NRCS soil conservationist reviews conservation plan with poultry operator Frank Robinson (right) in front of his chicken composter.

Delaware

Frank Robinson and his two sons are the proud owners of a 89-acre poultry operation in Kent County, Delaware. NRCS staff introduced Mr. Robinson to the Environmental Quality Incentives Program (EQIP) to help him identify potential natural resource concerns on his land before the pollutants reached nearby Marshyhope Creek, a tributary to the Chesapeake Bay.

NRCS staff and Mr. Robinson developed a comprehensive nutrient management plan to address his resource concerns and meet his poultry operation goals. EQIP provided technical and financial assistance to properly install structural conservation practices. His manure storage facility stores the chicken manure until it can be properly land applied at the right time for maximum crop uptake, thus reducing excess nutrients. Mr. Robinson's composter and pads also address similar concerns. The impervious concrete pads significantly reduce the potential for excess nutrients to seep into the surface or groundwater. The composter allows for proper disposal of deceased birds.

NRCS is also working with Delmarva Poultry Industry (DPI) to install vegetative buffers on his operation. Once planted, these trees will stabilize the land—helping to reduce soil erosion, screen out noise and dust, provide habitat for wildlife and improve the landscape.

Restored wetland wildlife habitat on the Rackmyer WRP project.

New York

Nancy Rackmyer is a landowner in Otsego County, New York. In 2003, she contacted NRCS about enrolling a small acreage of pasture into the Wetlands Reserve Program (WRP). She was using the pasture as a grazing area for her horses. A portion of this pasture area had hydric soils, was often wet, and its run-off water flowed into Pleasant Brook, which was located only 650 feet from the pasture.

In 2005, NRCS funded Mrs. Rackmyer's WRP application for a 7.12 acre permanent wetland easement. Restoration began in 2008 and was completed in 2009. To restore the wetland, a low embankment with a water control structure was built with a number of potholes to create shallow water habitat and attract migratory waterfowl. Water quality has improved by the filtering properties of the wetland vegetation, and by moving the horses to a new area. Mrs. Rackmyer is delighted to see ducks, geese, blue herons and other wildlife frequenting the newly restored wetland area!

NRCS Natural Resources Conservation Service

NRCS 2009 Conservation Activities in the Chesapeake Bay

We're on the Web!
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Helping People Help the Land

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Did You Know?

- In 2009, the USDA Natural Resources Conservation Service (NRCS) provided $2.1 million in Conservation Innovation Grants for public and private partnerships to stimulate cutting edge technologies.
- The Bay supports 3,600 species of plant and animal life, including more than 300 fish species and 2,700 plant types.

Conserving Natural Resources in the Chesapeake Bay

NRCS 2009 Conservation Activities

Initiatives in the Bay

Inspired by a shared passion for conservation, the USDA Natural Resources Conservation Service (NRCS) works with farmers, communities and other individuals and groups to protect natural resources on private lands. For 75 years, NRCS has been working with landowners in the Chesapeake Bay Watershed to identify natural resource concerns and develop conservation plans for restoring and protecting these resources.

The 2008 Farm Bill featured the Chesapeake Bay Watershed Initiative (CBWI) in which an unprecedented $23 million was released in 2009 to provide the region's farmers with assistance to implement agricultural conservation practices. In total, the 2008 Farm Bill will provide $188 million from 2009-2012 to support restoration of the Chesapeake Bay and its watershed. This financial contribution represents one of the largest single federal investments in the clean-up effort.

As a result of NRCS assistance, landowners have applied agricultural conservation practices such as nutrient management, cover crops, crop residue management and vegetative buffers to improve water quality, preserve and enhance natural resources, and reduce the pollutants flowing into the streams, creeks and rivers that feed the Chesapeake Bay.

Agriculture remains a key part of the solution to Bay restoration, and the CBWI will provide vital funding to increase the use of necessary conservation practices.

