

COMMUNITY PARTNERS

The Lamprey River is located in an area of active scientific research and environmental concern. As the most significant source of fresh water to the Great Bay Estuary, the condition of the river is clearly connected to the health of the bay. Sadly, Great Bay is experiencing several problems that have earned it a place on the federal list of impaired waters. Many entities, including the University of New Hampshire (UNH), municipalities, federal and state regulatory agencies, and volunteer groups, are conducting multiple studies to ascertain the exact cause(s) of these impairments and developing plans to address the impairments. Several other rivers also drain to Great Bay, but the Lamprey River has been the subject of the most research. For eight years, such research has been presented in the annual day-long Lamprey River Science Symposium hosted by UNH. Researchers from a wide range of disciplines present their findings to a large, engaged crowd that includes other researchers, public officials, and concerned citizens.

The Lamprey is in an area of active land conservation. Of the key indicators identified in the [*Piscataqua Region Estuaries Partnership \(PREP\) Management Plan*](#), the goal of putting twenty percent of the area under permanent conservation by the year 2020 is one that seems likely to be attained, at least along the Lamprey River. As of 2011, nine Lamprey River watershed towns had conserved more than fifteen percent of their land area and three had conserved ten to fifteen percent. The LRAC has played a significant role in that success. Working with several land conservation partners and towns, the LRAC has used \$4.9 million to leverage almost \$21 million for the permanent protection of 3500 acres of critical habitat and important riparian lands along the Lamprey River.

Partnerships between the LRAC and towns in the watershed have always been strong and new relationships are being developed. The four Wild and Scenic towns have long benefited from LRAC expertise and financial assistance. All four towns have been partners in land protection projects, recreational enhancements, historical documentation, and various outreach and educational activities. Assistance from the LRAC is currently being extended to upriver towns to improve recreation and the general public's understanding of local environmental resources and issues.

The LRAC has a strong relationship with the non-profit Lamprey River Watershed Association (LRWA). Since 1998, LRWA volunteers have conducted water quality tests along the main stem of the Lamprey River. The State of New Hampshire provides some funding for this work, but financial support from the LRAC has provided equipment and coordination that other New Hampshire rivers have been unable to secure. During economic downturns and the resultant loss of state funding, LRAC support ensured that years of data were not interrupted. In addition to support for water quality testing, the LRAC has awarded several grants to the LRWA to study issues that warrant careful investigation or highlight work along the Lamprey. Advice and financial support from the LRAC ensured these projects were given proper attention. Below are a few examples:

- evaluating large woody material in the context of paddling access
- documenting dams and making recommendations that might improve fish passage

- exploring the potential for helping towns install demonstration stormwater reduction projects
- creating three DVDs that identify river issues and celebrate river heroes

River Profiles



Photo courtesy of UNH

Undergraduate and graduate students, as well as academic scientists, are increasingly expected to apply their knowledge to the real world. My participation as an LRAC member from 2012 to present has provided me with local and relevant examples of the application of scientific knowledge in successful watershed management that have intrigued students in my hydrology classes at the University of New Hampshire. These students are quite motivated to maintain the quality and quantity of the campus drinking water supply. The related complex technical, social, and legal issues have inspired several to pursue additional coursework and rethink career choices.

Expertise, capacity, and funding from LRAC have enabled several of my undergraduate students to develop thesis projects that address real-world knowledge gaps, projects that have ranged from a field study examining controls of high turbidity levels in a small tributary to a retrospective analysis of watershed-wide water quality over the last 20 years. Science in the Lamprey River watershed benefits not only from world-class monitoring and analysis led by scientists at USGS, NOAA, UNH, and NHEPSCoR, but also from the knowledgeable and dedicated citizens who serve on LRAC and are intimately familiar with the history, management, and concerns facing the watershed.

submitted by Anne Lightbody, PhD, LRAC representative

By the Numbers: Community Partners

Item Description	Count
Wild and Scenic communities participating	4
other watershed communities participating	10
partner agencies and organizations	~25



Photo by RH Lord

Intermittently for the past few years, a mysterious flow of fine sediment has been clouding Woodman Brook as it enters the Lamprey River. In an interesting partnership with LRAC and under the guidance of LRAC representative Anne Lightbody, UNH student Jake Poirier investigated the issue and came to some initial conclusions, summarized in his poster, available at <http://www.lampreyriver.org/about-the-river-current-research-woodman-brook>