



United States Department of Agriculture
Natural Resources Conservation Service

Fiscal Year 2011 Accomplishment Report

***NRCS...conserving, improving and sustaining our natural
resources for future generations.***

USDA is an equal opportunity provider and employer.

Who We Are

The USDA Natural Resources Conservation Service (NRCS) provides leadership and technical assistance to address natural resource conservation issues on private land. NRCS employees work to improve and protect natural resources in partnership with Maine's 16 Soil and Water Conservation Districts, federal, state and local agencies, farmers, landowners and communities. The partnership's commitment to conservation provides a solid foundation to a locally-led program delivery system. The partnership is also committed to a voluntary, incentive-based approach to private land stewardship and conservation treatment.

Vision

An effective team providing leadership and expertise in the use and stewardship of Maine's natural resources.

Mission

Provide technical assistance to help people conserve, improve and sustain our natural resources.

Offices in Maine

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Cumberland and York Counties

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Visit us at:
www.me.nrcs.usda.gov

A Message from the State Conservationist



On behalf of the Natural Resources Conservation Service (NRCS) in Maine, I am delighted to present this 2011 agency report to you. It was a great year! We have much to celebrate and many opportunities ahead as we continue to pursue our mission of Helping People Help the Land.

Working with our partners, we accelerated conservation assistance with additional resources to support initiatives such as the Organic Initiative, Irrigation Initiative, Seasonal High Tunnels, Conservation Activity Plans, and the New England/New York Forestry Initiative. We obligated more than \$7 million in financial assistance through the Environmental Quality Incentives Program and Wildlife Habitat Incentives Program for these initiatives, and an additional \$11 million in financial assistance to our general programs such as the Agricultural Management Assistance Program, Conservation Stewardship Program, Environmental Quality Incentives Program, Farm and Ranchland Protection Program, Wetland Reserve Program, and Wildlife Habitat Incentives Program.

Thanks to Maine producers, our conservation partners and NRCS employees, we were able to effectively utilize the \$18 million allocated to Maine NRCS in FY2011 to get conservation on the ground better and faster than ever. As we move into another year, I expect we will continue on our path of improvement and excellence in conservation delivery, even during these times of tight budgets. Our best is yet to come!

JUAN C. HERNANDEZ
State Conservationist

Conservation Technical Assistance (CTA)

Conservation Technical Assistance (CTA) is the basic foundation for NRCS activities. Our locally-based NRCS staff works directly with farmers and others to provide technical and financial conservation assistance. Our guiding principles are service, partnership and technical expertise.

USDA Outreach Meetings Draw Beginning Farmers

Like many areas of the country, Aroostook County has suffered from loss of farmers and cultivated acres over the past 20 years. But as other landowners have moved in, USDA has also suffered from a lack of participation in agency programs.

In an effort to increase participation by underserved clientele in northern Maine, in particular beginning farmers, three outreach meetings were held in Fiscal Year 2011. Aroostook County took on the task early in the fiscal year by hosting one each in southern, central and northern Aroostook County. A collaborative effort between all of the USDA Service Center agencies (NRCS, FSA, RC&D and RD) and the District, the idea was to reach a group that was typically not served by USDA and make them familiar with what we offer. Descriptions of some of the many programs, assistance, and information available through the various agencies were touched



on by speakers from all of the agencies. The goals were to get the attendees interested in visiting their local USDA office and to let them know that USDA is there to help the agricultural community.

Another USDA meeting was held in southern Maine’s Cumberland and York counties for new or beginning farmers and private woodland owners who have had little or no participation in USDA or conservation district programs. The last message left with them was “Come in and see us!”

