, methods that are useful for identifying groups of analytes or organisms have poor specificity for individual analytes and vice versa. Thus, Analyte/Organism Specificity and Class Specificity fields have been added.

An additional feature of NEMI-CBR is a companion expert system that guides a user to method(s) most useful for addressing an incident of a defined nature. Water Anti-Terrorism Expert-system Response (WATER) has two primary uses. One is in an emergency mode to find a method or methods that will provide

information rapidly for making a decision on the identity of a suspected analyte or organism in water as quickly as possible. The second use is to find a method or methods that may be used to confirm a suspected analyte or organism identity or that may be used to monitor water for analytes and/or organisms of interest. In addition to providing help with method selection, the expert system also provides general advice on where and how to sample within a drinking-water system.

NEMI-CBR will likely be offered in a secure environment available to authorized environmental, health, and security managers and personnel.

NEMI USERS AND DATA BASE GROWING AND GROWING

Over 40,000 visits to NEMI have been recorded in the past year, and the positive response has been overwhelming. Users around the country are reporting that the user-friendly source of analytical method information is an integral part of their daily toolbox for planning studies and evaluating data. The Methods Board NEMI Workgroup is continually refining the data base, and many more methods—including field and biological methods—are being added throughout 2003. If you haven't visited NEMI you can access it online at www.nemi.gov.

METHODS BOARD HAS A NEW WEBSITE!

The Methods Board's new website is scheduled to be up and running sometime this fall. The new, updated site features highlights and updates on the Board's works in progress, position papers, other products, past issues of *Across the Board*, links to other useful sites, and more! You can visit the new site—when it's launched—at <http://wi.water.usgs.gov/methods/>



**National Environmental
Methods Index**

www.nemi.gov

EARLY WARNING SYSTEMS EVALUATION IN NEW JERSEY

A consortia consisting of EPA, USGS, Rutgers University, and several water utilities in NJ are embarking on a landmark evaluation of early warning systems for drinking water. EPA Region 2 provided \$500,000 seed money for the effort, which is being managed by Dr. Eric Vowinkel of USGS's West Trenton, NJ office. Eric, a member of the Board's New Technologies workgroup, says that some of the different sensors are currently being tested as part of the USEPA's Environmental Testing and Verification (ETV) Program in conjunction with EPA's National Homeland Security Research Center. EPA's Testing and Evaluation (T&E) Facility in Cincinnati will also be testing sensors in the near future. Promising technologies will be deployed at sites in NJ already being monitored, in real-time by USGS, for flow, temperature, and other conventional parameters. Part of the plan is to include results of the evaluations in NEMI-CBR to enable easy evaluation of the technologies, their precision and accuracy, and relative cost.

LABORATORY AND FIELD ACCREDITATION

Following up on a paper, approved by ACWI, recommending accreditation of federal laboratories, the Accreditation Workgroup is developing a similar paper on accreditation of state laboratories. Water Quality Data Elements (for chemical, radiological, and microbial contaminants) developed by the Board and the National Council have been incorporated into the Field Activities standard, which was adopted by the National Environmental Laboratory Accreditation Conference (NELAC). The Methods Board is monitoring the North American Benthological Society's (NABS) development of a standard for taxonomic measurements, which will be submitted to NELAC for adoption.

NELAC has been restructured; it is now solely a standards adoption body. Standards are being developed by standards development organizations. The Institute for National Environmental Laboratory Accreditation has been created to do some of the standards development. Accreditation Workgroup members are independently participating in the INELA standards development, and will also consider helping other organizations in the development and adoption of standards.

WATER QUALITY DATA ELEMENTS

The EPA Office of Environmental Information (OEI) is evaluating how agencies could implement the Water Quality Data Elements (published in the Federal Register: March 16, 2001, Volume 66, Number 52) in their programs. OEI has met several times with the Office of Water concerning this possibility. OEI is in the process of drafting business rules for implementing WQDE within EPA's regulatory and voluntary programs. The WQDE with some minor modifications have been adopted by the State-EPA Environmental Data Standards Council (August 21, 2002) for future chemical, radiological, and microbial data exchanges between states and EPA. WQDE for biological parameters are being developed using a modular concept.

