



A flotilla of training in pool 26 (Alton, IL) on the Mississippi River in 2005.

It's Time Again For EMAP-GRE Training

The annual 2006 EMAP-GRE training will be held at two locations this year. The main event will be held June 20-21 in St. Louis, MO. The classroom portion will be held at the Holiday Inn Riverport on the 20th. The field portion will be held on the Missouri River on the 21st. We will assemble at 8 AM at the Blanchette landing in St. Charles, MO, about 6 miles from the Holiday Inn Riverport. This training is a great opportunity to mix and mingle among people to see how other crews have approached field logistics and solved issues related to sampling. Please make your reservations at

the Holiday Inn Riverport (314) 298-3400, St. Louis, MO.

Another training session will be held in Lake City, MN. The training is 2 days with the river portion to be held on the Mississippi River. All crews should make every effort to attend the main training session in St. Louis, MO as hotel and classroom space is very limited at the Lake City training. Contact Mark Pearson at pearson.mark@epa.gov for more information about this training. We all look forward to seeing both old and new faces as we prepare for another successful EMAP-GRE field season.

Missouri River Meeting Focuses on Water Quality Issues

Larry Shepard (Region 7/USEPA)

EPA ORD- Midwest Ecology Division, Region 7 (Kansas City), and Region 8 (Denver) sponsored a workshop in Omaha, NE on May 2-3, 2006 to familiarize all attendees with existing water quality monitoring and assessment frameworks for the mainstem Missouri River. A discussion ensued of the need for a forum under which efforts to monitor, assess, and protect the water quality of the Missouri River mainstem would be better coordinated among tribal, state, and federal entities. The 2-day facilitated workshop included presentations from each of the 7 mainstem river states on the design of their river monitoring network and on their use of water quality data for the river in meeting Clean

Water Act requirements. Presentations were also made by several federal agencies, including EPA ORD's EMAP-GRE staff, on the nature and purpose of their Missouri River water quality monitoring and assessment activities and needs. Most of the workshop was dedicated to discussion among state and federal agency representatives about the need to develop and support a unified vision of Missouri River water quality management.

Staff from water quality management agencies for all 7 mainstem states, U.S. Geological Survey, U.S. Army Corps of Engineers, and EPA attended the workshop. Staff from the Central Plains Center for Bioassessment at the Uni-

versity of Kansas also attended. The executive director of the Upper Mississippi River Basin Association, Holly Stoerker, spoke and provided participants with the perspective of another organization working on large river water quality management.

After extensive discussion, participants agreed that a water quality forum for the Missouri River was needed, but that limited state and federal staff resources required a better understanding of which water quality issues should serve as the focus of such a "forum." Initially, the group viewed more water quality data as the most pressing need. The group felt that the paucity of water quality data encourages

inconsistent water quality assessments by individual states and limits the ability of states and tribes to develop more appropriate water quality standards for the river. There was consensus that the group should develop a statement of purpose which identifies water quality issues, which are best addressed collectively in a coordinated manner rather than individually. Participants developed a list of issues and prioritized those to identify which should be considered initially. Several participants agreed to clarify the list of water quality priorities for group consideration and will reassemble via a conference call.

EMAP-GRE Data Being Presented Around the Nation

Mark Pearson (NHEERL/ORD/USEPA)

Several research scientists from the EPA Mid-Continent Ecology Division (MED) and the USGS Long Term Resource Monitoring Program (LTRMP) will be presenting data collected for the EMAP-GRE project at the International Conference on Rivers and Civilization meeting in La Crosse, WI, June 25-28, 2006. Ted Angradi (MED) will be presenting a paper titled: **A Reference Approach For the Great Rivers of the Central Basin: The Ohio, Missouri, And Upper Mississippi Rivers**; Debra Taylor (MED) will present a paper titled: **From Data to Information: Development of Integra-**

tive Habitat Indices for Great River Ecosystems; and Andy Bartels, Terry Dukerschein (LTRMP Onalaska Field Station), and Brian Ickes (Upper Midwest Environmental Science Center) will present a poster titled: **Exploratory Analysis of Index of Biotic Integrity Scores Calculated from Data Sets Obtained from Three Different Day Electrofishing Protocols**. Igor Grigovich and Kevin Stroom (Wilson Environmental Laboratories Inc., EPA contractor) will present posters titled: **Invasive Mussel Species and the Integrity of Large Rivers** and **Macroinvertebrate Community Struc-**

ture in Large Rivers of the U.S. Central Basin and Implications for Field and Laboratory Approaches, respectively.

