

# **Minnegram On-line**

**September 1996**

## **Regional WRII Directors Set Projects For Funding**

Water Resources Research Institute directors for the northcentral region met as a panel with the program leader from the USGS on the St. Paul campus on July 11-12 to select proposals for regional funding. The panel, consisting of 10 of the 13 director or their representatives, based its selection in part on the the results of external reviews.

At least two external reviews were solicited for each proposal. External reviewers rated proposals on their relevance and importance, scientific merit, feasibility, technology transfer, qualifications of investigators, and budget. Scientific merit was the most important factor, with almost as much weight at all the other factors combined. The other factors were approximately equally important.

The panel considered the ratings and comments of the external reviewers plus their own reviews and discussion in making their decisions. The director from the state that was the source of a proposal was excluded from the discussion and ranking of that proposal.

Two of Minnesota's proposals were rank highly enough to move on to the next stage in the process. These proposals will be included in the combined regional proposal submitted to the USGS. In the past, funding of proposals sent to the USGS at this stage has been a matter only of budget negotiations.

The two proposals from Minnesota to move ahead were submitted by Ed Nater/David Grigal and Susan Galatowitsch/John Tester. As reported in the June Minnigram, the Nater/Grigal project concerns transport through forested watersheds of mercury in association with particulate organic carbon, and the Galatowitsch/Tester project will assess the effects of land use on wetland quality using GIS.

The panel had a total of \$805,000 to distribute. Of the 52 proposals submitted from the 13 states in the region, approximately 15 will be funded. The exact number will depend on final budget negotiations.

The region's WRII directors are hopeful that this regional style of competition will be short-lived, and that a process more closely resembling the state-level competition of past years will be reinstated. Word on how next year's research grant competition will work awaits congressional passage of the FY 1997 appropriations bill.

## **Minnesota Rivers Council Established**

The past year has seen the creation of the Rivers Council of Minnesota, a statewide, nonprofit rivers organization formed to help communities protect Minnesota's streams and rivers. The Northwest Area Foundation provided a three-year grant of \$215,200 to fund initial operations, and additional funding was provided by the Blandin Foundation. The Mississippi Headwaters Board (MHB), which received the grants, will serve as fiscal agent for the Council. Grant money will be used for activities aimed at protecting rivers, river ecosystems, and watershed through local action. These activities will include technical, administrative and financial support, education, coordination, and advocacy.

A steering committee, formed in September 1995, has been meeting over the past year to lay the groundwork for the new organization and to develop its workplan. The plan focuses on efforts to establish strong river protection programs at the community level and providing coordination of these efforts for entire river systems.

One of the Council's first major initiatives will be a "Minnesota's Rivers Conference," planned for October 4-5, 1996, at Hamline University. The conference will be an opportunity for people interested in the welfare of Minnesota's rivers to share ideas and experiences. Participants will be asked to help shape the Council's agenda through interaction with the steering committee on elements of the first three-year workplan. For more information about the conference or the Rivers Council of Minnesota, contact Molly MacGregor, Director, MHB, (218) 547-7263, fax (218) 547-7376.

## **Hands-On Sessions Draws Crowds To WQ Research Site**

A total of 165 agribusiness dealers, farmers, and conservation agency staff attended one of three day-long workshops conducted by the Anoka Sand Plain Crop Diagnostic Training Clinic July 16 - 18 at the Management System Evaluation Area (MSEA) site outside of Princeton, MN. Some 150 small plots were established to illustrate for workshop participants "real-world" examples of insect, weed, disease, fertilizer, and cultural production problems common to corn and soybeans.

Workshop sessions included corn and soybean growth and development, soil fertility, soil and water management, herbicide injury and mode of action, and European corn borer and nematode control. Session leaders included University water quality project personnel, Minnesota Extension Service specialists, and Natural Resources Conservation Service staff.

Summary results from participant surveys indicated a favorable rating for this year's sessions, with individuals willing both to recommend to others and personally attend a similar training clinic next year at the MSEA site. In addition, a total of 24 certified crop advisors applied for the 6.5 hours of continuing education credits offered to participants.

