

New advisory committee lays groundwork for exciting changes, service enhancement, and improved communication at NWQL

The Laboratory Program Advisory Committee (LPAC) meeting in mid-November was "positive, cordial, pragmatic, and results oriented," according to Charlie Patton, Acting Chief of the Methods Research and Development Program. Patton believes that the committee will help to promote open communication and "stimulate feedback for change."

One change to look for, says Grady Moore, New York District Chief, is heightened visibility and familiarity in Laboratory contacts with District and Regional offices. Moore called for visits and greater participation in meetings among NWQL staff and District offices.

Dave Rickert, Chief, Office of Water Quality, said that LPAC should convey to the Laboratory a sense of what the U.S. Geological Survey needs in the way of water-quality services. At the same time, he suggested that the NWQL should use the LPAC forum to offer new methods, develop quality control, and explain ideas for new technology. John Conomos, Regional Hydrologist, Menlo Park, agreed and emphasized that the "NWQL must use its technical expertise to tell the rest of the Water Resources Division what's new and coming in the future."



TOUR DE FORCE – Ivan James II (left to right), Assistant Regional Hydrologist, National Water-Quality Assessment Program, Denver; Dave Rickert, Chief, Office of Water Quality; and Bob Broshears, Regional Water-Quality Specialist, Denver, observe laboratory operations during a tour of NWQL November 13. All three are members of the Laboratory Program Advisory Committee, although Rickert retired at the end of December.

Throughout the meeting, November 13 and 14 at NWQL, the Office of Water Quality's mission for NWQL was uppermost in the minds of all participants: "Provide appropriate data of high and known quality at the lowest possible cost." "Appropriate" means that NWQL can measure chemicals that customers need at the concentration appropriate to the task and that the Laboratory, in turn, can send the results to its customers in a reasonable time with ease. "High and known quality" was defined to mean appropriate quality control is always used, and the environmental data are continuously reviewed to identify potential problems. Quality comes first with cost and speed second.

Meanwhile, Carl Shapiro, Director's Office, USGS, heads up the finances subcommittee of LPAC. The goal of the subcommittee is to determine appropriate funding strategies for NWQL. Those strategies will determine appropriate costs to be charged for analytical services, and costs that should be supported by Division funds. Subcommittee membership includes representatives from NWQL and the Division.

Bob Williams, NWQL Chief, briefed LPAC on the desired development of a strategic plan, as well as an annual planning process. He pointed out that a strategic plan would foster partnerships and understanding between the Laboratory and the Division.

Conomos suggested not limiting the strategic planning process to NWQL senior staff but to include others with vision and leadership abilities. Conomos added that the Laboratory should not be afraid to take risks.

[NOTE: These minutes are highly condensed. The reader is referred to the following Web site for additional information: http://www.dwater.wr.usgs.gov/usgs-only/ccpt/lpac/mtg9711_min_long.htm.]

Mission statement calls for close ties, cutting-edge science in water quality

By Dave Rickert

I want to thank all of the members of the Laboratory Program Advisory Committee (LPAC) for agreeing to serve. The next several years will be exciting and challenging for LPAC members, as well as for the National Water Quality Laboratory (NWQL) staff.