Brian Hill (MED) will present a paper titled: **Downstream Patterns in C:N:P and Sediment Microbial Enzyme Activity in the Missouri, Upper Mississippi and Ohio Rivers** at the 54th annual meeting of the North American Benthological Society, June 4-9, 2006 in Anchorage, AK.

Past Presentations using EMAP-GRE Data

Alex Levchuk (LTRMP Havana Field Station) presented a paper

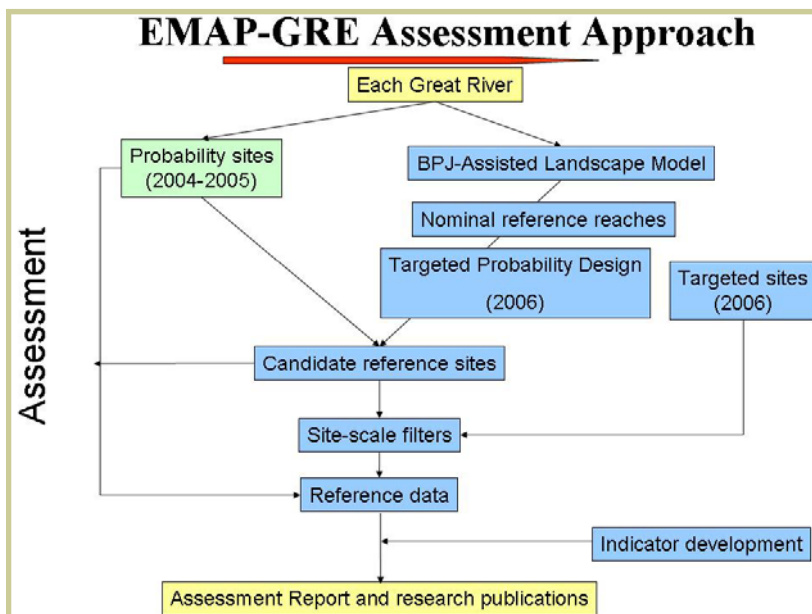
at the Mississippi River Research Consortium annual meeting in La Crosse, WI, April 27-28, 2006 using EMAP-GRE zooplankton data. His paper was titled: **Enumeration of Zooplankton Samples: Effects of Mesh Size on Density Estimates of Copepods, Cladocerans, and Rotifers**.

Brian Hill (MED) presented a paper titled: **Demonstrating a Consistent and Unified Approach for Monitoring and Assessing Ecological Conditions of the Missouri, Mississippi, and Ohio Rivers** at the 5th National Monitoring Conference in San Jose, CA, May 7-11, 2006.

EMAP-GRE Indicator Workshop to be held in Duluth, Oct. 24-26

At the last EMAP-GRE Technical Committee meeting in Cincinnati (Jan. 2006), it was decided that an indicator workshop was needed to start the task of developing Great Rivers indicators using data collected from the EMAP-GRE project. The workshop has been scheduled for Oct. 24-26, 2006 in Duluth, MN. This workshop will focus on the development of EMAP-GRE indicators for the purpose of the EPA assessment of the

Upper Mississippi River System, including the Ohio and Missouri Rivers. Travel support will be available for state agency employees. This workshop is being arranged by the Council of State Governments. Please set aside these dates for this important workshop. More information will be provided in future Great Rivers Newsletters. Contact Mark Pearson at pearson.mark@epa.gov for more information.



EMAP-GRE assessment scheme for the Great Rivers of the Central Basin of the United States.

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. The newsletter and other EMAP information can be found on this website : www.epa.gov/emap/greatriver