Highlights of 2010 CTA Accomplishments

Practice	Planned	Applied	Practice	Planned	Applied
Access Road (ft)	4,620	3,425	Forest Trails and	10,950	10,950
Conservation Systems—Plans / Acres	153 / 17,067	211 / 26,634	Integrated Pest Management (ac)	694	519
Conservation Crop	1,985	2,593	Lined Waterway (ft)	770	1,274
Cover Crop	548	1,180	Nutrient Management (ac)	4,822	6,149
Early Successional Habitat (ac)	864	779	Pipeline (ft)	5,350	960
Fence (ft)	7,420	1,020	Prescribed Grazing (ac)	563	952
Forest Harvest Management (ac)	1,370	1,297	Upland Wildlife Habitat Management (ac)	1,213	1,039

Agricultural Management Assistance (AMA) Program

Agricultural Management Assistance (AMA) provides cost share assistance to agricultural producers to voluntarily address issues such as water management, water quality, and erosion control by incorporating conservation into their farming operations. Producers may construct or improve water management structures or irrigation structures; plant trees for windbreaks or to improve water quality; and mitigate risk through production diversification or resource conservation practices, including soil erosion control, integrated pest management, or transition to organic farming.

In Fiscal Year 2011 NRCS provided funding for new and expanded irrigation systems. AMA is available in 16 states where participation in the Federal Crop Insurance Program is historically low.

As a result, \$2,185,000 was obligated through 39 contracts for new and expanded irrigation systems.

Aroostook County Potato Farmers Receive Irrigation Assistance

A Limestone farmer has a new way of watering his potato fields. With the assistance of the NRCS Agricultural Management Assistance (AMA) Program, Brent Edgecomb has had a center pivot irrigation system installed on his potato farm, and has the capability of moving it from field to field as needed. The farm is adjacent to Durepo Pond, so Edgecomb has a great water supply available to him.

Edgecomb was sold on the system through one of his friends in St. Agatha, Keith LaBrie. A few years ago Labrie had a center pivot irrigation system installed on his potato farm with the assistance of the AMA Program, and in 2011 he added a tower to the system, allowing him to irrigate new acres. Through farmer-to-farmer conversations with LaBrie, Edgecomb decided to apply for AMA financial and technical assistance. His system was installed in 2011.



Environmental Quality Incentives Program (EQIP)

The Environmental Quality Incentives Program (EQIP) is a voluntary program that provides assistance to farmers and ranchers who face threats to soil, water, air, and related natural resources on their land. Through EQIP, the NRCS provides assistance to agricultural producers in a manner that will promote agricultural production and environmental quality as compatible goals, optimize environmental benefits, and help farmers and ranchers meet Federal, State, Tribal, and local environmental requirements.

In Fiscal Year 2011, Maine obligated more than \$10.6 million through 750 contracts in EQIP funding. Of this, 572 contracts totaling \$4.8 million was through special initiatives. See pages 7 and 8 for the special initiatives.

NRCS Program Benefits Immigrant Farmers

With the technical and financial assistance of NRCS, and the day-to-day assistance and education from Cultivating Community, 12 Androscoggin County immigrant farmers are learning how to build a successful farm business and market their crops.

In FY 2011 the immigrant farmers signed contracts with NRCS that provided them financial assistance through EQIP for five conservation practices, enabling them to produce sustainable crops while conserving natural resources.

- ◆ Crop rotation to improve soil health and provide crop benefits over the length of the rotation;
- ◆ Cover crops for season protection against soil loss and weed suppression;
- ◆ Mulching for water conservation, weed suppression and nematode management;
- ◆ Integrated pest management to manage weeds, insects and diseases that directly or indirectly cause damage; and,
- ◆ Micro irrigation with pressure regulating emitters producing an irrigation efficiency of 90 percent.



Cultivating Community leases 30 acres to assist them in carrying out their New American Sustainable Agriculture Project. Each of the 12 immigrant farmers are using a portion of the leased land to plant and take care of their vegetable farm.

Cultivating Community also has an EQIP contract through NRCS for the same five conservation practices. They have a desire to improve the soil health of the farmland they are using while managing their crops to produce a more sustainable level of quality and nutrition in their vegetables. The EQIP contracts signed by Cultivating Community and the 12 immigrant farmers totaled \$110,000. In addition to feeding their families, the produce will be provided to local families and sold at farmers markets.