NYC WATERSHED PHOSPHORUS COMPARABILITY STUDY

Data comparability is playing a role in the protection of New York City's Watershed. Many laboratories contribute to the ongoing monitoring and research efforts to protect the sources of the City's drinking water. Phosphorus, an analyte of considerable concern generated from wastewater, agriculture, and urban sources, is of particular interest. In order to evaluate comparability between phosphorus data analysis from laboratories analyzing samples from the watershed, EPA and USGS organized an interlaboratory comparability study. Ten laboratories participated in the study. Laboratories analyzed spiked water samples, and actual NYC Watershed water for total and ortho phosphate. Results showed that about half of the laboratories produced results which met accuracy and precision targets. A second trial is being run for laboratories that didn't meet targets. Those that fail again will need to address their methods and techniques to determine where improvements are necessary, and to establish acceptable performance using independent test samples.

EPA FORUM ON ENVIRONMENTAL MEASUREMENTS

The U.S. Environmental Protection Agency has created a Forum on Environmental Measurements (FEM). The FEM is a standing committee of senior EPA managers established to enhance EPA's measurement programs by adopting basic principles to promote consistency and consensus within the agency on measurement issues. The Forum has been established to provide a central point of focus to address Agency-wide measurement issues including: standards for validation and documentation of methods for sample collection and for biological, chemical, radiological, and toxicological analysis; for developing scientifically rigorous, statistically sound and representative measurements; and for employing a quality systems approach that ensures that the data gathered and used by the Agency are of known and documented quality.

For more information on the Methods Board and to let us know what's going on with you...

For more information about becoming a part of the Board, contact us at:

mdcbinfo@tetrattech-ffx.com

or contact Dennis McChesney:

mcchesney.dennis@epa.gov, 732-321-6729.

We'd also like to hear from you 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 the Methods Board at:
mdcbinfo@tetrattech-ffx.com

MEET THE BOARD

Dr. Katherine Alben wears many professional hats—as a Research Scientist at the New York State Department of Health’s Wadsworth Laboratories in Albany New York; as an Assistant Professor in the Department of Environmental Health and Toxicology at the State University of New York - Albany; and as a dedicated, prolific, and



seemingly tireless member of the Methods Board. Katherine’s energies are ubiquitous in Board activities, among them chairing the Biology and New Technologies Workgroups.

Katherine received her PhD from Yale University (Physical Chemistry, 1976), following a BA in chemistry from Mount Holyoke College, and did post-doctoral work at both the Washington State Department of Health and Yale’s Department of Engineering and Applied Science. She brings to the Board her

vast experience in examining physical-chemical processes which mediate drinking water quality, mass transfer of organic contaminants between liquid and adsorbed phases, and instrumental analysis and

computational methods. Her current research interests include the novel application of algal pigments for evaluation of their uptake by various benthic organisms, and the use of immunoassays for detection of environmental contaminants. In addition to an active professional

Katherine particularly enjoys the mix of interactions across disciplines and professional experiences—between scientists and program managers, and between biologists and chemists. “It’s amazing but true that my work has found new sources of inspiration from interactions that at times seem disconnected and open-ended. Occasionally a bit of creative tension energizes the discussions, but serendipity also contributes its rewards to the experience. I am also impressed by the extraordinary patience of Board members in working together to reach consensus.”

life, Katherine enthusiastically pursues a lifestyle typical of upstate New York (gardening, running, skiing, bicycling, hiking, canoeing, swimming), and values time spent with her husband, as well as three grown children who are scattered around the nation.

CURMUDGEON’S CORNER

WELCOME TO THE

We hope that this will become a regular feature of Across the Board. The Methods Board is cursed—or blessed—with a contingent of members fondly self-identified as the “Curmudgeons.” This not-at-all exclusive group was founded by Cliff Annis and Ed Santoro but has been joined, at one time or another, for varying reasons and durations, by most members of the Board. Here, in their own words, Cliff and Ed describe the evolution and raison d’être of the Curmudgeons and their Corner of the newsletter.

Dennis McChesney, Editor—Across the Board

Originally, when we started on the Methods Board, we sat and listened to hours of sermonizing on the effectiveness of cooperative programs at the state and federal level. After we both went out of the room to reflect on the message we were hearing, we decided to stir up the pot—and thus were born the “Curmudgeons.”