Fiscal Year 2009 Chesapeake Bay Funding—NRCS Financial and Technical Assistance

	Environmental Quality Incentives Program (EQIP)	Wildlife Habitat Incentive Program (WHIP)	Agricultural Management Assistance (AMA)	Chesapeake Bay Watershed Initiative (CBWI)	Farm and Ranch Lands Protection Program (FRPP)	Wetlands Reserve Program (WRP)	Conservation Reserve Program (CRP)**	Conservation Technical Assistance (CTA)
Delaware	$ 4,009,840	$ 29,565	$ 121,864	$ 1,255,220	$ 1,990,829	$ 496,148	$ 17,017	$ 564,310
Maryland*	$ 8,232,533	$ 370,441	$ 361,605	$ 4,960,927	$ 4,399,953	$ 5,197,917	$ 582,064	$ 4,158,815
New York	$ 2,380,033	$ 348,353	$ 0	$ 1,251,752	$ 0	$ 315,310	$ 45,106	$ 1,194,907
Pennsylvania	$ 9,473,829	$ 343,775	$ 606,458	$ 6,740,130	$ 4,533,301	$ 1,766,496	$ 1,007,423	$ 5,169,200
Virginia	$ 4,596,453	$ 357,735	$ 0	$ 6,214,544	$ 1,787,903	$ 447,224	$ 529,308	$ 4,737,999
West Virginia	$ 1,854,219	$ 445,354	$ 373,085	$ 1,419,044	$ 1,042,054	$ 43,979	$ 35,284	$ 910,070
Totals	$ 30,546,907	$ 1,895,223	$ 1,463,012	$ 21,841,617	$ 13,754,040	$ 8,267,074	$ 2,216,202	$ 16,735,301

**Note: Maryland numbers include figures for Washington, D.C. **CRP numbers are Technical Assistance only*

Irrigation water management

Highlighted Conservation Practices Applied in 2009 in the Chesapeake Bay Watershed

Riparian buffers	3,395 acres	Upland wildlife habitat	33,438 acres
Prescribed grazing systems	23,492 acres	Residue management	100,181 acres
Irrigation water management	9,258 acres	Access control	12,534 acres
Nutrient management systems	154,228 acres	Contour farming	7,825 acres
Waste storage/manure composting facilities	186 facilities	Cover crop	65,215 acres
Wetlands created, restored or enhanced	2,036 acres	Pest management	77,924 acres
Streambank, shoreline stabilization	228,172 feet	Waste utilization	17,792 acres

Shallow water areas for wildlife were created using WHIP. These areas provide feeding, nesting, and over-wintering habitat for ducks, geese, and other wildlife.

Maryland

Harleigh Farms' owners, John and Sally Akridge, manage 1,400 acres on Maryland's Eastern Shore and have worked with NRCS and partners for the past 15 years to restore wetlands and wildlife habitat. Roughly one quarter of the farm is planted in corn, wheat, and soybeans and the balance is dedicated to wildlife habitat and watershed protection.

They participate in the following USDA programs: the Wildlife Habitat Incentive Program (WHIP) to install 16 acres of shallow water areas; the Environmental Quality Incentives Program (EQIP) to clear and reposition brush to create wildlife cover; and the former Conservation Security Program (CSP) by practicing no-till farming and planting cover crops. Water quality is benefited by absorbing excess nitrogen and reducing sediment loss, planting native plant species in areas adjacent to crop fields, and controlling noxious and invasive plants through mechanical and chemical means. These undisturbed areas and food plots provide tremendous benefits for wildlife such as deer, quail, fox, rabbits, upland birds, and waterfowl.

Restoration of shallow water areas, establishment of forested and grass buffers, and enhancement of wildlife habitat provide a pleasing aesthetic view of the farm. Its open fields are managed for a natural landscape and the preservation of habitat for the Northern Bobwhite Quail and the American Woodcock, both classified as species of concern in Maryland. These conservation practices provide Harleigh Farms with great opportunities for hunting and recreation, as well as enhancing the overall water quality and wildlife values in the Chesapeake Bay region.

