

US EPA ARCHIVE DOCUMENT

Various sampling techniques will be used in the NELP project:

- ▶ Knowing what kind of plants and animals live in a lake provides a good picture of its overall health. Electrofishing provides a representation of the larger animals, while netting plankton will show what smaller, even microscopic, animals and plants live in the lake. After counting the fish and examining them for overall health, they are returned unharmed to the lake—though occasionally a few fish are taken to the lab to be analyzed for various contaminants.
- ▶ An assessment of larger aquatic vegetation will provide a crucial indicator of the lake's condition, as well as show the presence or absence of nuisance exotic, or invasive, plants. Land use around the lake is considered as well, through the application of various well established land cover models.
- ▶ Knowing the historical condition of the lake can help us set goals for the future. Core samples of sediment from the lake bottom can help us understand current conditions, as well as what changes have occurred in the lake's condition over hundreds of years.

Assembling these and other parameters together, and analyzing them for each lake, as well as for the whole set of lakes, will provide a picture of the condition of New England's lakes and ponds.

If you are interested in knowing more about NELP, and other efforts being made to protect our fresh waters, call the EPA's Region 1 office at: 888-372-7341, or log on to: <http://www.epa.gov/ne/lab>. If you would like to help, most states have volunteer monitoring programs and there are many local Lake Management Associations. If your lake doesn't have one yet, maybe you could help to get one started.

The EPA's Environmental Monitoring and Assessment Program (EMAP), a national, long-term effort to assess status and trends of aquatic ecosystems across the U.S. with a known statistical confidence, has been ongoing since the late 1980s. In the 1990s, the Regional Environmental Monitoring and Assessment Program (REMAP), was initiated to apply the EMAP approach at regional and local scales. These programs provide the research needed to determine the condition of the nation's resources, a necessary step in the Agency's overall strategy for environmental protection and restoration. NELP is part of a continuing REMAP effort to assess the ecological health of vital fresh water resources in New England.

New England Lakes & Ponds Project

U.S. Environmental Protection Agency
New England Regional Laboratory

The mission of the EPA is to protect human health and the environment. Since 1970, EPA has been working for a cleaner, healthier environment for the American people.

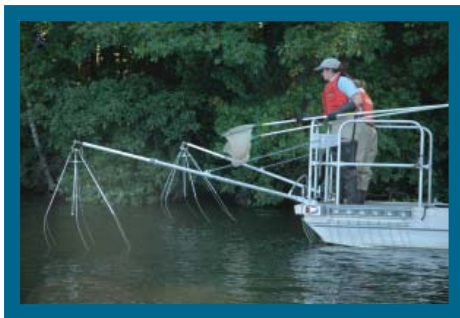


Vermont Agency of Natural Resources

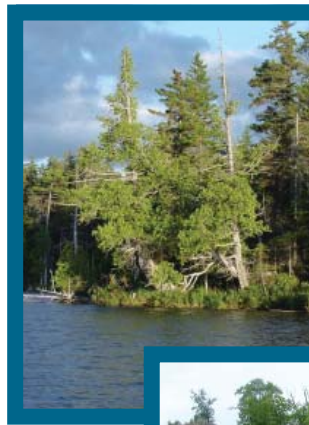
 NEIWPCC

Starting in 2006, the U.S. Environmental Protection Agency (EPA), along with the New England Interstate Water Pollution Control Commission (NEIWPCC), state environmental agencies, and other partners are assessing the current water quality and ecological condition of lakes and ponds throughout New England. The New England Lakes and Ponds Project (NELP) will take place over a six year period.

The EPA and its partners will be collecting chemical, physical, and biological data from a set of up to 300 lakes. These lakes were chosen through a rigorous statistical process to ensure an accurate geographic representation of all the lakes throughout the region. The data will be used to identify current stresses on ecological health, and to guide management strategies for the protection and enhancement of New England's surface waters.



Fish are caught using the EPA's electro-fishing boat.



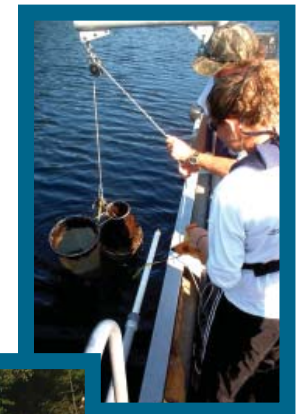
Prime habitat



Collection of water for chemical analysis.

The condition of the environment is always changing. Some changes are subtle, some are dramatic. Surface waters—streams, ponds, lakes and estuaries—and the organisms they support can reflect these changes clearly, through the composition of the water and the communities of aquatic plants and animals. By monitoring the chemistry and other aspects of water, as well as the community of organisms living in and around it, scientists can provide policy makers with information to help protect this resource that we all depend on and value.

The ecological quality of fresh water bodies is affected by many factors, including local geology, climate, land cover, and human impacts, both positive and negative. Some of the lakes in this project are expected to be of the highest quality that currently exists, while others may be heavily impacted. Drawing comparisons between them will help us understand how to protect those most sensitive to human influenced stresses, and how to repair and manage those in declining or degraded ecological condition.



Raising nets through the water column to collect plankton samples.



Examining the catch.