Clinic sponsors included the Anoka Sand Plain Water Quality Demonstration Project, MSEA, Minnesota Extension Service, Minnesota Agricultural Experiment Station, and the USDA's Natural Resources Conservation Service and Agricultural Research Service.

*Story provided by David Cooper, MES Coordinator - Anoka Sand Plain Water Quality Demonstration Project.*

## **Water Programs' Co-Location On Track**

As reported in the June Minnegram, the CAIWQ, MES Water Quality Program and the WRRC with associated graduate programs will be co-located in the former Health Services building on the St. Paul Campus. The concept for this co- location of programs grew out of the 1994 University Plan for Water, which recommended that the units on the St. Paul Campus with water-related missions work more closely to increase the effectiveness of their research, education, and outreach.

There has long been need for a central entry point on the campus to provide better access to water programs. Each of the cooperating programs will continue to operate autonomously within the context of its current mission; co-location will facilitate better coordination of activities and service to citizens with water resource related questions and problems.

Preparations for the co-location started with the identification of staffing needs and the hiring of office support staff, including an associate administrator and executive secretary. In addition, an MES Education Coordinator position has been filled. The co-location should be accomplished by November 1, 1996. As the move occurs, there will be continuing coordination activities with other water-related programs that have a presence on the campus. An update on the progress and activities will appear in the December *Minnegram*.

## **WRS Program Student Handbook and Course Guide Available**

Two useful booklets for students in the Water Resources Science Program have been published. The WRS Program Student Handbook is a handy reference for new and continuing students that provides hints for navigating the university and graduate school systems, along with basic information about the program and facilities. Topics range from desk space and building access to degree requirements sequences. Also included are a list of the 80 program faculty, their addresses and research interests; a list of useful telephone numbers; and examples of required M.S. and Ph.D. forms.

Two useful booklets for students in the Water Resources Science Program have been published. The WRS Program Student Handbook is a handy reference for new and continuing students that

provides hints for navigating the university and graduate school systems, along with basic information about the program and facilities. Topics range from desk space and building access to degree requirements sequences. Also included are a list of the 80 program faculty, their addresses and research interests; a list of useful telephone numbers; and examples of required M.S. and Ph.D. forms.

Both booklets are available from the WRS Program offices in the WRRRC and from Anne Hershey, the WRS Program's co-Director of Graduate Studies, at UM-Duluth.

## Water Web Sites

The **International Rivers Network** has established a web site at <http://www.irn.org>. The site carries news and information on International River Network campaigns.

The **Water Science and Technology Board of the National Research Council** has a web home page at <http://www2.nas.edu/wstb>. The WSTB newsletter, information about activities, committees, and publications can be found there along with basic information on the WSTB, its board and staff.

The **National Drought Mitigation Center** has expanded its web site to include climatology and more information on the roles of federal agencies in drought planning and management. Their address is <http://enso.unl.edu/ndmc>.

**Colorado State University** has created a public information resource on Colorado's water called Colorado Water Knowledge. Its World Wide Web address is <http://www.cnr.colostate.edu/CWK/>.

National Water Research Institute (Fountain Valley, CA) July 1996 BRIEFINGS alerted us to of World of Water, a site developed with UC Office of University/Industry Research & Technology and developed by graduate students at UC-Irvine. A search for the NWRI's World of Water failed, but turned up **World Wide Waterr** at UC-Davis, a pretty good collection of links to water and water-related information. Find World Wide Water at <http://moby.ucdavis.edu/WWWater/>.

Among the web sites listed in the July/August issue of North Carolina's WRRRI newsletter is **EurekaAlert!**, a site for "free and universal electronic access to the latest research finding in science, medicine and technology." A creation of the AAAS, Duke and Stanford universities, the site is at <http://www.eurekaalert.org>. On our visit, we found the site a little frustrating to navigate and some material is restricted to registered reporters. Although we found nothing directly relevant to water, general science is well represented, and people may want to use this location for quick access to a long list of university and research institution home pages.

