



**Building Capacity of *E. coli* Monitoring by Volunteer
Networks: A Multi-State Effort
Summary of Activities (based on Annual Report of
Accomplishments 2004)
February 2005**



Institutions: The Ohio State University, Michigan State University, University of Minnesota, University of Wisconsin, Wisconsin Department of Natural Resources, Purdue University, Indiana Department of Natural Resources, Iowa Department of Natural Resources, Iowa Geological Survey

Activities: In October 2003, six upper Midwestern states were awarded funding through the USDA Cooperative State Research Education, and Extension Service (CSREES) National Integrated Water Quality Program to assess the quality, reliability and usability of five different *E. coli* test kits with volunteer stream monitors. The project group will make a recommendation of an *E. coli* testing kit for use with volunteers and will develop uniform methods and training to help ensure consistency across states. In addition the project group will develop educational materials that support the project and help to ensure that the public is well educated about the risks of *E. coli* in our surface waters.

The project team, comprised of Volunteer Monitoring coordinators from each participating state, and the National Facilitation Project on Volunteer Monitoring, are responsible for overall project coordination and implementation of state activities. During 2004 the team met via 10 monthly conference calls as well as two team meetings held in Madison, WI.

During 2004, volunteers in Indiana and Iowa, tested five methods (Easy Gel incubated, Easy Gel not incubated, 3M Petri Film and Colisure IDEXX, and 3M Petrifilm) and their results were compared to laboratory results (obtained using the modified mTEC method). The five 'home laboratory' methods were also evaluated based on volunteer preference using survey instruments developed by the Evaluation Unit at the University of Wisconsin's Environmental Resources Center. The Project team has opted to move forward with continued assessment of 2 home laboratory test methods in year two. The kits chosen to continue future sampling are: (1) Coliscan Easygel - Incubated 24hrs. (2) 3M Petrifilm- Incubated 24hrs. Purdue University's statistical analysis of the results greatly assisted with decision making throughout this process.

Also during 2004, Michigan took the lead developing a training manual. The training manual will be used in late spring 2005 training sessions for volunteers in all six states. Wisconsin took the lead to develop a Project website in conjunction with the Volunteer Monitoring National Facilitation Project. The other partner states participated in the development of these materials. Both Ohio and Minnesota volunteers began initial field testing with results obtained from the lab. These two states also initiated development of educational materials to support training materials.

Training, testing and volunteer evaluations will be modified and improved based on the results from 2004. Indiana and Iowa volunteers will continue to test all five methods vs. laboratory results to ensure the best recommendation of the five kits was indeed made to the other participating states. Pilot testing of the two recommended methods and comparisons with laboratory results will occur in the other 4 states during 2005.