Members of the Curmudgeons have been tagged with the responsibility of providing a “sanity check” to enhance the utility of the products the board produces. This is fully compliant with the long-term adage in government that “simpler is better.” The intent of the Curmudgeons is to provide a litmus test for ideas and activities developed by the Board with an eye towards “can I use this back in the real world?” Clearly the above activities require that we take a critical and humorous approach to issues that do not have simple solutions (an example of this is PBMS, excuse me, there’s no “M” in the world anymore).

The Curmudgeons will always try to inject humor into those difficult and sometimes “no good answer” issues the Board faces. However, we will not accept the words best stated by The Simpson’s Krusty the Clown, “ah, that’s your answer to everything.” We encourage all to speak up because the only bad idea is the one not shared. If you have an issue you feel curmudgeonly about, please let us know—send an email to: clifford_annis@merck.com or esantoro@drbc.state.nj.us. Remember the Curmudgeon’s motto: “Curmudgeons—a way of life”.

Curmudgeonly,

Cliff Annis, Jr., Merck & Co., Inc.

Ed Santoro, DE River Basin Commission

MARK YOUR CALENDAR NOW!

Join us for the **4th National Monitoring Conference** as we explore the experiences, expertise, lessons learned, innovations, and strategies necessary for

Building and Sustaining Successful Monitoring Programs

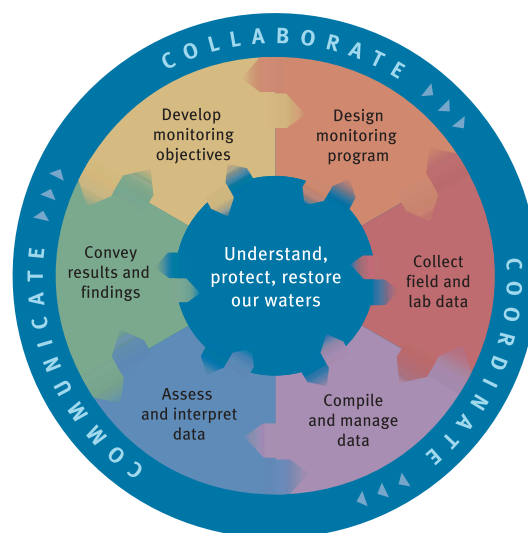
Chattanooga, Tennessee • May 17–20, 2004

As with the previous conferences hosted by NWQMC, the May 2004 Chattanooga meeting will provide an outstanding opportunity to participate in technical programs and trainings, share successes, discuss issues, and network with colleagues in the water monitoring community. The conference agenda will include plenary sessions, workshops, training courses, paper presentations, posters, exhibits, facilitated discussions, field trips, and informal networking opportunities. The 2004 conference will weave together five overall themes critical to building and sustaining successful programs:

- Promoting collaborative efforts
- Exploring new and emerging methods and technologies
- Addressing changing expectations of monitoring
- Ensuring data and information comparability
- Sharing results and successes

For instructions on submitting an abstract or for other conference information, go to www.nwqmc.org or send an email to nwqmc2004@tetrattech-ffx.com.

Framework for Monitoring



Interested in working with the Board?

For more information about becoming a part of the Board, contact:

MDCBinfo@tetrattech-ffx.com

or

Dennis McChesney:

mcchesney.dennis@epa.gov, 732-321-6729.

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

Name	Workgroup	Email
Katherine Alben	Biology chair, New Technologies chair	alben@wadsworth.org
Clifford Annis	PBS chair	clifford_annis@merck.com
LeAnne Astin	Biology WQDE chair	lastin@potomac-commission.org
Herb Brass	Methods Board co-chair	brass.herb@epa.gov
Chuck Job	WQDE co-chair	job.charles@epa.gov
Ron Jones	Nutrients co-chair	serc@fiu.edu
Dennis McChesney	Outreach chair	mcchesney.dennis@epa.gov
Glenn Patterson	WQDE co-chair	patterson@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
Dan Sullivan	NEMI chair	djsulliv@usgs.gov

For a complete list 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/>