

Monitoring Paves the Way to Conservation Policy

The Challenge

It's Vermont and an ecosystem is at work. The weather, water, geology, trees, air, and wildlife each play their part in this complex relationship. In 1990, very little was known about the health and baseline conditions of forested ecosystems in the state.

Without a starting point, there was a troublesome inability to identify and address changes in ecosystem condition and function as a result of such things as acid rain and mercury (Hg) cycling. The challenge was: how to monitor changes in forested ecosystems; uncover the reasons for the changes; and observe how the forested ecosystem responded over time. A solution was needed for the benefit of both science and policy.

The Solution

The challenge was a big one, bigger than any one agency or discipline of science could accomplish on its own. The solution required a coordinated effort. Three principle partners led the way:

- State of Vermont Department of Forests, Parks, and Recreation,
- University of Vermont, and
- The US Forest Service.

These initial partners pooled their scientific resources and Federal and local funding to establish the Vermont Monitoring Cooperative (<http://vmc.snr.uvm.edu/>). The mission of VMC is to coordinate multi-disciplinary research related to forests in order to understand, manage, and protect forested ecosystems in the state. VMC is now recognized as a model program/partnership that other states emulate.

Resulting Benefits

VMC enhanced the exchange of forest ecosystem information between natural resource managers and scientists by providing multidisciplinary study sites, networking opportunities and data sharing.

Scientists from hydrology, geology, biology, chemistry, forestry and other fields direct their efforts towards understanding complex forested ecosystems within two



Vermont Monitoring Cooperative air quality and mercury monitoring site at Proctor Maple Research Center in Underhill.

primary, intensive long-term study sites. Cooperators from government, academia and the private sector monitor and research a variety of topics including: forest health; air quality; meteorology; wildlife; and aquatic systems.

Sharing Success

VMC's work monitoring Hg deposition and cycling in particular availed data to support environmental protection efforts at the state and national level. Notably:

Hg monitoring results availed data for development and passage of Vermont's mercury labeling law in 1998, regulating labeling, sale, and disposal of mercury-added products.

VMC's Hg work played into the passage of new federal mercury emissions requirements.

Current Hg monitoring is informing EPA, state, and federal policy makers that current models to estimate mercury deposition are seriously underestimating the amount of Hg deposited in the Northeast.

The cooperative monitoring and research effort coordinated by VMC now involves more than 55 organizations. The existence of ongoing ecosystem studies and the availability of multidisciplinary data for the two study sites VMC coordinates attract other researchers. Rather than working through gaps in data, they get all the information they need to complete the picture of ecosystem health. Many of the intensive study projects are components of statewide, national or international research endeavors.

VMC's monitoring results benefit both scientific research and public policy.



USDA Forest Service
Northeastern Area
State and Private Forestry

For more information, contact:

Kathryn P. Maloney, Area Director
11 Campus Blvd., Suite 200
Newtown Square, PA 19073
Phone: 610-557-4103
Email: kmaloney@fs.fed.us

Bernie Raimo, FH Group Leader
271 Mast Road
Durham, NH 03824
Phone: 603-868-7708
Email: braimo@fs.fed.us