



Pure Water Stewardship

BACKGROUND

All major watersheds in Massachusetts contain bodies of water that do not now meet or face imminent threat of not meeting water quality standards and other natural resource goals, such as streamflow or fish passage problems. Each watershed has multiple water bodies listed on the 1998 303(d) list. Pollutants such as metals, nutrients, and suspended solids are found in these waters, as well as pathogens and low dissolved oxygen. Many lakes contain noxious aquatic plants caused by organic enrichment.

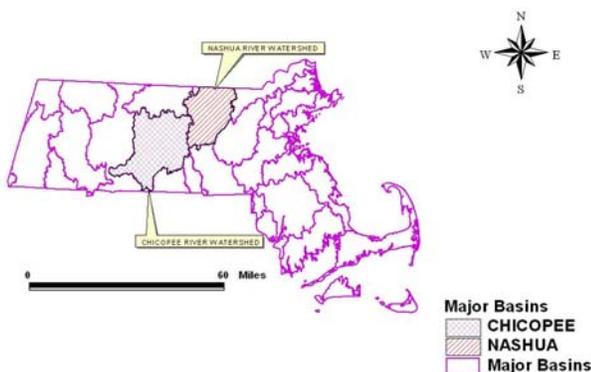
Forests can play a key role in mitigating the effects of these pollutants and problems. Well-managed forests improve infiltration, decrease sedimentation, promote stable channels, reduce nutrient loading, and filter other contaminants from waterways. Forested ecosystems provide wildlife habitat, wood products, and recreational opportunities.

The Pure Water Stewardship Project (PWSP) will build upon the successes of previous PWSPs to improve the watershed stewardship of private lands in the Nashua and Chicopee River Basins. Administered by the Worcester Conservation District, this project combines the power of grassroots conservation with the technical expertise of many varied state, federal, and local non-profit partners to encourage personal participation and investment in watershed protection by private landowners.

LOCATION

The Pure Water Stewardship Project will focus its efforts in the Nashua and Chicopee River Watersheds in central Massachusetts where approximately two-thirds of the state's population receive their drinking water. There will be additional focus within the Ware River and Wachusett Reservoir Watersheds, located predominantly in the towns of Rutland, Hubbardston, and Princeton.

Pure Water Stewardship Project
Worcester County Massachusetts



ISSUES BEING ADDRESSED

Non-point source pollution and land use-related runoff threaten the integrity of these important surface water sources. Improving land use management is vital for protecting drinking water in Massachusetts.

GOALS

Riparian zones need protection from agricultural runoff. Forest riparian buffers can be planted to mitigate agricultural-related pollution.

In Massachusetts, watershed health and quality are ultimately determined by the land use practices of private landowners. Forest and farm landowners will be trained to promote forest riparian buffers and Best Management Practices (BMPs) to protect watershed and water quality. This hands-on approach will improve landowner capabilities and build community networks to implement stewardship practices.

The PWSP will connect communities to their watershed resources by establishing networks of local citizen stewards through organized implementation exercises. Landowner and community investment in watershed stewardship also increases the efficiency of state and federal assistance programs.

The goal for the pilot phase is to complete four forest buffer and BMP projects.

METHODOLOGY

The PWSP will proceed in two phases. The first phase will provide outreach, assessment, coordination, and implementation of improved forest buffers and BMPs. Landowners who currently receive forestry or agricultural assistance will be targeted in one sub-basin in each of the two watersheds.

The second phase will include development of multi-media educational materials and the cross training of other watershed associations and conservation districts to expand delivery of the PWSP. Once these groups have the materials and the capacity to conduct this work, they can bring the success of the PWSP pilot phase to other sub-basins throughout the watersheds.

The PWSP will also:

- Coordinate community involvement in riparian corridor projects such as buffer enhancement and revegetation, forest management planning, livestock fencing, and erosion control.

Since 1999, the Northeastern Area and the Northeastern Area Association of State Foresters have sponsored a cooperative challenge grants program to promote watershed health and restoration through the conservation, restoration, and sound stewardship of trees and forests.



- Organize groups of interested landowners in sub-basins to identify and implement small stewardship projects. The projects will efficiently accomplish work while building community ties and improving resource protection. The projects will provide each participating landowner with individual benefits (e.g. an installed fence or a forest management plan) as incentives for involvement.

- Metropolitan District Commission Division of Watershed Management
- MA Executive Office of Environmental Affairs Watershed Initiative Team Leaders
- UMass Extension
- Nashua River Watershed Association
- Forest and farm landowners

OUTCOMES AND ACCOMPLISHMENTS

- **Public Meetings:** Public meetings were held in Hubbardston and Rutland to organize and educate landowners regarding available options for conservation management and land planning. Topics included resource management and planning for forestry and agriculture BMPs, estate planning, and the use of conservation restrictions. Public input and participation were encouraged throughout the process.
- **Open Space:** Individuals in Hubbardston and Princeton began grassroots movements to assist private landowners to work with elected representatives to place restrictions on private property. This will ensure that the land is maintained as open space and protected with BMPs.
- **Forest Management Plans:** Four plans were implemented during the project. Over 250 acres of forestland located in critical watershed areas and one entire water supply source have been protected. The four forest management plans were expanded with additional management elements in order to meet Massachusetts Forest Stewardship Plan criteria. This introduced provisions for wildlife habitat and allowed the plans to be certified as Forest Stewardship Plans. The four landowners are now eligible for additional funding and cost sharing incentives that will encourage them to implement additional BMPs in the future.
- **Fencing:** One landowner installed fencing to prevent livestock from entering wetlands that adjoined pastureland.
- **Riparian Buffers:** Two of the projects were located on properties that surround a critical community water supply. Planting a 6-acre buffer strip on the land of one landowner and implementing a forest management plan for the other landowner have protected the entire surface water supply area.
- **Education:** A 23-page, two-color booklet entitled *Working Lands: A Resource Guide for Massachusetts Forest & Farm Owners* was published and distributed to all interested parties, agencies, and organizations. A brochure entitled *Guide to Landowner Assistance Programs* was developed and distributed to stakeholders.

PARTNERS

- USDA Forest Service
- Worcester Conservation District
- MA Watershed Coalition/Pure Water Stewardship Project
- MA Department of Food and Agriculture
- MA Department of Environmental Management

FUTURE PLANS

The four landowners, each with unique needs for their property, will provide a variety of stewardship projects to serve as learning opportunities. Acres harvested, fenced, planted, and other means of measurement will be tracked.

Landowners who understand a wide variety of stewardship practices will promote those practices to other landowners. Watershed associations and landowners trained in BMPs will recruit new Stream Team members and expand the PWSP to landowners in other sub-basins. Stream Teams can facilitate long-term monitoring of projects. The PWSP will serve as the preliminary model that will be exported to other sub-basins within the targeted watersheds.

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