Christie Vilsack, wife of USDA Secretary Tom Vilsack, helped the students to plant native species that will decrease erosion and stormwater runoff.

District of Columbia

Using agricultural conservation practices on an inner city school yard, NRCS assisted the Brent Elementary School in planting a rain garden along the edges of its playground at the Capitol Hill area school. Rain gardens absorb, reduce, and filter the amount of storm water running off a paved surface before entering the city's waste water system. Up to 70 percent of pollution in waterways is non-point source pollution, such as urban runoff. The rain garden, which also serves as a living, outdoor classroom, was installed through a partnership among NRCS, the District of Columbia's Department of the Environment and Brent Elementary School.

Fencing project keeps livestock out of streams, reducing sediment and nutrients.

Virginia

Bob and Susan Threewitts operate a 90-acre beef cow/calf operation in Keezletown, Virginia. Cub Run, one of three streams that cross the property, is impaired due to sediment, bacteria, and nutrients. The Threewittses sought technical and financial assistance from NRCS and other partners to restrict livestock access and improve water quality on their farm.

A 35-foot buffer would have taken about a fifth (18 acres) of the pasture needed for their 60 cows with calves. Using a pilot project of an average 10-foot setback, the owners worked with the Shenandoah Valley Soil and Water Conservation District to build over two miles of fence along the streams. NRCS provided assistance on a gravity flow watering system including seven troughs and three culvert stream crossings. Next, the Spotswood High School ecology class and local 4-H volunteers planted trees on two acres along Cub Run with technical help from the Virginia Department of Forestry. Funds for the fencing, livestock crossings and watering system came through the Resource Conservation & Development program from a Chesapeake Bay Funders Network grant. The tree planting project was funded by Cargill and a fundraiser hosted by Turner Ashby High School Future Farmers of America.

These practices will reduce nutrients and bacteria in the stream and save up to 120 tons of soil annually.

Heavy Use Area with the new installation of an animal walkway.

Pennsylvania

Stover Farms is a large 200-head dairy operation located in Cumberland County, Pennsylvania. The Stovers applied for EQIP funding to address livestock operation resource concerns, such as fumes from a waste storage, silage leachate from the silage bunker area, and a heavy use area without vegetation.

NRCS assisted in the survey and design of the layout for the installation of a new waste storage system and collection alley for waste from the free stall barn. Through EQIP, NRCS provided assistance to collect and transfer the silage leachate, which would be stored in the new waste storage facility. A stabilized animal walkway from the heifer barn to pasture paddocks was installed. The existing heavy use area was then planted in pasture and hayland seeding mixture, thereby eliminating nutrient resource concerns.

The leachate collection area prevents nutrients and runoff from entering nearby water sources. The improved heavy use area now controls erosion and prevents sediment from leaving the area and potentially contaminating ground and surface waters.

Fence keeps cattle out of the stream while trees create a buffer and riparian wildlife habitat.

West Virginia

Hardy County agricultural operator Joe Mathias received technical and financial assistance through NRCS to address overwintering of his livestock on his diverse agricultural operation. Previously, he fed his stocker calves near a tributary of the South Branch of the Potomac River.

Using the Environmental Quality Incentives Program (EQIP), a feeding facility was constructed to reduce surface and groundwater pollution from excess nutrients caused by heavy sediment and manure loadings. A well was drilled to supply water to a trough inside of the structure. The facility includes a waste storage structure designed to store 300 tons of manure until it can be properly applied to fields in the spring, following the Comprehensive Nutrient Management Plan he developed with assistance from NRCS. The tributary was fenced to keep livestock out and trees were planted to create a buffer and riparian wildlife habitat.

Mr. Mathias now has an easily-accessible, stabilized area to feed his cattle during the harsh winter months. Increased management of animal wastes and establishment of riparian buffers improve water resources in the county and ultimately, the Chesapeake Bay Watershed.