

The New England Regional Monitoring Collaborative

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Ms. Herron's role as program coordinator of the URI Watershed Watch program (URIWW) involves her in every facet of Rhode Island's largest citizen volunteer water quality monitoring program, from sample collection and analysis, to data entry and analysis, and volunteers training. She is active on a regional scale as a founding member of the New England Regional Monitoring Collaborative, as chair of the New England Chapter of the North American Lake Management Society, and a founding member of the RI Volunteer Monitoring Advisory Board. She has made numerous presentations about volunteer water quality monitoring, and training volunteers in a variety of monitoring procedures to local, regional and national audiences.

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Abstract:

The New England Regional Monitoring Collaborative (NERMC) coordinates the delivery of training and related services to volunteer groups in New England interested in watershed monitoring. The NERMC emphasizes whole watershed assessment, over more traditional and narrowly defined water quality monitoring, in order to solve water resource problems. NERMC partners include: River Network, Massachusetts Water Watch Partnership, University of Maine Cooperative Extension and Department of Public Affairs, University of New Hampshire Cooperative Extension and Freshwater Biology Group, University of Rhode Island Cooperative Extension - Watershed Watch Program, and the Merrimack River Watershed Council.

Currently NERMC is producing a set of manuals, videos and training aids, and developing a regional trainer's network for volunteer groups covering five watershed assessment tools. Those tools are *Watershed Natural Resources Inventory*, *Rapid and Intensive Habitat Assessments*, *Benthic Macroinvertebrate Streamside Assessment*, *Intensive Benthic Macroinvertebrate Assessment*, and *Following the Flow: On-site Non-point Source Pollution Evaluation*. Evaluation and planning has been instituted to a) assess current and emerging needs, b) the collaborative's capability to meet the demand of volunteer monitoring groups, then c) develop strategies to strengthen volunteer monitoring as an integral component of the New England environmental decision making process.

The ultimate goal of this collaboration is to improve our ability to be proactive in developing sampling and action strategies, prevent redundancies of effort, increase the level of expertise of volunteers and coordinators, and improve program quality and effectiveness. In addition we strive to increase the use of low cost and user-friendly watershed monitoring tools by making training and related services more accessible.

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PURPOSE

There is a growing recognition that it's not just the water – it's the watershed – which must be understood in order to solve non-point pollution problems. Yet most watershed groups still only use conventional water monitoring techniques. The New England Regional Monitoring Collaborative (NERMC) emphasizes whole watershed assessment, over more traditional and narrowly defined water quality monitoring, in order to solve water resource problems.

The New England Regional Monitoring Collaborative coordinates the delivery of training and related services to volunteer watershed monitoring groups in New England. NERMC partners are:

- River Network
- Massachusetts Water Watch Partnership
- University of Maine Cooperative Extension and Department of Public Affairs
- University of New Hampshire Cooperative Extension and Freshwater Biology Group
- University of Rhode Island Cooperative Extension, Watershed Watch
- Merrimack River Watershed Council

The collaborative formed to address concerns that monitoring programs within the region were often “reinventing the wheel” when considering watershed monitoring strategies. Program coordinators would search for appropriate protocols to adapt, sometimes training themselves. Other times they would bring in regional experts to train their volunteers. This approach proved expensive and inefficient, requiring the regional expert to travel throughout New England conducting the same training over and over to various groups. The NERMC approach enables volunteer programs to expand their monitoring efforts while capitalizing on the expertise developed by those regional experts. Individuals from throughout the region are trained to use and teach the various NERMC watershed monitoring tools. They then serve as trainers to local groups, with support from the NERMC. This results in a set of tools, adapted to address local concerns, being used throughout the region, enabling improved sharing of data and more efficient expansion of watershed monitoring activities.

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PROGRAM ACTIVITIES

NERMC partners are currently working on the following projects:

- Production of a set of manuals, videos and training aids for volunteer groups covering five watershed assessment tools:
 - 1) *Watershed Natural Resources Inventory*: This essential first step develops a big picture of what is happening in the watershed and suggests appropriate directions for monitoring. Readily available information is gathered on the ecological and human resources, political and legal setting, resource issues, and restoration efforts at the watershed level.
 - 2) *Rapid and Intensive Habitat Assessments*: These two methodologies assess habitat quality for aquatic life, evaluating physical indicators such as shoreline vegetation and shading. Results are used to determine if habitat degradation from human activities is causing impairments.
 - 3) *Benthic Macroinvertebrate Streamside Assessment*: This rapid field methodology detects gross impairments of invertebrate communities living on the river bottom; the status of these

invertebrate communities serves as an indicator of environmental health.

- 4) *Intensive Benthic Macroinvertebrate Assessment*: These in-depth field and lab methodologies are used to detect subtle impacts from various types of human activities on the invertebrate communities living on the river bottom.
- 5) “*Following the Flow: On-site Non-point Source Pollution Evaluation*”: This visual assessment methodology traces non-point source pollution from its origin to the receiving body of water, evaluating the production, transport, treatment, and impacts of pollutants from various types of land-use.

Used in combination these tools create a watershed monitoring toolkit that gives watershed groups the “big picture” and “bottom line” on the ecological integrity of their watersheds and expands upon conventional water monitoring techniques. An introductory video explains the applications of these tools.

- Creation of a regional trainer network in New England by conducting a series of “train-the-trainers” workshops using the above listed tools.
- Institution of an evaluation and planning process to a) assess the current and emerging needs of volunteer monitoring groups, b) assess our capability to meet the demand, and c) develop strategies to strengthen volunteer monitoring as an integral component of the New England environmental decision making process.

BENEFITS

In addition to the training aids and workshops described above this program will have a number of benefits:

- better access to training and materials by volunteer monitoring groups, schools, and community groups tackling non-point pollution problems,
- more, and more effective, watershed assessments on the part of volunteer monitoring groups, schools, and community groups,
- a long-term collaboration among the River Watch Network, the Massachusetts Water Watch Partnership, the Cooperative Extension of the universities of Maine, New Hampshire, and Rhode Island, and the Merrimack River Watershed Council. This collaboration may evolve into a virtual laboratory to develop new monitoring tools and provide services on a regional basis.

FURTHER INFORMATION

Additional information about the training materials described above, can be received by contacting: River Network, 153 State Street, Montpelier, VT 05602, (802) 223-3840. If you would like information about the workshops described above, contact: URI Watershed Watch, Rm. 210 B Woodward Hall, Kingston, RI 02881, (401) 874-2905. Visit our web page (<http://www.umass.edu/tei/Mwwp/nermc.html>) for updated program information and organizational links.