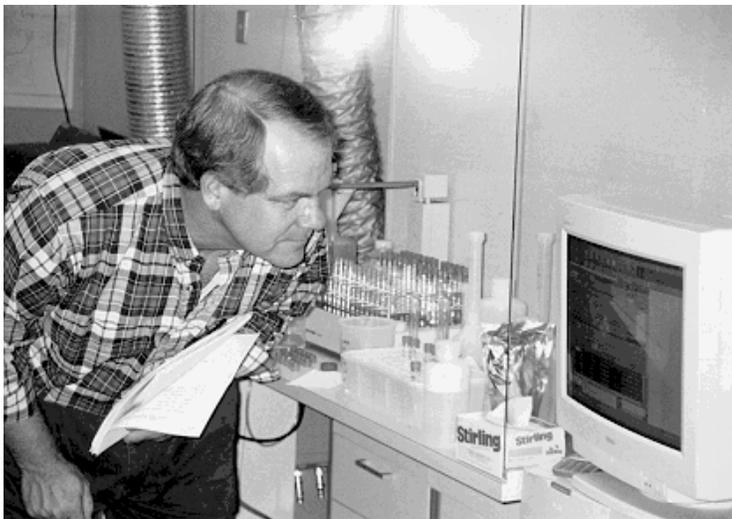
The NWQL has made great strides over the last decade in developing and implementing new methods and in improving liaison with District customers. These efforts have enabled the Federal-State Cooperative Program and the National Water-Quality Assessment Program (NAWQA) to be at the cutting edge of water-quality science in the United States.

At the same time, the U.S. Geological Survey (USGS) is developing close ties with the U.S. Environmental Protection Agency that will bring new opportunities for low-level environmental chemistry work related to human and aquatic health. This new work will require new methods, new quality-assurance/quality-control (QA/QC) measures, new requirements on the transfer and reporting of data, and new training of District personnel in sample collection and data interpretation. In addition, the NAWQA Program is being reevaluated to define new needs from the NWQL in chemical, and perhaps microbiological, methods.

LPAC will focus entirely on the NWQL for the first year. Thereafter, it may be appropriate for the LPAC to review the role and functioning of other laboratories in meeting analytical needs of the USGS. The other laboratories could include the Ocala Lab, District production labs, cooperative labs, contract labs, and the large research labs in the California, New York, and Kansas Districts.

August 7 was ground-breaking day for the new NWQL building at the Denver Federal Center. USGS will finally have the laboratory facility it needs, but the move will create temporary NWQL service disruptions that we need to minimize and communicate in advance to District personnel.

[EDITOR'S NOTE: Related articles about LPAC in this issue of the Newsletter include the meeting minutes (p. 1), committee membership (p. 3), and charter (p. 3).]



STATE-OF-THE-ART-LAB – Sandy Williamson, Study Unit Chief in Tacoma, Washington, takes off his safety glasses to get a closer look at the computer setup in the new inductively coupled plasma-mass spectrometry (ICP-MS) laboratory at NWQL. Williamson, a member of the Laboratory Program Advisory Committee and representative of the National Water-Quality Assessment Program, toured NWQL in mid-November during an LPAC meeting. The new ICP-MS equipment produces superior detection results, determines more compounds, takes up less space, and provides more stability and precision than the older system it replaces.

Ad hoc committee studies liaison, financial issues

The ad hoc Laboratory Services Committee (LSC) met for the first time last summer to prepare detailed recommendations for the senior staff of the Water Resources Division regarding NWQL financial and District/NWQL liaison issues. The LSC briefed the new Laboratory Program Advisory Committee (LPAC) on its progress and final recommendations, and then reported the recommendations to Division senior staff. The LSC will exist for about 9 months.

Dave Rickert, Chief, Office of Water Quality, said the LPAC will commission ad hoc committees from time to time to explore specific NWQL issues that need resolution.

LPAC Membership

John Conomos, Regional Hydrologist, Menlo Park

Ivan James II, Assistant Regional Hydrologist, National Water-Quality Assessment Program (NAWQA), Denver

Bob Broshears, Regional Water-Quality Specialist, Denver

Grady Moore, District Chief, Troy, N.Y.

Callie Childress, District Water-Quality Specialist, Raleigh, N.C.

Sandy Williamson, NAWQA Study Unit Chief, Tacoma, Wash.