## Minnesota Water Line Usage Grows

The Minnesota Water Line is becoming the number to call in Minnesota for answers to questions about household water, septic systems, and water resource protection. Since its creation in 1995, use has grown steadily to more than 60 calls per month, recorded in March 1996. Calls come from almost 2/3 of the counties in Minnesota.

Almost 40% of the calls in its first year of operation, concerned well water contamination and testing. Another 15% concerned septic construction and maintenance. The rest have covered a wide range of topics and include many calls (6%) for school projects.

The Water Line publishes a monthly newsletter and recently completed a survey of previous callers. Survey results, published in the newsletter, showed a high rate of satisfaction with the information dispensed. Ninety-seven percent of respondents said they would recommend the Water Line to others with questions.

Deanne Roquet answers the phone 9:00 a.m. to noon, Monday through Friday and responds to voice mail messages left at other times. Ms. Roquet's advice, backed up by the expertise of a cadre of technical advisers, can be very direct. Her answer to the June newsletter's question of the month: "Additives are of no benefit and some may even do harm to your septic system."

To reach Ms. Roquet at the Minnesota Water Line, call 1-800-455-4526.

Water Line is the product of a partnership among the U's MN Extension Service, MN Sea Grant Program, and other government and non-profit organizations.

## Minnesota Water Community News

### Applied Economics

**Jerry Fruin** received research project funding from MN Dept. of Transportation for Development of Freight Movement Demand Databases in Physical Units for Use on Personal Computers

### Biosystems and Agricultural Engineering

**David Biesboer** (Plant Biology) and **Bruce Wilson** received a grant for \$118,714 from the MN Dept of Transportation and the Local Road Research Board to study the effectiveness of erosion control blankets and soil stabilizers. The project also will assess the effect of these temporary erosion control tools on germination and growth of native grass used for long-term soil stabilization on road banks.

**Wilson** was selected as one of the Outstanding Reviewers for the Soil and Water Division of the American Society of Agricultural Engineers during 1995. This is his second such award in the past two years.

## Civil Engineering

**Bruce Monson**, (PhD candidate and Environmental Scientist at Barr Engineering ) and **Patrick Brezonik** presented a paper and a poster at the 4th International Conference on Mercury as a Global Pollutant, Aug 4-8, in Hamburg, Germany. **R. Strassman** and **E. Swain** were co-authors on the paper, Seasonality of Total Mercury and Methyl-mercury in Water and Plankton from Low Alkalinity Lakes. **J. Hu** co-authored the poster, Recovery of Labile Methylmercury in the Presence of Aquatic Humic Substances and Commercial Humic Acid.

Sept 8-12, **Brezonik** will be in Wroclaw, Poland, to present a paper at the IHSS-8 Conference of the International Humic Substances Society, reporting research by **Brezonik**, **Monson**, and **Cheng-Min Tann** on humic substances mediated photodegradation of mercury, on humic substances mediated photodegradation of mercury.

**John Gulliver** and **Efi Foufoula-Georgiou** were promoted to Full Professor beginning the 1996-97 academic year.

## Environmental and Occupational Health

**Deb Swackhamer**, with **Joe Depinto** and **Joe Atkinson** of SUNY-Buffalo, received a major grant from NOAA's National Undersea Research Center at U of Connecticut, Avery Point. The project, titled "Formation of the BNL and its impact on Contaminant Cycling", uses a remotely operated vehicle to sample contaminant concentrations and hydrodynamic characteristics of the Benthic Nepheloid Layer (BNL) of Lake Michigan.

**Swackhamer** presented a paper at *Dioxin '96* meetings in Amsterdam Aug 12-18, and returns to the Netherlands Sept 16-18, as an invited participant in a workshop on links between eutrophication and contaminant cycling. Also in September, **Swackhamer** will speak at the International Joint Commission meeting in Windsor, CA.

In May, Ph.D. student, **Annette Trowbridge** received a Graduate Student Scholarship Award from the International Association for Great Lakes Research.

## Fisheries and Wildlife

**Peter Sorensen** was invited instructor, Fish Chemoreception, at an international summer course sponsored by the European Commission in Sardinia, Italy, July 12-18, 1996.

