MARIS—a wealth of lake and stream information with a single Internet click

If a multistate pilot project gets continued support, fish population data, winter kill information, lake depths, and more, information on lakes and streams all over the country will be available from a single point of contact on the Internet.

The project, the Multistate Aquatic Resources Information System (MARIS), has 10 States using a common, Internet-based application to make selected fish population survey data available from Ohio, Illinois, Iowa, Wisconsin, Michigan, Minnesota, Pennsylvania, Maryland, New York, and Wyoming.

These States have each developed their own statewide fisheries survey database containing information, including relative or absolute abundance of fish species, lake morphometry, location, and water chemistry in lakes and streams, and will share this information through MARIS.

"MARIS isn't a centralized database," explains MARIS coordinator Andrew Loftus. "State agencies will maintain control over their data, updates, and additions. What makes MARIS valuable is the ability to access data sets from multiple states with one simple query process."

Users may access MARIS on the Internet at http://www.marisdata.org.

Loftus says the MARIS databases have tables on lake and stream information including name, location, maximum depth, area, shore length, winter kill, and public access.

The core of the databases contains updated lake and stream survey catch information including date of sampling, catch numbers and weight, gear used and species caught. An additional component provides water chemistry data including alkalinity, conductivity, pH, water temperature, and secchi depth, if that information was collected with fish sampling.

Data extend back to the 1970s in most cases and to the early 1900s in some cases, providing valuable historic species occurrence and range data. Loftus expects the MARIS system to provide more standardized geo-referenced data in the future.
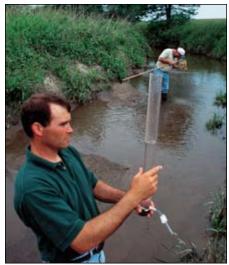
"It's been a really good State-Federal partnership," Loftus says. "State resource agencies gather and supply information, and Federal agencies supply core funding for coordination, computer hardware, system planning and programming support."

State agencies involved include the Department of Natural Resources of Illinois, Iowa, Maryland, Michigan, Minnesota, and Wisconsin; Illinois Natural History Survey; New York Department of Environmental Conservation; Ohio Division of Wildlife; Wyoming Fish and Game, and Pennsylvania Fish and Boat Commission.

Other organizations participating include the Conservation Management Institute at Virginia Tech, Penn State Institute for the Environment, Geographic Modeling Systems Lab/National Center for Supercomputing Applications at the University of Illinois, American Fisheries Society, U.S. Department of Agriculture (USDA) Forest Service, USDA Natural Resources Conservation Service (NRCS), U.S. Fish and Wildlife Service, Multistate Conservation Grant Program, U.S. Geologic Survey (USGS), and the USGS National Biological Information Infrastructure.

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The AWCC, located in Madison, Mississippi, is a fish and wildlife technology development center.

NRCS photo by Lynn Betts
Collecting water quality data