Top 10 practices contracted in Maine under EQIP in Fiscal Year 2011			
Practice	# of Occurrences in Contracts	# of Contracts	Total Obligation
Forest Management Plan	361	361	\$817,015
Cover Crop	197	39	\$139,507
Mulching	130	36	\$169,936
Integrated Pest Management	128	24	\$68,611
Conservation Crop Rotation	127	24	\$137,356
Forest Stand Improvement	110	50	\$205,174
Access Road	106	81	\$577,288
Fence	71	43	\$286,410
Heavy Use Area	68	51	\$997,018
Tree/Shrub Pruning	67	37	\$42,671

EQIP Initiatives

Special initiative efforts through EQIP add new options and more conservation funds for clients and partners.

→ High Tunnel Initiative

Seasonal high tunnels increase the availability of locally-grown produce in a conservation-friendly way. FY 2011 was the second year of a three year pilot project which will determine if high tunnels are effective in reducing pesticide use, keeping vital nutrients in the soil, extending the growing season, increasing yields and providing other benefits to growers.

In FY 2011, Maine obligated \$482,610 through 61 contracts for the establishment of high tunnels.



Two high tunnels built in 2011. The one on the left was in Franklin County and the one on the right was on Penobscot Indian Nation land.

→ Conservation Activity Plans

In FY 2011, funding was available to develop plans for agricultural energy audits at the farm's headquarters or on the landscape, for conservation nutrient management plans, forest management plans, conservation plans supporting organic transition, and fish and wildlife habitat plans.

As a result, nearly \$1.2 million was obligated for 437 plans in FY 2011.

→ **Organic Farming Initiative**

In FY 2011, Maine continued to provide funding specifically to help organic farmers and those agricultural producers transitioning to organic farming. This initiative helps to make organic food producers eligible to compete for EQIP funds.

In FY 2011, \$924,788 was obligated through 48 contracts to organic producers.

→ **Conservation Innovation Grants (CIGs)**

The purpose of CIGs is to stimulate the development and adoption of innovative conservation approaches and technologies while leveraging Federal investment in environmental enhancement and protection, in conjunction with agricultural production. CIG projects are expected to lead to the transfer of conservation technologies, management systems, and innovative approaches into NRCS technical manuals or guides, or to the private sector.

In FY 2011, two proposals were selected for funding by Maine NRCS, totaling \$87,000.

The **Piscataquis County Soil and Water Conservation District (SWCD)** received \$75,000 to carry out a mobile, seasonal high tunnel project. The grant will help in constructing structures which will extend the season for growers while helping to avoid expensive outside inputs. The high tunnel structures that are currently being built require the import of metal support structures while the proposed project will use locally available materials. The SWCD hopes that the end point of this project will see a bonus to local farmers, loggers and wood structure manufacturers while keeping the profits close to home.

David McDaniel of **Earth Dharma Farm in Jackson, Maine**, received \$12,000 to carry out a bio-char project. The project aims to demonstrate and present data for sustainable on-farm bio-char production. Bio-char is thought to be a source of long-term soil nutrients as well as a way to sequester carbon. Project results will provide data regarding the cost-effective production of bio-char, the maximization of carbon sequestration, and the effective use of bio-char to improve soil fertility.

→ **Irrigation Assistance**

Two million dollars was made available in FY 2011 for irrigation assistance through EQIP.

In FY 2011, \$2,203,300 was obligated through 26 contracts.



Landowner in Cumberland County entered into a 2011 EQIP contract on 87 acres to improve water conservation, conserve energy, reduce soil erosion, improve air quality and overall irrigation system efficiency.

Old System: One mile of aluminum portable pipe set up by hand labor each year that supplied water to a 55 percent efficient traveling volume gun.

