



Goal and Objectives

The goal of the CSREES New England Regional Water Quality Program is to improve water quality management through educational knowledge and Extension programming that emerges from a research base. The CSREES New England Program focuses on the following areas:

- Agricultural Best Management Practices
- Community-Based Watershed Protection
- Residential Pollution Prevention
- Volunteer Water Quality Monitoring



Our objectives are to:

- Enhance integration of water quality efforts within the New England region.
- Increase the accessibility of research, education, and Extension resources of the Land Grant University System to Federal, State and local water quality improvement efforts.
- Facilitate multi-partner efforts that minimize duplication of effort and leverage multiple funding sources into a collaborated effort.
- Enhance progress toward place-based water quality goals.
- Improve the capacity of CSREES to draw on resources throughout the nation to address water quality issues.

Research

USDA CSREES sponsored research at New England Land Grant Universities and private universities is providing information to Extension educators, students, farmers, and communities to improve and protect water quality. Some examples of this research include:

- Testing methods to improve crop nutrient utilization to minimize fertilizer application
- Developing sustainable plants resistant to disease and insects thereby reducing the need for pesticide application
- Evaluating alternative septic systems that minimize nutrient and pathogen contribution to ground water
- Studying pathways of pollutants through watersheds utilizing field methods and geographic information system resources
- Evaluating pollution prevention Best Management Practices (BMPs)



Our web site contains a comprehensive listing of CSREES research projects in New England with links to their Current Research Information System (CRIS) record.

Education

Improving and protecting water quality requires involving our partners within the community- residents, scientists, politicians and children alike. New England strives to improve its water quality by educating the public through outreach- and university-based education programs. University degrees include:

- Natural Resources Science
- Environmental Management and Policy
- Environmental and Natural Resource Economics
- Urban Horticulture and Turfgrass Management
- Forest Ecosystem Science
- Sustainable Agriculture



Extension

Extension programs within CSREES New England are providing technical assistance, tools, and training to citizens, farmers, and community leaders to ensure that New England waters are improved and protected. Demonstration projects, educational programs and training, watershed management tools, and water quality monitoring are common venues of New England Extension outreach.

Agricultural Best Management Practices

The CSREES New England Water Quality Program has worked with growers to implement accepted BMPs to reduce the potential of water contamination from pathogens, nutrients, and pesticides. Farmers are learning how to improve their soil quality while improving the use of on-farm residuals and improving the level of farm management through nutrient and pesticide management plans.



Impacts

- The Vermont CropMD software for livestock nutrient management planning and field crop record keeping was updated and distributed. 49 of 60 survey respondents wish to continue program use.
- Extension assisted Connecticut farmers in completing Nutrient Management Plans for over 7,600 acres of farmland.
- Connecticut Extension tracked farmers implementation of Nutrient Management Plans. Efforts are underway to determine what factors have the most influence on the farmers' ability - or willingness to follow plans.

Community-Based Watershed Protection

The CSREES New England Water Quality Program is providing the simple and intuitive tools and training to community leaders, raising the local capacity to use the watershed approach in decision making. Natural resources were inventoried and assessed, existing and future pollution loads were modeled, and future landscapes were visualized with the use of "geospatial" technology. As a result of these efforts, communities are improving and protecting water quality.

Impacts

- Almost every town participating in the CT Nonpoint Education for Municipal Officials (NEMO) Program is making changes to land use plans and regulations thereby protecting natural resources and water quality.
- Maine NEMO is developing a professional train-the-trainer series with partnering agencies to expand NEMO programming statewide.
- New England NEMO Programs participated in National NEMO training in cooperation with NOAA on the use of the Impervious Surface Analysis Tool (ISAT).



Residential Pollution Prevention

CSREES New England Water Quality Programs within this focus area teach private well owners how to test and adequately treat their well water, teach homeowners to assess and prevent water quality contamination around their homes, increase the use of alternative septic systems subsequently decreasing pathogen and nutrient loads to ground and surface waters, and demonstrate residential sustainable landscaping thereby reducing pesticide and nutrient pollution from lawns and gardens to protect water quality.



Impacts

- Valuable partnership formed with EPA New England, important to Extension programs in each state, creating more opportunities for funding and allowing states to leverage existing resources.
- Alternative treatment technologies have replaced many failing septic systems, reducing pollutant outputs from wastewater to levels that are within state standards.
- Partnerships with Master Gardener Programs throughout New England provide water quality information to volunteers and consumers.

Volunteer Water Quality Monitoring

Volunteer water quality monitoring programs within the CSREES New England Water Quality Program often serve as the critical first link that engages the public in watershed stewardship. Volunteer monitoring programs improve understanding of local water resources, encourage individual and community involvement in water quality protection and restoration efforts, and help communities make informed decisions that improve water quality.

Impacts

- Decrease in phosphorus levels in Lake Chocoma, NH due to management decisions based on volunteer data.
- One hundred thousand acres of clam flats on the Maine coast opened for harvest between 1990 and 2002 with help of volunteer monitors.
- New Englanders participated in a series of train-the-trainer workshops using monitoring tools developed by the New England Regional Monitoring Collaborative and CSREES New England. Participants of these workshops apply their learning by teaching others and conducting these assessments in their home watersheds.



Website

The CSREES New England Regional Water Quality Program web site serves as a portal to 406-funded activities throughout the Region.

<http://www.usawaterquality.org/newengland>



Partners



The CSREES New England Water Quality Program is facilitated through the collaboration and support from numerous partners. These partners include Sea Grant, U.S. EPA, USGS, NRCS, various state agencies, conservation districts, local communities, Master Gardeners, local environmental and sporting organizations, Native Americans, watershed associations, and lakeside residents and organizations. In addition, New England Extension programs are active participants in the National Water Quality Monitoring Council, the New England Regional Monitoring Collaborative, and the North American Lake Management Society.

