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Who We Are

Inspired by a shared passion for conservation, NRCS collaborates with farmers, ranchers, communities, and other individuals and groups to protect natural resources on private lands.

Side-by-side with these landowners, we identify natural resource concerns, such as water quality and quantity issues, soil erosion, air quality, wetlands and wildlife habitat, and develop unique conservation plans for restoring and protecting resources. Funds to implement these plans are made available in Farm Bill programs that share the cost of conservation for the benefit of the farm, the watershed, and the community. Conservation easement programs, also in the Farm Bill, provide long-term options to conserve land.

NRCS helps Vermont and the Nation balance economic goals with the needs of the environment—ensuring sustainably productive lands that supply food, fiber, forest products, and energy for all citizens.



Cows in pasture at Woodnotch Farm in Vermont. This farm signed a water quality monitoring contract through EQIP under the AGO Initiative.

Photo: Keith Hartline, NRCS

Lake Champlain Basin Water Quality Monitoring through America's Great Outdoors Initiative

The Lake Champlain region in Vermont was picked as one of three national project areas to receive funding under President Obama's America's Great Outdoors Initiative (AGO). These areas were targeted to receive Environmental Quality Incentive Program (EQIP) funding due to the existing relationships with local stakeholders and the ability to begin project implementation within the year. A Vermont conservation partners group determined there is a lack of information on the effectiveness of selected agricultural Best Management Practices (BMPs) on Vermont farms.

Prior to the AGO announcement, NRCS Vermont began working with farmers, federal and state partner agencies, watershed associations, and conservation groups to establish seven edge-of-field water quality monitoring projects on six farms. The purpose of the monitoring is to evaluate the effectiveness of selected agricultural BMPs for a period of at least three years. The projects will evaluate the effectiveness of these specific BMPs in trapping and/or removing sediment and phosphorus prior to entering surface waters.

Data on the effectiveness of these BMPs will allow us to better focus our resources on those conservation systems that are most effective in addressing runoff and associated phosphorus and sediment losses. This data is needed to strategically align conservation planning and financial assistance programs with those practices that provide the greatest benefit in our landscape. The information could also be used as input into phosphorus tracking systems, Total Maximum Daily Load (TMDL) formulation, and for future computer modeling.

- Practices to be evaluated include: cover crops, no-till with manure injection, manure incorporation on hay, and sediment basins
- Total estimated project costs for 7 edge-of-field water quality sampling projects: \$1,040,000
- NRCS Payments: \$650,000, plus \$150,000 for practice implementation
- Partner Contributions: \$390,000

Flood Recovery

Spring flooding and Tropical Storm Irene caused record damage in Vermont Communities.

2011 proved to be a record year for the Emergency Watershed Protection program (EWP) in Vermont. EWP is a recovery program aimed at relieving imminent hazards to life and property caused by natural occurrences. Two separate weather events in Vermont caused the need to utilize the EWP program twice in 2011. Severe thunderstorms sustained over May 26th and 27th produced dangerous river flooding in towns around Washington and Caledonia counties. On August 28, Tropical Storm Irene hit Vermont, causing rivers to rage and change their course throughout the landscape. River water washed away homes, roads, and left communities that were in need of assistance completely isolated. The USDA-NRCS VT Engineering Staff coordinated with NRCS employees from around the country to form teams who performed damage survey report (DSRs) throughout the state. In 2011, NRCS VT investigated 193 damaged sites and determined 153 of them eligible for the EWP program. The total estimated cost of flooding damage at eligible sites totaled over \$7 Million, with the USDA share equaling over \$5 Million. The remaining cost must come from local sources and are in the form of cash or in-kinds services. Recovery from Tropical Storm Irene remains a priority for NRCS through EWP through 2012.



A man surveys the damage left by Tropical Storm Irene in Readsboro, Vermont. Powerful river flooding caused extreme bank erosion that made this a typical scene in southern and central Vermont. NRCS engineers assessed such sites to determine eligibility for the Emergency Watershed Protection Program (EWP).

Water Quality and Wildlife Habitat

50% of Vermont's historic wetlands have been destroyed or impaired due to industrial, residential and agricultural land uses.

Functioning wetlands help improve water quality, provide valuable wildlife habitat and offer recreation opportunities for residents and visitors to the state of Vermont. Using the Wetlands Reserve Program (WRP), NRCS Vermont has worked with 41 private landowners to permanently protect and restore wetlands in the Otter Creek Watershed. The WRP cluster of easements in the Otter Creek Watershed consists of 1,904 acres of wetlands that are permanently protected. An additional 1,374 acres are in the WRP planning process and will be protected under permanent easements next year. Restored wetlands along Otter Creek provide flood water storage; help trap, store and filter sediment and nutrients; and provide hunting, fishing and wildlife viewing opportunities for residents and visitors to the State of Vermont. Data collected from this area after Tropical Storm Irene show significant flood mitigation due to the water storage capacity of the landscape.



Migrating geese rest at the Saenger Wetland Reserve Program (WRP) easement site in Whiting Vermont. This easement is part of the Otter Creek Watershed WRP Cluster and covers 152 acres, including 82 acres of restored wetland.

Productive, Healthy Forests

Improving Vermont's forest land for fish and wildlife, water quality, health and productivity.

