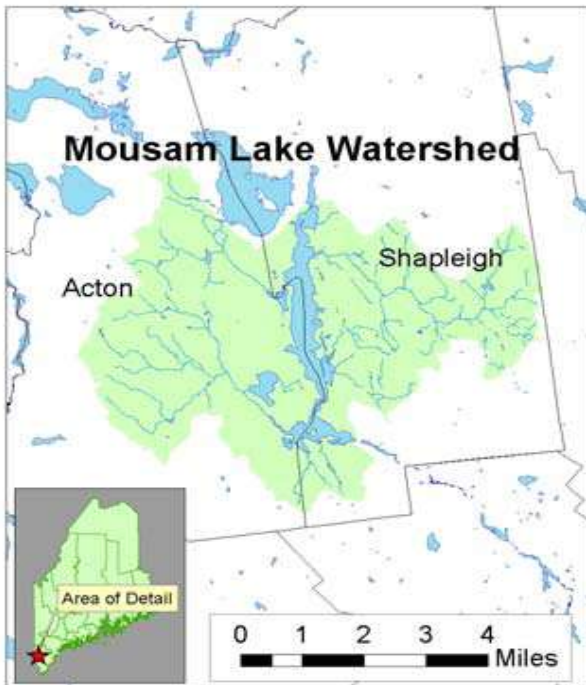


Think Globally -- Act Locally. Restoring Mousam Lake



Communities everywhere are proving that they can make a noticeable difference in their neighborhood water resource. In York County, Maine, the Soil and Water Conservation District (SWCD) and the Mousam Lake Regional Association (MLRA) together with residents, townships, state agencies and others embarked on the Mousam Lake Water Quality Improvement Project. With widespread collaboration and a little bit of funding, they were able to clean up their lake.

Confronting Environmental Challenges

Mousam Lake, a 863-acre lake located at the southern point of Maine, is a popular spot for boaters, anglers, and vacationers with its sandy shores and excellent cold and warm water trout fisheries. However, this 21-square mile

watershed was suffering from suburbanization and the conversion of forested land to driveways and parking lots. Surrounding the lake itself, the shoreline is heavily developed with over 700 seasonal and year-round homes and a heavily used boat ramp. For the past several decades, Mousam Lake has endured increased erosion, and pollution from stormwater runoff from development, lawns, roads, and aging septic systems. Increased levels of phosphorus has led to increased algal growth, decreased water clarity and lowered levels of dissolved oxygen. This downward trend in water quality resulted in a steady decline in the lake's once viable ecology and that of its surrounding aquatic habitats. In the 2003 Total Maximum Daily Load (TMDL) assessment, excess phosphorus was identified as the major impairment. Maine's Department of Environmental Protection (MDEP) attributes the problem to soil erosion and polluted runoff from residential properties and camp roads and effluent from inadequate septic systems located in the sandy soils around the lake. The TMDL assessment estimated that to meet water quality standards, the annual amount of phosphorus reaching the lake would need to be reduced by 27%.

A Decade of Effort

Since 1997, the York County SWDC, MLRA, MDEP, and the towns of Acton and Shapleigh have been working together to address source of pollution in the lake and foster long-term watershed stewardship. In 1999, the Mousam Lake Water Quality Improvement Project began. With help from EPA, Maine Department of Transportation and Maine Department of Agriculture, cost share agreements with public and private landowners were negotiated and best management practices were installed at 45 priority sites. Technical assistance was provided to another 77 landowners. Projects included stabilizing shoreline erosion, improving gravel road

surfaces and installing and/or upgrading roadside drainages. Twenty-one roads were fixed. In 2001, the Lake Youth Conservation Corps program was established to help with installation of best management practices, raise local awareness and commitment to lake protection, and involve local youth in environmental stewardship. From 2002- 2007, the youth have completed over 115 projects and continue to fix an average of 18 sites each year with annual support from the towns of Acton and Shapleigh. The total cost for the project was \$1.1 million with local townspeople and others contributing over \$400,000 in matching funds or in-kind services.

A Cleaner, Healthier Lake

In 1998 MDEP designated Mousam Lake as impaired and added it to the state's section 303(d) list of waters not meeting water quality standards, a requirement of the federal Clean Water Act. From 1999 through 2006, a galvanized community tackled the problem and in 2007 monitoring result indicated that pollution loads in the lake were reduced by more than 150 tons/year of sediment and 130 pounds/year of phosphorus. Water clarity is a full meter clearer than it was in the lake ten years ago. Today, erosion projects continue to be installed thus keeping an estimated 76 tons of sediment and 64 pounds of phosphorus out of the lake each year. In 2006, Mousam Lake was removed from the state's 303(d) list of impaired waters.

Staff and a small cadre of local leaders are continuing their campaign to keep the lake in good health. Community outreach and education activities are ongoing to inform residents on how they can help. As part of the project, numerous newsletters have gone to every household in the watershed; MLRA holds annual meetings; the SWCD conducts workshops and delivers presentations; 30 construction sites have been acknowledged with "Gold Star" signs for environmental stewardship; and more than 200 homeowners attended one of the thirteen "Septic Socials" to learn about system function, proper maintenance and water conservation.

Every Little Bit Helps

In many, many instances, small, local efforts can provide incentives and moral support for others. The success of the Mousam Lake project has inspired protection efforts on several neighboring lakes. The Acton Wakefield Watershed Alliance, the Square Pond Association, and the Loon Pond Association are now busy with their own restoration activities. For more information or tips from the people at Mousam Lake, contact the York County SWCD at <http://www.yorkswcd.org/> or the York County Conservation District at <http://www.yorkccd.org/>



Vegetated buffer planting by Master Gardeners.