



It Takes a More than a Village: *Watershed Management Strategies and Resources*

By Bill Arcieri, CPESC, CPSWQ

Across New Hampshire, the need to restore and protect our water resources is ever-increasing: State and federal regulations are requiring more action, and studies have shown that the quality of our surface waters—such as streams, rivers, lakes, and ponds—correlate to our quality of life, and even our livelihood. The task can be daunting for a single municipality since it requires changes to human behavior and modifications to the built environment throughout the watershed to have a meaningful effect. Proactive steps in one town have the potential to be negated by another. This is where regional watershed management planning and coordination among communities is likely to result in the greatest benefit.

Why Watershed Management Matters

In addition to the obvious loss of ecological and recreational value, the growing list of impaired waters leads to increased costs to communities and businesses. Infrastructure upgrades, maintenance needs, and other compliance add direct costs, while lost revenue from diminished recreation and tourism activities, and related employment, create indirect costs. A recent study entitled *What's Our Water Worth?* reported an estimated economic impact of \$51 million in lost retail and hospitality sales and \$18 million in state and local tax revenue if a significant decline in water clarity or purity was to occur statewide¹. According to Michele L. Tremblay, President of the New Hampshire Rivers Council and interim Co-Chair of a new public-private partnership "New Hampshire Lives on Water," a new companion study called "*What's Our Water Cost?*" is underway. This study will examine and update water-related costs, including deferred maintenance on infrastructure to treat and deliver drinking water and treat and dispose of wastewater. According to Tremblay, "Employers want a healthy environment and a good quality of life to attract and retain a skilled workforce." The study will provide economic data on the value of water and future infrastructure needs to policy makers and decision makers on the local and state levels.

Taking Action to Preserve Our Waters

To initiate collaboration, communities in the same watershed should form a steering committee to leverage common interests among public and private organizations and to develop and implement a watershed management plan. This can lead to quicker results and cost-savings by harvesting the energy and resources of multiple entities seeking to achieve a common goal. Forming a committee prevents duplication of efforts and promotes the effective use of resources to enact effective policies and programs to educate residents about the importance of shoreland buffers, storm-water management, septic system setbacks, and land-use

zoning. Public involvement and engagement are essential to restoring and protecting water quality.

Numerous examples exist throughout the state where municipal officials, lake associations, river advisory groups, regional planning agencies and state agencies have come together to develop a watershed approach. Among these, for example, is the Southeast Watershed Alliance (SWA), which has established model stormwater management regulations with the help of the UNH Stormwater Center and Rockingham Planning Commission to enhance stormwater treatment for future development. So far, about a dozen communities have adopted these regulations, the first step forward in a multi-phased regional approach to resolving water quality issues in the Great Bay Estuary. The key to getting started is securing funding assistance to initiate and leverage common interests.

Finding the Resources for Help

Implementing watershed management plans takes an investment of public resources—including time and money, both of which are often in short supply. There are, however, a number of funding sources that New Hampshire municipalities can turn to for assistance. For example, although state or federal grant funds cannot be used to perform specific compliance activities contained in the MS4 permit, the NHDES Watershed Assistance Section can provide **US EPA Clean Water Act Section 319** grant funds to assist communities and non-profit groups with addressing water quality problems from a broader watershed perspective. Developing watershed management plans as part of the Section 319 program can spread the responsibility of restoring surface waters amongst multiple stakeholders and organizations, and can make the most of limited resources to find the most cost-effective solutions. Securing Section 319 funding in support of watershed-based planning or best management practice (BMP) implementation involves a competitive application process, as well as a 40% non-federal match in the form of cash or in-kind services, materials, equipment, time, labor, etc.

The Clean Water State Revolving Fund (CWSRF) represents another potential funding source for implementing nonpoint source and stormwater management control measures. This program provides assistance through the use of low-interest loans. In FY2015, NHDES set aside \$1.35 million for projects that promote water conservation, water reuse, energy efficiency, or the use of LID stormwater management measures. Projects involving infrastructure mapping and asset management are also eligible for up to 30% loan forgiveness in 2016. For more information on this

Success with Section 319

Section 319 grants have helped New Hampshire's municipalities make great strides in alleviating surface water impairments in our lakes and streams, as well as resulting compliance activities imposed by state or federal permits. For instance, NHDES 319 funds covered 40% percent of approximately \$400,000 spent to date on the ongoing Berry Brook Watershed Restoration Project in Dover. So far, the project has reduced the effective impervious area in the watershed by 12%, as well as reduced the annual pollutant loading of sediment by 6.8 tons, phosphorus by nearly 50 pounds, and nitrogen by 330 pounds. Section 319 funding is being used to facilitate similar success on projects at Willow Brook in Rochester; Hodgson Brook in Portsmouth; Crystal Lake, Maxwell Pond, and McQuesten Brook in Manchester; Cobbetts Pond in Windham; and Baboosic Lake in Amherst—just to name a few. For more information see <http://des.nh.gov/organization/divisions/water/wmb/was/index.htm>.

program, see the NHDES web page: <http://des.nh.gov/organization/divisions/water/wweb/grants.htm#srf>.

Other related state funding programs include the Aquatic Resource Mitigation (ARM) funds and the Moose Plate Grant (MPG) programs. The ARM fund supports resource restoration activities such as stream bank stabilization, wetland restoration, dam removal, or stream crossing upgrades. These funds are specific to each major watershed and have a revolving application period. For more information, go to <http://des.nh.gov/organization/divisions/water/wetlands/wmpl/index.htm>.

Meanwhile, the MPG program supports a wide range of habitat and water quality protection and restoration projects. The grant awards are generally smaller, in the range of \$5,000 to \$25,000, depending on the project and number of qualified proposals. These funds are geared toward supporting public education and outreach activities. Additionally, they can be used as match for Section 319 projects, supplementing other grant awards and stretching resources even further to expand the overall geographic scope and environmental benefit. For more information, go to <http://www.moosplate.com/>.

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A Collaborative Effort

Ultimately, when it comes to watershed management planning, a number of old adages apply—from “many hands make for light work” to “making the most of limited resources.” It may truly “take more than a village,” but between collaboration across communities, involving the public, and seeking

assistance from some of the numerous funding sources available, New Hampshire’s towns and cities can make great strides in restoring and protecting our invaluable water resources.

Bill Arcieri is a senior water quality scientist with VHB in Bedford, NH. He is a member of the Board of Directors for the Southeast Watershed Alliance, has been actively involved in providing technical

assistance to NH regulatory agencies on water quality issues, and is a frequent speaker at water resources-related conferences throughout the region. Bill can be reached at barcieri@vhb.com.

¹For more information on the What’s Our Water Worth? study, please go to <http://www.nhivers.org/documents/Econ%20Study%20Brochure.pdf>.

In FY2014, around

\$500,000

in NHDES 319 funds were used to complete

\$1 million

in restoration activity, eliminating

44 tons of sediment and keeping

82 & 44

pounds of phosphorous

pounds of nitrogen

from entering NH waters.

