THE GREAT RIVERS NEWSLETTER

United States Environmental Protection Agency

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THE ENVIRONMENTAL MONITORING AND ASSESSMENT PROGRAM FOR GREAT RIVER ECOSYSTEMS (EMAP-GRE)

EPA Using Partnerships to Grade Health of Great Rivers

The U.S. Environmental Protection Agency's **E**nvironmental **M**onitoring and **A**ssessment **P**rogram (EMAP) has embarked on an ambitious research program to improve the science of assessing the health of the Great Rivers in the central United States. Since July 2004, field crews from 14 cooperating state and federal agencies have been sampling aquatic organisms, water, and habitat in the Upper Mississippi, Ohio, and Missouri Rivers. Crews are sampling more than 3500 miles of river, from Montana to Pennsylvania, and from Minnesota to Missouri. Improved information about river health will help scientists and the public make better decisions about river management. A Great Rivers "report card" will show current status of the rivers; future report cards will show whether conditions are getting better or worse. While condition reports will be useful to managers, demonstrating how to compile the reports in the future is an important project goal. "Grades" of river condition will be derived from indicators based on the diversity within biological communities, levels of contaminants in fish tissue and sediments, water quality, and habitat diversity.

River Wisdom

I started out thinking of America as highways and state lines. As I got to know it better, I began to think of it as rivers.

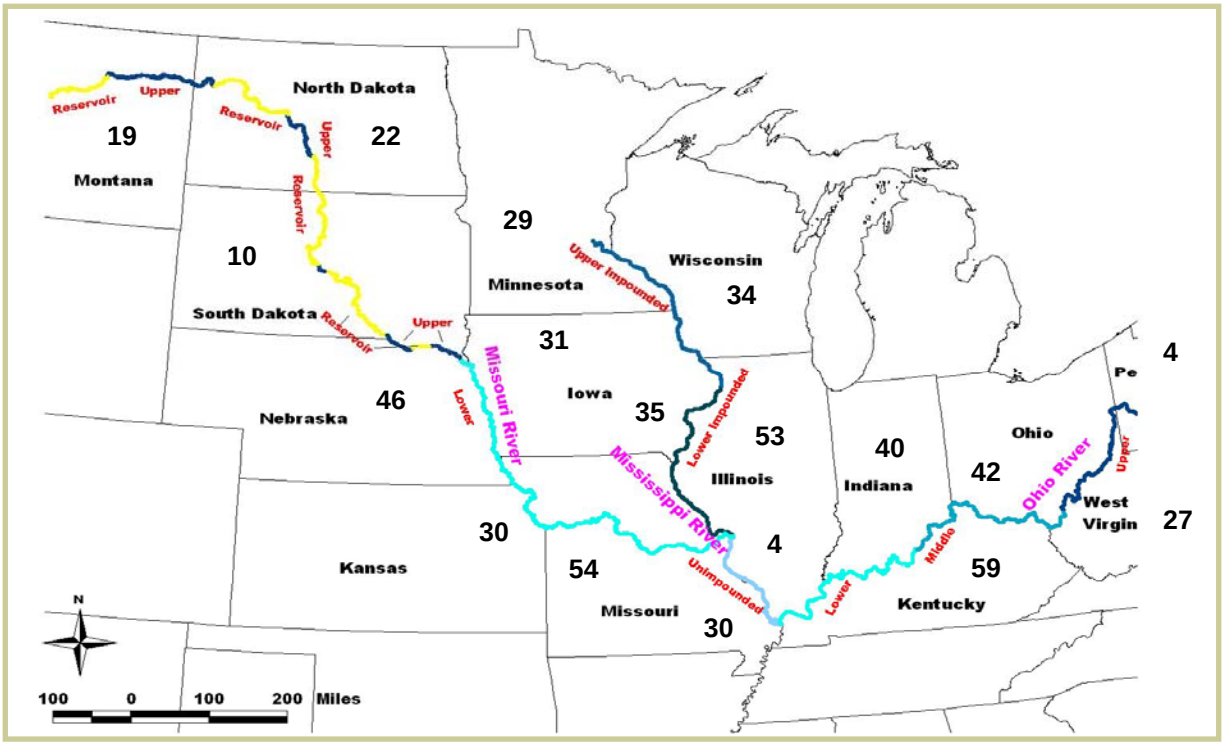
Charles Kuralt *From the Magic of Rivers*

There are alternatives to oil, but there are no substitutes for water.