New System (above): 4,025 feet of new permanent buried Irrigation Water Conveyance high pressure plastic pipeline and three new Center Pivot Sprinkler Irrigation Systems (90 percent efficient, 2,246 feet total pivot length) along with installation of a new EPA Air Quality certified diesel pumping plant.

Results: Water savings of about 8 million gallons each growing season. He is using 60% less diesel fuel as a result of the pumping plan and overall irrigation efficiency improvements.

Farm and Ranchland Protection Program (FRPP)

The Farm and Ranch Land Protection Program (FRPP) provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses. Working through existing programs, USDA partners with State, tribal, or local governments and non-governmental organizations to acquire conservation easements or other interests in land from landowners. USDA provides up to 50 percent of the fair market easement value of the conservation easement.

In Fiscal Year 2011, Maine obligated more than \$2 million of FRPP funding to keep 7 parcels of productive farmland in agricultural use. Estimated Conservation Easement Value totaled \$2,076,630 on 3,362 acres of land.

Agricultural Land in Kents Hill, Conserved

As a result of trying to keep agricultural land in production, there are now new owners of what once was the Kents Hill Orchard in Readfield, Maine. Brian and Lee Ann Baggott of Belle Vue Farm, LLC in Manchester have purchased and will conserve 92 acres of prime agricultural land for farming.

In 2010, the prior owners sold their orchard to the Maine Farmland Trust under the condition that it be resold to a new farmer who would keep the lands in production under an agricultural conservation easement. A preservation model of “Buy/Protect/Sell” was used in which the Trust acted as a holding company: it purchased the land, kept it out of development, then solicited bids from those in the agricultural community who would be required to keep the property as working farmland.

Baggott said the orchard will become a vegetable farm where he will grow zucchini, squash and cucumbers, replacing the 100-year old dead and dying apple trees. Eventually about 60 acres of the property will be planted with crops.

Through the NRCS Farm and Ranch Lands Protection Program, \$50,000 was funded towards the preservation of this farmland.



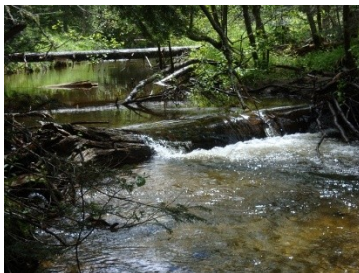
Photo courtesy of Maine State Planning Office

Wildlife Habitat Incentives Program (WHIP)

The Wildlife Habitat Incentives Program is a voluntary conservation program that provides technical and financial assistance to landowners for developing, improving or managing wildlife habitat or for restoring natural ecosystems on eligible land. Landowners agree to prepare and implement a wildlife habitat conservation plan. NRCS provides technical and financial assistance to implement the wildlife habitat restoration practices.

In Fiscal Year 2011, Maine obligated \$2,452,700 through 108 contracts in WHIP funding. Of this, 84 contracts totaling more than \$2.2 million was through the New England/New York Forestry Initiative.

Before →



Timber bridge built on Penobscot Indian Nation land through the New England/New York Forestry Initiative.



After →

Pullen Mill Fish Passage Completed

Problem: Pullen Mill, located in the Sheepscot River Watershed in Kennebec County, had an old mill foundation that was an obstruction to fish migration. When the mill was constructed rocks and boulders were brought in to create an impoundment for the water-powered mill and to direct water flow over a section of ledge. When the mill impoundment blew out from natural causes it created a large area of rock debris that impeded fish passage.



(Above) Before – This was the site before construction. The stream is not visible from this area.

Solution: Using all low-impact methods, debris was removed in the area and created a new area for fish to pass outside of the existing stream channel. The work involved using hand tools to remove several large rocks and trees along the side of the stream. A larger amount of smaller debris was removed and placed further away from the stream. Once the ledge was exposed outside of the stream channel a concrete saw and hand tools were used to create pools and weirs within the ledge.

(Below) After – This is a shot taken from the same location as before. As you can see, fish now have a viable route for migration.



