

# New England Regional Water Program: Combining Research, Extension and Education to Improve Water Quality

## Our Goal :

To improve water quality management through educational knowledge and extension programming that emerges from a research base.

## Our objectives are to:

- Facilitate incorporation of science in regionally developed education and outreach programs that improve the quality of New England's water resources in agricultural and rural watersheds.
- Encourage the adoption of behaviors and activities that result in water quality improvement and protection through thematic programming in our nine Focus Areas. (The boxes below Provide examples of Focus Area activities.)

- Conduct water quality needs assessments for the Region and Focus Areas and report on partnerships and progress in water quality improvement.
- Work with partners to identify, develop and disseminate research-based tools, curricula and educational programs that promote voluntary approaches to local water quality management.
- Serve as a repository for all reports from water quality projects funded by the CSREES National Integrated Water Quality Program (NIWQP).
- Continue to develop and maintain both the NIWQP and the New England Regional Water Program websites.
- Participate in national activities that strengthen the capacity of the NIWQP.

## Our Approach:

To address the water quality challenges of rural New England, we created locally relevant programs focused on land and community management. We work at both local and regional scales to develop, test and refine programs. We work with federal, state, university and local partners to create the mix of resources required to solve real-life water quality problems.



## National Theme: Pollution Assessment and Prevention

New England Focus Area: Sustainable Landscaping

### Accomplishments:

- Partnering with Northeast IPM Center and Region 2 Water Program, the Sustainable Landscaping focus area members organized and presented at the first Green-Blue Summit on residential pest management, nutrients, and water quality.
- UCONN has trained more than 230 Master Gardeners in water quality and home landscaping. URI has presented seven Healthy Landscapes workshops for more than 240 people in the state.
- This focus area was awarded a three year \$480,000 Integrated Research, Extension, Education Grant by CSREES NIWQP to apply behavioral research results to Extension efforts to reduce application of excess nutrients by homeowners.

### Adopted Practices:

- Several lakeside communities in VT have developed BMPs for smart landscaping for all new construction and two VT municipalities are applying sustainable landscaping awareness strategies for business property owners.
- UMaine's Buffer Brigade installed eleven buffers, including one large-scale demonstration project, resulting in an average landowner spending of \$225 and 20 volunteer hours.



## National Theme: Nutrient and Pesticide Management

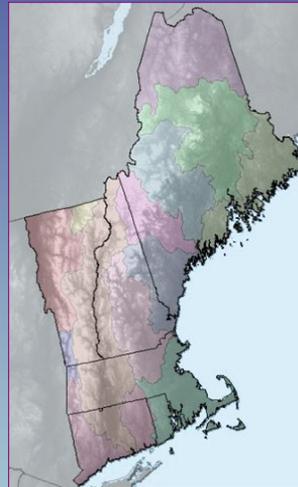
New England Focus Areas: 1. Agricultural Nutrient and Pest Management; 2. Animal Waste Management

### Accomplishments:

- The UMASS Pasture Research & Learning Center for New England and eastern New York spawned the formation of the Southern New England Grazing Network and a group website. Regional pasture walks are coordinated by Extension faculty, NRCS and other organizations. The Center received grants from USDA SARE, UMASS Extension and the MA Agricultural Innovations Center totaling more than \$550,000 to support research and education activities.

### Adopted Practices:

- A pilot course developed at UVM demonstrated that encouraging and enabling farmers to create their own nutrient management plans that meet the NRCS standards has led to increased plan implementation. To date, 28 farms have developed plans on 14,342 acres. The course will be adapted and piloted in RI in 2007-2008, with financial support from NRCS.
- Participants in UMaine's In-Service Training Program assisted 328 farmers to implement ten pest management practices on 53,000 acres. Thirty-three percent of the farmers saved \$6 to \$50 an acre implementing these practices for a total savings of \$300,000 to \$2.6 million.



## National Theme: Watershed Management

New England Focus Area: Green Valley Institute

### Accomplishments:

- Green Valley Institute's GIS specialist created a new aquifer data layer that has been incorporated into natural resource inventories and used to make better land use decisions, thereby protecting water quality and promoting sensible community growth.

### Adopted Practices:

- Landowners attending "Protecting Family Farm" workshop made a commitment to protect 5,156 acres of undeveloped land.
- Six communities prioritized common natural resources and incorporated the information into Corridor Plans of Conservation and Development.



## National Theme: Pollution Assessment and Prevention

New England Focus Area: New England Onsite Wastewater Training Program (NEOWT)

### Accomplishments:

- About 4,500 southern New England wastewater professionals and municipal officials completed classes on topics such as nitrogen removal systems. About 2,300 wastewater professionals attended national and regional conferences.