Jean Michael Cousteau *From the Third World Water Forum, Kyoto, Japan, March 20th, 2003*

Geographic Scope of Great Rivers EMAP Study is Extensive

This map shows the Great Rivers of the Central Basin. The numbers refer to the number of sampling locations throughout the study area. A total of 320 sites will be sampled across 15 states in 2004-2005.



The Great Rivers Newsletter is periodic publication of the EPA's Mid-Continent Ecology Division in Duluth, MN. The newsletter is designed to disseminate timely information about the EMAP-GRE project among EPA investigators; state, federal, and tribal collaborators; and other stakeholders. Contact Mark Pearson, editor (pearson.mark@epa.gov; 218-529-5205) to obtain copies of the newsletter.

Data Management Tracking System Update

Conducting training for the EMAP-GRE Missouri River crews.

EMAP-GRE Information Management (IM) is a centrally localized system which captures, tracks, validates, and distributes all data collected in the field, lab, and office. IM includes the design of field forms, sample tracking, field and lab data entry, data validation, and more. To date the EMAP-GRE IM team has tracked over 3000 samples from ten field crews to eight different labs for the 2004 field season. Field data for 2004 are currently being entered by Computer Science Corporation under contract with the EPA into a Surface Waters Information Management (SWIM) database. Field data entry is done by scanning the field forms. Because of this scanning process each form has a unique code to identify its data and alignment boxes. Collected field data will go through a rigorous validation process to ensure its integrity. Field data are reviewed by each crew leader before submission for entry. The staff entering the data reviews the output from the scanning software with the actual form. Once data are in the database, crew members and indicator leads will have the opportunity to review the data again. Preliminary data will be available to the principal partners for program promotion (posters and presentations) and exploratory purposes in May 2005.

EMAP-GRE Technical Committee to Meet in Cincinnati

A view of the Newport KY skyline from the Ohio River.

The first meeting of the EMAP-GRE Technical Committee will be held in Cincinnati at EPA's National Exposure Research Laboratory on March 29-30. The Technical Committee advises the EMAP-GRE Senior Advisory Committee. It is the Technical Committee that considers issues of field, analytical methods, assessment needs, and product development. Both the Technical Committee and the Senior Advisory Committee are composed of experts on ecological indicators, EPA scientists, and state partners and represent the geographic scope, ecological diversity, scientific uncertainties, and stakeholders of the Great Rivers in the central basin. In addition, the Technical Committee connects the products of EMAP-GRE to those of other research and monitoring programs. It is chaired by David Bolgrien, the program's technical coordinator (bolgrien.dave@epa.gov or 218-529-5216).

Ted Angradi (EPA) evaluating invertebrate sampling techniques.

EMAP-GRE Has a Successful First Field Season

The first field season of EMAP-GRE was successfully completed in September 2004. Nineteen crews of state, federal (USGS), and contractor personnel collected data at 144 sites (68 on the Missouri River; 46 on the Mississippi River; and 30 on the Ohio River) from July through September. All sampling crews had a safe field season and no logistical constraints were encountered. High flows following Hurricane Jeanne caused the sample season on the Ohio River to be curtailed two weeks early. These sites will be sampled in 2005. All the biological samples have been delivered to laboratories; many samples have already been processed. QA audit visits by EPA and Ohio River Valley Water Sanitation Commission (ORSANCO) personnel revealed some minor inconsistencies among crews in sampling methodology. These issues were discussed in a series of field season de-briefings between EPA and field crews; the Field Operations Manual will be revised to address resulting minor methods changes prior to the 2005 field season.

Future newsletters will include more detailed updates of the sampling effort, the people behind the nets, and local media coverage.

Terri Jicha (EPA) demonstrating water quality sample collection techniques.