Jack Weeks, Regional Branch Chief, National Research Program, Denver

Merle Shockey, Production Program Chief, NWQL

Charles Patton, Acting Chief, Methods Research and Development Program, NWQL

Dave Rickert, Chief, Office of Water Quality, Reston

Charter sets scope, purpose, procedures for new laboratory advisory committee

Establishment. It is the goal of the U.S. Geological Survey to maintain a state-of-the-art National Water Quality Laboratory (NWQL) to support current and future water-quality programs. In support of this goal, the Water Resources Division Senior Staff has established the Laboratory Program Advisory Committee (LPAC). This charter sets forth the purpose, scope, composition, and procedures for LPAC.

Purposes. LPAC has two purposes: (1) To provide the Chief, Office of Water Quality (OWQ), with advice on issues concerning the plans for, and the operation of, the NWQL; (2) to foster a partnership between the NWQL and the Division so that

- The NWQL understands the Division's evolving needs for analytical services and associated support;
- The Division understands the NWQL's ability to meet the Division's needs; and
- The NWQL and the Division work together to increase the NWQL's abilities to meet the Division's needs.

Scope. LPAC will work with the Division and the NWQL staff to seek ways to identify needs for new analytical methods; increase the efficiency of data production; achieve more effective quality assurance/quality control; improve the ease of data transmission to Districts; and assist personnel in the field to interpret the new types and low levels of analytical data.

The partnership is also needed to develop long-range plans for analytical support and associated services; to keep NWQL customers informed of planned actions; to inform customers as NWQL implements changes; and to educate customers about how to deal with changes from the NWQL.

Composition. See accompanying sidebar for initial list of members. LPAC membership was purposely selected to provide a cross section of management and technical positions across the Division. As individuals leave the committee, new members will be selected to represent the same management/technical position. Members of LPAC are expected to communicate with their peers throughout the Division regarding information, insights, and recommendations made at LPAC meetings.

Rules and procedures. The LPAC will explore and provide recommendations on the issues identified under "Scope." LPAC is not formed for management or fiscal oversight of NWQL operations. However, the LPAC may make recommendations on operational issues to the Chief, OWQ, to facilitate achievement of objectives the committee deems important. And LPAC may form subcommittees to focus on specific issues. The committee will meet quarterly. Members serve at the discretion of the Chief Hydrologist.

[Editor's note: charter abridged for this article.]



LPAC BRIEFING – Gary Cottrell (right) served as tour guide for members of the Laboratory Program Advisory Committee during a meeting at NWQL in mid-November. LPAC members shown (from left) are John Conomos, Regional Hydrologist, Menlo Park; Callie Childress, District Water-Quality Specialist, Raleigh, .C.; Myron Brooks, Assistant Chief, Branch of Regional Research, Central Region, who filled in for Jack Weeks, Chief, Branch of Regional Research; Grady Moore, District Chief, Troy, N.Y.; and Ivan James II, Assistant Regional Hydrologist, Denver.

Billing-report information available on Lab Web page

Beginning with the November 1997 billing cycle, the Laboratory is providing weekly and monthly billing reports on the NWQL's Web Page. The advantages to District users are

- Access to the weekly and monthly billing can be obtained by anyone within the District for review of specific analysis and billing information.
- All weekly and monthly billing reports will be available after subsequent billing cycles are completed. Prior to November, only the most recent weekly or monthly reports were available.
- Charges for supplies and postage will now be available on the weekly reports. Heretofore, these charges were only reflected on the monthly billing report.

Instructions for access and use can be found on the NWQL Home Page Web site at <http://www.nwql.cr.usgs.gov/USGS>. For questions pertaining to the weekly and monthly billing reports, contact Cecilia Hill (cjhill) at (303) 467-8014.



by Deborah Treseder

New titles in print

Agbeti, M.D., Kingston, J.C., Smol, J.P., and Watters, Christine, 1997, Comparison of phytoplankton succession in two lakes of different mixing regimes, *in* Arch. Hydrobiol., v. 140, no. 1, July 1997, p. 37-69.