### Adopted Practices:

- The NEOWT Program, partnering with New England NEMO programs, has been instrumental in offering assistance to ten towns in RI, two in CT and two in MA for the development of local wastewater management plans. These new plans have resulted in town ordinance changes in Charlestown, New Shoreham and South Kingstown, RI.



## National Theme: Pollution Assessment and Prevention

New England Focus Area: River and Stream Restoration

### Accomplishments:

- An improved online database now encourages easier input of volunteer road-stream crossing surveys in CT, VT, RI and NH.

### Adopted Practices:

- Elements of the River and Stream Crossing Standards are used by the Army Corps of Engineers in the Programmatic General Permits for MA, ME, CT and RI. These standards will serve as models for the development of state standards in CT and NH.



Steering Committee: Pete August<sup>1</sup>, Holly Burdett<sup>1</sup>, Heather Darby<sup>2</sup>, Dave Dickson<sup>2</sup>, Karen Filchak<sup>2</sup>, Art Gold<sup>1</sup>, Linda Green<sup>1</sup>, Stephen Herbert<sup>1</sup>, Elizabeth Herron<sup>1</sup>, Jurij Homziak<sup>3</sup>, Scott Jackson<sup>4</sup>, Roy Jeffrey<sup>5</sup>, John Jemison<sup>6</sup>, Alyson McCann<sup>1</sup>, Julia Peterson<sup>2</sup>, Laura Wilson<sup>2</sup>

Website: Kelly Addy<sup>1</sup>, Ann Borowik<sup>1</sup>, Aimee Mandeville<sup>1</sup>, Alison Millman<sup>1</sup>

<sup>1</sup> URI, College of the Environment and Life Sciences, Cooperative Extension; <sup>2</sup> UConn Extension; <sup>3</sup> UMaine Cooperative Extension;

<sup>4</sup> UMass Cooperative Extension; <sup>5</sup> UNH Sea Grant/Extension; <sup>6</sup> UVM Extension

This is contribution number 5136 of the College of the Environment and Life Sciences, University of Rhode Island.

## National Theme: Drinking Water and Human Health

New England Focus Area: New England Private Well Initiative

### Accomplishments:

- In partnership with U.S. EPA New England, the Water Systems Council, New England's state drinking water agencies, Dartmouth University and others, the 2005 New England Private Well Symposium was held in Portsmouth, New Hampshire, and provided a forum for professionals to share current research, approaches and materials. Attendees represented a cross-section of federal, state, university, nonprofit and private sector groups. Ninety-five percent of 36 post-event respondents reported a significant increase in knowledge in at least one of the symposium topic areas. The 2<sup>nd</sup> Symposium will be held December 3-4, 2007 in Newport, RI.



### Adopted Practices:

- Thousands of individuals have had their well water tested.
- Evaluations from the University of Rhode Island Home'A'Syst Program indicate that 55 percent of workshop attendees now test their water, and 63 percent share well program information with others. And in Massachusetts, more than 800 brochures provided by the University of Massachusetts were distributed by Massachusetts Boards of Health to private well owners. More than 20 percent of those who received initiative brochures from the Massachusetts Boards of Health had their well water tested.



## National Theme: Watershed Management

New England Focus Area: Volunteer Water Quality Monitoring

### Partnerships & Leveraging:

- About \$89,000 was generated by NH's Lakes Lay Monitoring Program which was matched by federal and state grants for the UNH Water Resources Research Center, NH municipalities and NH Department of Environmental Services.

- More than 13,000 volunteer hours, valued in excess of \$245,000 has ensured longevity of URI's Watershed Watch Program by providing grant match and reassurance to officials of the value and interest in monitoring.

### Accomplishments:

- The MA Water Watch Partnership, housed at UMASS, developed and published the MA Volunteer Coastal Monitoring - General Quality Assurance Plan (QAPP), a generic QAPP offered online, provides a useful foundation for QAPP development by programs in MA and throughout the region.

- "Getting Started in Volunteer Monitoring", a U.S. EPA Watershed Academy Webcast was presented to share successes, strategies, and lessons learned with a diverse group of monitoring practitioners.



## National Theme: Watershed Management

New England Focus Area: New England NEMO

### Accomplishments:

- The University of Rhode Island NEMO co-led a regional conference with U.S. EPA New England highlighting RI communities that effectively implemented comprehensive onsite wastewater management programs. The conference was attended by 60 local decision makers and state managers from southern New England.
- Coordinating with the Volunteer Water Quality Monitoring focus area, the University of Vermont held "Reducing and Preventing Beach Closures on Lakes and Rivers in Northern New England: Strategies for Detection, Correction and Financing" for decision makers in Maine, Vermont and New Hampshire.



### Adopted Practices:

- The publication of an educational brochure on open space inspired the first conservation workshop in the town of Candia, NH. As a result the town raised \$200,000 for conservation purposes. This was all made possible with coaching and support from NEMO's sister organization in NH - the Natural Resources Outreach Coalition.