The New Hampshire Lakes Lay Monitoring Program
Engaging citizen scientists to protect NH waters

Our Origins
The New Hampshire Lakes Lay Monitoring Program (NH LLMP), founded in 1978, was conceived by two University of New Hampshire (UNH) faculty, as a way to involve local residents in detecting long-term trends in lake water quality. It began as a follow-up to a UNH class in which students performed a detailed analysis of a local lake at the request of a neighborhood lake association. The students produced an assessment of the lake that was far more detailed than could be done through state or federal programs. Once word spread through the lakes region, a deluge of requests from other associations followed and very soon the founders realized that there would simply not be enough students available to meet this demand. The solution was to design a set of protocols to allow properly trained citizen volunteers to conduct a core suite of accurate water quality tests as well as pre-process and preserve water samples for later analysis at the University’s Center for Freshwater Biology’s laboratory.

Unexpected Outcomes
The original outreach intentions were twofold: to provide unbiased data for informed local lake management, and to create an opportunity for participants to gain hands-on understanding of water resource concepts and issues. The statewide “army” of volunteer scientists would prove invaluable in advancing applied research important to lake and watershed management decisions. The LLMP model of citizen science would spread to 35 states and over a dozen foreign nations, and the confidence gained by participating in this program would empower many NH LLMP citizen scientists to get involved in local boards and commissions and effect real change towards natural resources protection.

A Range of Powerful Impacts
Both the approach and datasets developed through the UNH LLMP have and are influencing water resource policy in the state and beyond. As one example, volunteer-driven intensive studies of the drainage area around Lake Chocorua led to a significant reduction of pollutants coming from roadway runoff bordering the lake. This gained national recognition from the US Environmental Protection Agency and the awarding of a Technical Achievement Award from the North American Lake Management Society.

NH LLMP data have also had a direct impact on other decisions, including:

• Altering sighting of a highway around a wetland bordering a lake.
• Qualifying lakes to receive federal and state assistance for monitoring, management and mitigation.
• Supporting municipal sewer system bonds.
• Expanding vegetated buffer zones, shoreline setbacks and low impact landscaping practices.
• Supporting improvements to, or rejection of, poorly planned, high-impact projects.
• Establishment of “No-rafting” zones (dense congregations of moored boats).
• Setting statewide nutrient criteria, high quality water standards and Total Maximum Daily Loading (TMDL) requirements.
• Providing the NH Department of Environmental Services with the yearly dataset which is warehoused and distributed along with their own data and used for their bi-annual reports to Congress.

The LLMP is jointly administered by UNH Cooperative Extension and the UNH Center for Freshwater Biology.

More info at: http://extension.unh.edu/WatRes/NHLLMP.htm

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