## Horticultural Science

**Susan Galatowitsch** received research funding from the MN Dept of Transportation for a project titled Restoration Wetlands Success.

## Minnesota Sea Grant

**Michael McDonald**, Director, was recently named an official observer to the Great Lakes Commission. **McDonald** gave a presentation on Great Lakes Sea Grant Network's activities to the commission during its semi-annual meeting May 16 in Indianapolis, IN.

**Judy Zomerfelt**, principal secretary, won the 1995-96 Outstanding Service Award for Minnesota Extension Service Civil Service staff. **Zomerfelt** was recognized for exceptional performance and contributions to the U's Sea Grant and Extension Service programs.

**Marie Salés** was hired as communications coordinator, after serving as Sea Grant's acting communications coordinator and editor for 1-1/2 years. **Salés** was elected president of the Voyageur (Minnesota) Chapter of the National Association of Government Communicators

MN Sea Grant announced the release of a new video on shoreland maintenance, *Keeping Our Shores: Video and Fact Sheets*, produced by Minnesota Arrowhead Water Quality Team and Parth Productions, Duluth. The 15-minute video comes with 18 fact sheets in a folder with a record-keeping section. The award-winning video and fact sheet series focuses on easily adopted practices to protect shoreland water quality and property values. The video highlights filter strips, septic system maintenance, Best Management Practices for recreation, and working together as a shoreland community. Fact sheet topics also include caring for lawns and gardens and limiting the spread of exotic species. Available from Lake County SWCD, (218) 834-6638, for \$20. Quantity discounts available. For a preview, contact Minnesota Sea Grant, (218) 726-7677.

## Natural Resources Research Institute

### Center for Water and the Environment

**Rich Axler**, **Jerry Henneck** and **Del Nordman** attended the International Symposium on Use of Constructed Wetlands in Cold Climates, in Niagara-on-the-Lake, Ont., CAN, June 3-5, 1996. They presented a paper "Constructed wetlands for the treatment of aquaculture wastes in northern Minnesota," co-authored with **Craig Tikkanen**, **Anastasia Bamford**, **Michael McDonald** (MN Sea Grant), and **Scott Bridgham** (U of Notre Dame). They were also co-authors on "Development of alternative on-site treatment systems for wastewater treatment: A demonstration and research project for Minnesota," with **Barbara McCarthy**, **Steve Monson-Geerts**, and **Tim Hagen** (NRRI/CARTD), **J. Crosby** (St. Louis County), **R. Kadlec** (Wetland Management Services), **J Anderson** (UM-TC), **D. Gustafson** (UM-Extension), **R. Otis** (Ayles and Assoc.s), **G. Sabel** (MPCA) and **P. Weidman** (Western Lake Superior Sanitary District.).

**Lucinda Johnson** presented "Influence of landscape factors on coarse woody debris biomass in midwestern streams," at the North American Benthological Society meeting in Missoula, MT, in June.

## St Anthony Falls Laboratory

**John Gulliver** received a \$237,000 grant from the NSF, Distribution and Droplet Formation from Surface Slick in Riverine Environments, which deals primarily with oil spills in rivers.

## Water Resources Research Center

**Patrick Brezonik** will be on single-quarter leave during the fall quarter 1996. **Ray Newman** (Fisheries and Wildlife) will be acting as the WRS Graduate Studies Program Director for that time.

**Susanna Eden**, WRRC editor, will be leaving in Sept. to complete her PhD degree program in Water Resources at the U of Arizona.

## Calendar

### Meetings

September 22-25, 1996. **Rivertech '96: 1st International Conference on New/Emerging Concepts for Rivers**. Chicago, IL. Celebrating the 25th anniversary of the International Water Resources Association (IWRA). Will bring together a broad range of professional disciplines to focus on emerging technical and ecological concepts in river management, river ecology and water quality, river hydrology, and river hydraulics. Contact: IWRA, U. of Illinois, 1101 W. Peabody Dr., Urbana, IL 61801-4273. Fax (217) 333-9561; e-mail: nbarrett@uluc.edu.

