



USDA-CSREES 2007 National Water Quality Conference

Volunteer Monitoring of E. coli in Upper Midwest Streams: A Comparison of Methods and Preferences

Bacterial contamination of surface waters is a common public health concern. Laboratory analyses can be expensive, yet such monitoring is important to ensure safe recreational opportunities. In 2004, volunteer monitoring programs in six upper Midwestern states were awarded a grant from USDA-Cooperative State Research, Education and Extension Service (CSREES) to evaluate five test methods for monitoring E. coli bacteria suitable for home use. Methods chosen for this project included Coliscan Easygel (incubated and not incubated), 3M Petrifilm, Coliscan MF Method, and IDEXX Colisure. The methods were evaluated both by comparing home lab results to laboratory analyses of E. coli and volunteer preferences in using the home lab methods. After one season of monitoring by volunteers using these five methods in Indiana and Iowa, the project team identified two methods for volunteers in the other four participating states to assess; these were: Coliscan Easygel (incubated) and 3M Petrifilm. In 2005 and 2006, nearly 100 volunteers in Michigan, Minnesota, Ohio, and Wisconsin, were trained to use these two methods and asked to assess each based on their own preferences. These volunteers' samples were also sent to a lab in their state for comparison of bacterial counts between home lab methods and lab results. Volunteers in Indiana and Iowa continued to monitor using all five methods and one additional method (IDEXX Colilert) during 2005 and 2006 to ensure the most appropriate home methods were recommended for use by volunteers in the other four states. This presentation will briefly describe the project's experimental design and will summarize final project results on the accuracy and usability of the home lab methods.

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