Harris, C.M., Litteral, C.J., and Damrau, D.L., 1997, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory-Use of a modified ultrasonic nebulizer for the analysis of low ionic-strength water by inductively coupled optical emission spectrometry: U.S. Geological Survey Open-File Report 97-382, 34 p.

Snyder-Conn, Elaine, Garbarino, J.R., Hoffman, G.L., and Oelkers, Alan, 1997, Soluble trace elements and total mercury in Arctic Alaskan snow, *in* Arctic, v. 50, no. 3, September 1997, p. 201-215.

Copies of these publications are available from the NWQL by contacting Korey Williams (kcwill) by Geomail, telephone 303/467-8006, or fax 303/467-8240.

Computer software developed for organic chemistry QC data

The Quality Assurance Unit (QAU) has awarded a contract to a software development company to design and test a data base for organic quality-control (QC) data. As part of this contract, several applications are being developed to help assess QC sample data (both set blank and spike data as well as the in-house Organic Blind Sample Program data). Applications include producing automated control charts, parametric and nonparametric statistical summaries, and other graphic techniques, such as box plots.

QAU is planning to use many of these applications to publish QC data on the NWQL's Web page. These applications will also be available to others within the NWQL to assess QC data. Plans call for adding inorganic chemistry data at a later date. Additional information can be obtained by contacting Kim Pirkey (kdpirkey; telephone 303/467-8049).

Chief named to head Methods Program

Robert B. Green has been selected Supervisory Chemist to head the NWQL Methods Research and Development Program. Tentative reporting date of the new appointment is mid-February. The announcement was made January 8 by Bob Williams, NWQL Chief, who cited Green's record as a research chemist with extensive management experience.

Green is a consulting scientist with Lockheed Martin Idaho Technologies Company in Idaho Falls, where he analyzes and assesses research and development projects funded through the University Research Consortium and the Laboratory Directed Research and Development Programs. Prior to the Lockheed position, he was vice president of programs from 1994-97 at Associated Western Universities, Inc., in Salt Lake City and in Richland, Washington.

From 1984-94, he worked at the Naval Air Warfare Center in China Lake, California, where he served as head of the Instrumental Chemical Analysis Branch and then directed the Chemistry Division. Other positions include Professor of Chemistry at the University of Arkansas from 1979-84, and Assistant Professor of Chemistry at West Virginia University from 1976-79.

Green's Ph.D. in analytical chemistry was awarded by Ohio University in Athens in 1974. He has authored or coauthored 56 publications. He shares a patent for continuous emissions monitoring of toxic airborne metals. Research interests include extensive application of lasers to analytical chemistry.

"The NWQL staff welcomes Bob and looks forward to his arrival. Bob's skills and experience will bring a strong resource to the NWQL program," added Williams.

New method being developed to analyze wastewater effluents

The NWQL is working on an interagency agreement to develop a custom method for the analysis of organic wastewater contaminants and sewage effluent tracers. The agreement is with the U.S. Environmental Protection Agency's Region 5 in Chicago and Larry Barber of the USGS National Research Program in Boulder, Colorado. The accord presents an opportunity for NWQL to keep up to date with recent water-quality concerns and problems, particularly related to increased urban development.

Concurrent to this project, NWQL is addressing similar USGS needs by providing a custom method for wastewater analysis until an official method can be provided. The Organic Chemistry Program already offered a custom method for the determination of caffeine, which is a useful indicator of wastewater. The new method includes nonylphenols and related nonionic detergent metabolites that are persistent indicators of domestic wastewater. These related compounds are of particular interest because of their high toxicity to aquatic life.

In addition, NWQL is also trying to include in the wastewater method representative compounds of food additives (caffeine), antioxidants, fragrances, fire retardants, plasticizers, industrial solvents, fumigants, disinfectants, fecal sterols, and polycyclic aromatic hydro-carbons, as well as a few high-use domestic pesticides. Such compounds have been frequently detected by mass spectral library searches, in addition to those organic compounds routinely determined by gas chromatography/mass spectro-metry.