September 22-26, 1996. **AWRA's 32nd Annual Conference & Symposium "GIS and Water Resources."** Bonaventure Resort & Spa, Ft. Lauderdale, FL. Conference and Symposium will be held concurrently. Conference will focus on multidisciplinary research and technology transfer solutions to diverse water resource challenges. Symposium will continue professional exchanges on GIS technology, organization, application, and research. Contact: AWRA, 950 Herndon Pkwy, Ste. 300, Herndon, VA 22070-5528. Phone (703)904-1225; fax (703)904-1228; e-mail: awrahq@aol.com.

September 22-28, 1996. INTECOL's **5th International Wetlands Conference**. Perth, Western Australia. A large conference with broad themes: Physical, chemical and biological processes in wetlands; wetland modelling; applied research, technology and management; and policy and planning for wetland management. Contact: Lloyd Townley, CSIRO Div. of Water Resources, Private Bag, PO Wembley WA 6014, Australia. Phone (+61) 9 387 0329; fax (+61) 9 387 8211; e-mail: lloyd@per.dwr.csiro.au; web <http://www.dwr.csiro.au/>

September 29 - October 1, 1996. **41st Annual Midwest Groundwater Conference**. Marriot's Griffin Gate Resort, Lexington, KY. Presentations on all aspects of groundwater restoration, planning, management, monitoring, modeling, and research, including hydrogeology, geochemistry, legal and policy issues, and wetlands. Contact: Jim Dinger, Kentucky Geological



Survey, U. of Kentucky, Lexington, KY 40506-0107. Phone (606)257-5500; fax (606)257-1147; e-mail (for questions only) dinger@kgs.mm.uky.edu.

October 4-5, 1996. **Rivers Council of Minnesota First Annual Meeting.** Hamline University, 1536 Hewitt Ave., St. Paul, MN. (See related article p.1.) Meeting to adopt by-laws, elect Board of Directors, formulate goals and objectives, frame workplans, and discuss the health of the state's rivers. Contact: Rivers Council of MN. Phone or fax (612) 690-0690; phone (218)547-7263; fax (218)547-7376; e-mail 0999mhb@ InforMNs.k12.mn.us.

October 5-9, 1996. **WEFTEC'96, The Water Environment Federation's 69th Annual Conference and Exposition.** Dallas Convention Center. Features sessions on wet weather research, ecological risk assessment, and results of WERF's research initiatives. Contact: Water Environment Federation, attn: Conference Program, 601 Wythe St, Alexandria, VA 22314-1994. Phone 1-800-666-0206.

October 12-13, 1996. **19th Midwest Environmental Chemistry Workshop.** Purdue Univ., West Lafayette, IN. Contact: Nona Schaler, Div. of Conferences, Purdue U., 1586 Stewart Ctr., West Lafayette, IN 47907-1586. Phone (317)494-2756 or 1-800-359-2968; e-mail njschaler@cea.purdue.edu.

October 22-24, 1996. **National Nonpoint Source Pollution Information/Education Conference.** Chicago, IL. Contact: Christy Trutter (217)782-3362.

October 29-31, 1996. **Water Resources & Environmental Research: Towards the 21st Century.** Kyoto, Japan. Contact: Prof. Shuichi Ikebuchi, WRRRC, Disaster Prevention Research Institute, Kyoto Univ. Gokasho, Uji, Kyoto 611, Japan.

November 3-6, 1996. **International Conference on Evapotranspiration and Irrigation Scheduling and the Irrigation Association Exposition.** San Antonio, TX. Focus on new and developing technology, applications, and future needs. Contact: Judy Brown, American Society of Agricultural Engineers. Phone (616)428-6323; fax (616)429-3852; e-mail: brown@asae.org.

November 6-8, 1996. **State of the Lakes Ecosystem Conference (SOLEC).** Cleary International Centre, Windsor, Ont. Sponsored by U.S. EPA and Environment Canada. Conference will communicate progress of commitment between the governments of Canada and the U.S. to work together to clean up and restore the Great Lakes. Focus will be on changing land use impacts, the state of information, and information management for the nearshore zone, including water, wetlands, and land by the lakes. Contact: Paul Horvatin, Great Lakes National Programs Ofc-US EPA, 77 W. Jackson Blvd, Chicago, IL 60604. Phone: (312) 353-3612 or 886-6399. - or - Regional Science Advisors - Ofc -Environment Canada - Ont. Region 867 Lakeshore Rd, Burlington, Ont L7R 4A6. Phone: (905)336-6270.