The New England – New York Forestry Initiative through the Wildlife Habitat Incentive Program (WHIP) continued in 2011 to provide forest landowners the tools they need to improve their land and forest based resources. In 2011, Vermont NRCS obligated \$966,530 for forest based practices through WHIP. Over 320 acres were contracted for Forest Stand Improvement, over 620 acres were contracted for Early Successional Habitat Management and over 700 acres for control of invasive plants. These practices will improve forest health, productivity, wildlife habitat and food for priority species. Improving water quality by addressing erosion continues to be the focus of the popular Forest Trails and Landings practice. While not part of the WHIP Initiative, in 2011 the Environmental Quality Incentives Program (EQIP) continued strong support of forestry for working lands and provided for the development of 161 Forest Management Plans, which cover 29,918 acres of Vermont forestland.



Wildlife Habitat Incentives Program (WHIP) Forestry Initiative implemented early successional habitat and soft mast feeding area for black bear and other wildlife.

Conservation Technical Assistance (CTA)

is the core approach NRCS has used successfully for more than 75 years to reach out to all American farmers. Through CTA America invests in conservation by investing in American farmers and ranchers, and the technical assistance they need to care for the more than 70% of our land, water and other natural resources that are in their hands. CTA is simply about helping people. NRCS employees assist in identifying problems, inventorying resources, providing conservation alternatives, and making recommendations to individual farmers, ranchers, local governments, and urban landowners.

Technical Planning and Design:

- Soils
- Water
- Air
- Plants
- Animals
- Human impacts
- Energy

Project Coordination:

- State Environmental Regulation
- Archeological Permits
- Necessary Environmental Consultations
- Professional Coordination

Financial Assistance for Working Lands:

Environmental Quality Incentives Program (EQIP)—provides assistance for a broad spectrum of conservation practices that promotes agricultural production, forest management and environmental quality as compatible national goals.

Wildlife Habitat Incentive Program (WHIP)—improves wildlife habitat on private agricultural, forest and Tribal lands.

Agricultural Management Assistance Program (AMA) - provides financial and technical assistance to agricultural producers to address water management, water quality and erosion control with conservation practices.

Conservation Easements:

Farm and Ranch Lands Protection Program (FRPP)—helps keep farm and ranch land in agriculture.

(Wetlands Reserve Program) WRP—restores wetlands and wetland habitat on marginal agricultural land

Grassland Reserve Program (GRP)—helps landowners restore and protect grassland, rangeland and pastureland, and maintain viable ranching operations.

Stewardship:

Conservation Stewardship Program (CSP)—encourages producers to embrace long-term comprehensive conservation, maintaining and improving existing practices.

Watershed and Community -Wide Programs:

Emergency Watershed Protection Program (EWP)—undertakes emergency measures on watersheds damaged by fire, flood and other natural calamities to prevent erosion and runoff that could endanger lives and property.

Vermont in The National Landscape

Science and Innovation Lead to Early 100% Completion of the Vermont Soil Survey

With the completion of the Essex County Soil Survey in 2011, the initial soil survey of Vermont is complete. The first survey of Vermont soil was completed in 1905, and since then more than 75 soil scientists devoted all or part of their careers with SCS/NRCS toward completing soil survey in the state. Computer technology entered the soil survey program in the 1980's and forever changed the way that soil surveys are conducted.

The Vermont-based MLRA Soil Survey Area 12-5 Staff, supervised by State Soil Scientist, Steven Gourley, and led by Project Leader, Robert Long, are in the forefront of new technology for soil mapping. The MLRA team worked closely with Dartmouth College to develop Arc Soil Inference Engine (ArcSIE) software, which has become a proven tool designed for field soil scientists to implement

knowledge-based, automated soil mapping. The Essex County soil survey is an entirely digital soil survey, one of the first of its kind, completed using high resolution digital elevation data and ArcSIE. A significant 50% time improvement in efficiency was realized over the course of the Essex County survey. Long was recognized as the 2011 NRCS Soil Scientist of the Year for his role in developing ArcSIE.

Even with more efficient delivery systems, much work still needs to be done educating the public on the role soil survey information plays in making wise land use decisions. As Vermont looks toward the next century, and begins grappling with issues such as locally grown food, bio fuels, sprawl, and maintaining clean water, a detailed understanding of the role that soils play in determining sensible land use policy and decisions is needed to ensure the future for all Vermonters.



MLRA Soil Survey 12-5 Staff, from left, top row: Roger DeKett, Tom Burke, Robert Long and Jessica Phillipe



2011 Farm Bill Program Funding*

NRCS Program	Dollars Obligated	Number of Contracts/Easements
Conservation Stewardship Program (CSP)	\$34,000	1
Environmental Quality Incentives Program (EQIP)	\$9,482,000	373
Agricultural Management Assistance Program (AMA)	\$138,000	8
Farm and Ranch Lands Protection Program (FRPP)	\$2,990,000	22
Grassland Reserve Program (GRP)	\$548,000	1
Wetlands Reserve Program (WRP)	\$482,000	4
Wildlife Habitat Incentives Program (WHIP)	\$1,056,000	142
Conservation Technical Assistance (CTA)	\$3,582,000	

*REAP data citation to follow in this space, and will be included with the REAP data when it is released.

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Financial Assistance (FA) is provided directly to producers. Conservation Technical Assistance (CTA) funding is used for professional planning and expertise to help carry out conservation activities. For GRP easements, the NFCS and the Farm Survey Agency financial assistance dollars are combined.

Data source: Foundation Financial Information System Status of Funds Report October 2011, revised.