Partnerships Involved: NRCS, Sheepscot River Watershed Council, Army Corp of Engineers, Maine IF&W, Maine DEP, US Fish & Wildlife Service, and NOAA. Partial funding for this project was through the NRCS Wildlife Habitat Incentives Program.

Wetlands Reserve Program (WRP)

The Wetlands Reserve Program is a voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. NRCS provides technical and financial support to help landowners with their wetland restoration efforts. The NRCS goal is to achieve the greatest wetland functions and values, along with optimum wildlife habitat, on every acre enrolled in the program. This program offers landowners an opportunity to establish long-term conservation and wildlife practices and protection.

The Wetlands Reserve Program has been around since the mid 1990's. Over the past 15 years it has become a cost-effective and ecologically successful voluntary wetlands restoration program. FY 2011 was the second year of a renewed push on the other benefits of the WRP program. It is an opportunity for many landowners, particularly farmers, who may have land that is poorly drained and difficult to cultivate, landowners who are looking to cut back on farming but don't want to sell the land, or those landowners interested in establishing and protecting prime wildlife habitat.

In Fiscal Year 2011, Maine NRCS received one new easement request for enrollment totaling \$428,225.

Soil Survey Program

Soil surveys provide an orderly, on-the-ground, scientific inventory of soil resources that includes maps showing the locations and extent of soils, data about the physical and chemical properties of those soils, and information derived from that data about potentialities and problems of use on each kind of soil in sufficient detail to meet all reasonable needs for farmers, agricultural technicians, community planners, engineers, and scientists in planning and transferring the findings of research and experience to specific land areas. Soil surveys provide the basic information needed to manage soil sustainably. They also provide information needed to protect water quality, wetlands, and wildlife habitat.

- **Completion of the Initial Soil Survey**

Field work for the initial soil survey was completed in November 2010, meeting the nationally issued time mandate. All areas have been digitized, selected lab analysis completed, and National Soil Information System data input for soil interpretations is nearing completion. As of September 2011, the spatial and tabular soils data were submitted and were SSURGO approved. All assurance specifications were met or exceeded.



- **Southern Penobscot Soil Survey**

The Penobscot County Soil Survey field work was completed in the late 1950's, more than 25 years before the development and publication of Soil Taxonomy. Southern Penobscot County, with its intensive land uses, was broken out as a separate survey project for extensive update in the early 1990's to address the need for refined soil interpretations. Soil mapping and field documentation is currently the primary focus of the Dover-Foxcroft Soil Survey Office staff. To date, about 500,000 acres of a total land base of 768,000 acres have been updated. All updated soil survey information is digitized and available to users as interim information.

- **Caribou Catena Soil Survey Project**

Work began this year with sampling a number of profiles of the Caribou catena soils in Aroostook County. Soil Scientists worked with a number of potato farmers to excavate about two dozen pits. The data will be used to recorrelate these very old series concepts into a more modern framework, with more trace element and other important data, and to unify with improvements in special soil survey data for users.



- **Rapid Carbon Assessment**

The national Rapid Carbon Assessment project was initiated in October of 2010 to assess current organic carbon levels in a broad range of soils under different management practices. In addition to providing an inventory of current soil carbon levels, or "soil health", the data will help to evaluate the effects of conservation practices encouraged by NRCS and Soil and Water Conservation Districts. All field work and sample shipments assigned to Maine were completed in FY 2011.



- **Technical Soil Services**

- ⇒ Maine Resource Soil Scientists provided soils investigation information for about 300 inquiries.
- ⇒ Resource Soil Scientists provided technical soil services to about 40% women and minorities, with particular outreach to Tribal and Somali communities.
- ⇒ A number of NEPA and FSA wetland identification and delineations situations were investigated and completed. The technical soil services staff consulted with field office staff and their producer/cooperators to informally avoid wetland impacts and to plan for mitigation where impacts are unavoidable.

Additional Before and After Visuals from FY 2011