November 12, 1996. **29th Annual Water Resources Conference sponsored by the Minnesota Section, ASCE and Univ. of Minnesota.** Univ. of Minnesota, St. Paul Campus. Conference will present a variety of topics including bioengineering, hydraulic structures, wetland restoration, creation, and enhancement. Contact: Bev Ringsak, Prof. Devel. and Conf. Serv's, 206 Nolte Ctr,

Univ. Minnesota, 315 Pillsbury Dr. SE, Minneapolis, MN 55455. Phone (612)625-6689; fax (612)626-1632.

November 13-16, 1996. **NALMS 16th Annual International Symposium: People, Lakes and Land - Puzzling Relationships.** Radisson South Hotel, Minneapolis. Symposium will address relationships in lake and watershed management including lake-watershed relations, regional and national lake and landscape patterns, and relations among people involved in lake management. Contact: NALMS, P.O. Box 101294, Denver, CO 80250. Phone (303)781-8287; fax (303)781-6538

November 17-22, 1996. **International Symposium on Hydrology in the Humid Tropic Environment.** Wyndham Kingston Hotel, Kingston, Jamaica. Special focus on hydrology in the humid tropics, including island hydrology, environmental impact in karstic terrain, waste disposal and hydrologic problems, hydrologic data analysis, handling, and processing (including GIS, remote sensing, and remote data transmission), hydrologic modeling, mineral processing and hydrologic/environmental impacts, urban drainage, salt water encroachment, and hydrogeological hazards. Contact: Secretariat, Humid Tropics Environment '96, A. Ivan Johnson, 7474 Upham Ct, Arvada, CO 80003.

## **Calls for Papers**

### **Water Resources, Education, Training, and Practice: Opportunities for the Next Century.**

June 29 - July 3, 1997. Keystone Resort in Summit County, CO. Annual symposium co-sponsored by AWRA and UCOWR. Oral presentations, posters, videos, and software demonstrations invited on two major themes: water resources education; and integrated watershed management. **ABSTRACTS DUE SEPTEMBER 30, 1996.** Contact: John Warwick, Tech. Chair, U of Nevada-Reno, 1000 Valley Rd., Reno, NV 89512-0180. Fax (702) 784-1953; e-mail [Keystone@dream.unr.edu](mailto:Keystone@dream.unr.edu).

**1st International Symposium on the Biology and Management of the Eurasian Ruffe (*Gymnocephalus cernuus*).** March 21-23, 1997. Sheraton Inn, Ann Arbor, MI. Sponsored by Great Lakes Sea Grant Network, and planned in conjunction with the Great Lakes Fishery Commission's Lake Superior, Michigan, Huron, and Erie Committee Meetings. Poster abstracts solicited on ruffe research topics, including biology, ecological effects, control and management, and environmental economics. Special emphasis on cases of ruffe as invasive species, applied ruffe management practices, and environmental economic impacts. In addition, authors may submit a manuscript based on the poster for publication in a peer reviewed symposium volume. **ABSTRACTS DUE NOVEMBER 8, 1996.** Symposium will bring together experts from Eurasia and North America to enhance the current understanding of ruffe infestation and its implications to North America. Geared principally toward researchers, others, including ecologists, managers and economists; those with technical backgrounds from aquaculture, commercial and bait fish industries, commercial shipping, sport fishing, and charter fishing, are urged to participate. Contact: Jeff Gunderson, MN Sea Grant College Program, 2305 E. 5th St., Duluth, MN, 55812-1445, (218) 726-8715, or Mike Klepinger, Michigan Sea Grant College

Program, 334 Natural Resources Bldg., Michigan State U, East Lansing, MI 48824-1222, (517)353-5508.