The NWQL is also investigating possibilities for determining estrogen and related compounds in wastewater that are known endocrine disrupters.

The NWQL plans to add important compounds and other requirements of Districts into an approved method. A list of compounds, recovery results, reporting levels, sample requirements, and cost are all available by contacting Steven Zaugg (sdzaugg), 303-467-8207 or Mike Schroeder (schroede), 303-467-8200.



by Steven Zaugg

Seminar schedule for 1998 announced

Denver Metro area visitors from USGS branches and district offices are invited to stop by the NWQL conference room and join the staff for the Laboratory Seminar Series. If interested in presenting a seminar at the Lab, contact Jon Raese (jwraese) for scheduling and speaking arrangements.

JANUARY

"Method Validation Compared to Method Performance: Examples from a C-18 Solid-Phase Extraction GC/MS Method (Schedule 2001)"

Mark Sandstrom, Research Chemist, Methods Research and Development Program, NWQL
10 a.m. Wednesday, January 14

Joint Seminar--

"Acetochlor and Other Herbicides in Air and Rain Samples in the Midwestern United States"
Bill Foreman

and

"Accumulation Histories of Polycyclic Aromatic Hydrocarbons in Urban Reservoirs"
Ed Furlong, Research Chemist, Methods Research and Development Program, NWQL
10 a.m. Wednesday, January 28

Note: The Foreman and Furlong joint seminar is based on talks they presented at the Society of Environmental Toxicology and Chemistry Annual Meeting in November 1997. They will present the results of custom analytical methods carried out in the Organic Chemistry Program.

FEBRUARY

"Arithmetic, Population, and Energy"

Albert A. Bartlett, Department of Physics, University of Colorado at Boulder
10 a.m. Wednesday, February 4

Dr. Bartlett will discuss population dynamics, resource consumption, and the principles of sustainability.

"A Biofilm Process for Denitrification of Ground Water for Drinking-Water Treatment in Rural Communities"

JoAnn Silverstein, Professor, Department of Civil, Environmental and Architectural Engineering, University of Colorado at Boulder
10 a.m. Wednesday, February 11

Prof. Silverstein says help is on the way for towns and cities plagued with rising levels of nitrates in their drinking water. Her cost-efficient process uses bacteria to gobble up nitrates that contaminate water sources.

Hirsch emphasizes water quality in message for the new year

Robert M. Hirsch, Chief Hydrologist of the U.S. Geological Survey, reflected on a number of issues January 7 in a statement on the future direction of the Survey. Included among his comments was the "recognition of the central role that we play in water quality."

Hirsch cited a letter from Bob Perciasepe, Assistant Administrator for Water, U.S. Environmental Protection Agency, to emphasize his point regarding water quality. Perciasepe had said, "we at EPA write the regulations to protect the Nation's drinking water. Good sense and the Safe Drinking Water Act require that the regulations be based on sound science. . . . USGS programs such as the National Stream Quality Accounting Network, the National Water-Quality Assessment Program, and the Drinking Water Initiative are helping us in our task."

Hirsch said the actions that led to Perciasepe's statement have taken more than a decade to develop. "They include excellent program design and execution, as well as proactive communication with decisionmakers at EPA," said Hirsch, who was gratified by EPA's recognition.



MARATHON MAN – Bob Williams, the new Chief of the National Water Quality Laboratory, spends his time off the job running in marathons (26.2 miles) and bicycling. This photo was taken during the Marine Corps Marathon, October, 1994, in Washington, D.C. His conditioning has paid off given all the time spent running back and forth between the West and East wings of the Laboratory.

Newsletter Staff

Jon Raese, Editor

The National Water Quality Laboratory Newsletter, is published quarterly by the National Water Quality Laboratory, U.S. Geological Survey, Box 25046, MS-407, Denver Federal Center, Denver, CO 80225-0046. For copies, call Jon W. Raese (303) 236-3464.

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