## **Publications**

Two recent publication of the U.S. Geological Survey are available from USGS-WRD, 2280 Woodale Dr, Mounds View, MN 55112. Phone (612)783-3100.

*Water-Quality Assessment of Part of the Upper Mississippi River Basin, Minnesota and Wisconsin: Environmental Setting and Study Design. 1996.* By J.R. Stark, W.J. Andrews, J.D. Fallon, A.L. Fong, R.M. Goldstein, P.E. Hanson, S.E. Kroening, and K.E. Lee. U.S. Geol. Surv. Water-Resources Invest. Rpt. 96-4098. Describes the physical, chemical, aquatic-biological, and human environment characteristics of the Upper Mississippi River Basin NAWQA study area, as they relate to water quality. Also describes NAWQA study design and study area stratification for the project, 1994-1999.

*Few Volatile Organic Compounds Detected in Rivers and Ground Water in the Upper Mississippi River Basin, Minnesota and Wisconsin. 1996.* A 2- page fact sheet prepared by William J. Andrews. U.S. Geol. Surv. Fact Sheet FS-095-96. Summarizes NAWQA assessment of water quality in the Upper Mississippi study area, based on 1978-1994 data. Very few river samples contained VOCs, and fewer than 5% of ground water samples contained VOCs except in wells near spills and leaks. In ground water, commonly used solvents and gasoline components were most frequently detected.

*Strategic Plan for the U.S. Geological Survey, 1996 to 2005.* Prepared by the Policy Council and the Strategic Planning Team, U.S. Geological Survey. 1996 (May). The strategic plan is a report on the continuous process aimed at keeping the USGS viable and relevant into the 21st century. The plan anticipates that water investigations will be their largest business activity and will grow in importance. Land and water use issues and environmental contamination also are expected to be growth areas. Partnerships and multidisciplinary studies will be emphasized. Available from USGS Libraries in Reston, VA, Menlo Park, CA, and Denver, CO; and on the web at <http://online.wr.usgs.gov/stratplan>.

*Focus 10,000: Minnesota's Lakeside Magazine.* Notice in this section of inauguration of a new magazine produced by the Minnesota Lakes Assn. may have left the false impression the Focus 10,000 magazine no longer exists. On the contrary, coverage of water quality and other issues relating to lakes and lakeside property will continue. Subscription are available from P.O. Box 289, Aitkin MN 56431. Phone (218)927-4100 or toll-free in MN 1-800-450-5253.

*State of the Great Lakes 1995.* Environment Canada and U.S. Environmental Protection Agency. Summarizes the chemical, physical, and biological integrity of the waters of the Great Lakes basin ecosystem. Report preparation followed the October 1994 State of the Lakes Ecosystem Conference (SOLEC) sponsored by the U.S. and Canada to implement the Great Lakes Water Quality Agreement. Conference discussions and the highlights of six background papers prepared

for the conference on aquatic community health, human health, habitat, contaminants, nutrients, and the economy are incorporated into the report. There is a section on each of the five Great Lakes. Contact Great Lakes National Program Office, U.S. EPA, 77 W. Jackson Blvd, Chicago, IL 60604. Ask for EPA 905-R-95-010 - July, 1995. -or- Environment Canada, 867 Lakeshore Rd, Burlington, Ont., Canada L7R 4A6. Ask for Cat. No. En40-11/35-1995m.

*Lake Sediment Contaminant Levels in Minnesota*, prepared by Steven Heiskary, MPCA-Waters, Monitoring and Assessment. Fourth in a series of MN lake water quality assessment reports, this 45-page report contains baseline data and an analysis of lake sediment contaminant levels for mercury, cadmium, chromium, copper, lead, PCBs, and total phosphorus. Samples were collected from lakes in central and southwestern MN and a few others in the northeast. Historical data also is discussed.

*Freshwater Ecosystems: Revitalizing Educational Program in Limnology*. Report of the WSTB Committee on Inland Aquatic Ecosystems, chaired by Patrick Brezonik (Dir. WRRRC), contains a history and overview of the issues along with recommendations for changes in limnology education. Contact study director Jackie MacDonald at (202)334-3422.