



Vermont NRCS State Conservationist
Vicky Drew

Conservation Programs in Vermont

During 2015, a total of \$12,448,323 was obligated through 437 contracts/easements to help protect and improve natural resources on private lands on Vermont.

Agricultural Management Assistance (AMA) provides financial and technical 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.

Dollars Obligated: \$105,976

Contracts: 4

The Conservation Stewardship Program helps agricultural producers maintain and improve their existing conservation systems and adopt additional conservation activities to address priority resources concerns. Participants earn CSP payments for conservation performance - the higher the performance, the higher the payment. Through CSP, participants take additional steps to improve resource condition including soil quality, water quality, water quantity, air quality, and habitat quality, as well as energy.

Dollars Obligated: \$37,845

Contracts: 4

The Environmental Quality Incentives Program (EQIP) is a voluntary program that provides financial and technical assistance to agricultural producers to plan and implement conservation practices that improve soil, water, plant, animal, air and related natural resources on agricultural land and non-industrial private forestland. EQIP may also help producers meet Federal, State, Tribal, and local environmental regulations.

Dollars Obligated: \$8,662,048

Contracts: 386

RCPP EQIP Dollars: \$79,219

RCPP EQIP Contracts: 20

The Agricultural Conservation Easement Program (ACEP) provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits. Under the Agricultural Land Easements component, NRCS helps American Indian tribes, state and local governments and non-governmental organizations protect working agricultural lands and limit non-agricultural uses of the land. There are two types of ACEP easements—

Agricultural Land Easements (ALE)

NRCS provides financial assistance to eligible partners for purchasing Agricultural Land Easements that protect the agricultural use and conservation values of eligible land.

Dollars Obligated: \$2,260,000

Easements: 16

RCPP ALE Dollars: \$874,500

RCPP ALE Easements: 6

Wetland Reserve Easements (WRE)

NRCS also provides technical and financial assistance directly to private landowners and Indian tribes to restore, protect, and enhance wetlands through the purchase of a wetland reserve easement.

Dollars Obligated: \$428,735

Number of Easements: 1

In 2015, Vermont NRCS improved and protected nearly 27,000 acres by helping private landowners implement conservation practices.

Vermont NRCS -Selected Practices Implemented 2015		
Practice Name	units	Amount Implemented 2015
Cover Crop	acres	15,371
Forage and Biomass Planting	acres	1,238
Residue and Tillage Management-No Till	acres	2,366
Residue and Tillage Management-Reduced Till	acres	2,652
Nutrient Management	acres	5,622
High Tunnel System (orig. practice was 798, Seasonal High Tunnel System)	sq ft	12,954
Prescribed Grazing	acres	938
Watering Facility	each	58
Livestock Pipeline	feet	26,945
Trails and Walkways	feet	2,377
Waste Storage Facility	each	19
Heavy Use Area Protection	acres	7
Roofs and Covers	each	4
Waste Transfer	each	30
Forest Stand Improvement	acres	114
Early Successional Habitat Management	acres	692
Brush Management	acres	614
Forest Trails and Landings	feet	12,844

EQIP Funds 2015	Amount Obligated in 2015	Contracts Entered into in 2015
Lake Champlain Targeted Funding pools	\$6,045,538.00	134
Non-Champlain Specific	\$2,374,982.00	249
Conservation Innovation Grants	\$241,528.00	4
RCPP Contracts	\$79,219.00	20
AMA Contracts	\$105,976.00	4
Conservation Stewardship Program	\$37,845.00	4
	\$8,885,088	415
EQIP Funds 2016	Amount Pending 2016	Estimated Contracts in 2016
Lake Champlain Targeted Funding pools	\$7,897,873.00	134
Non-Champlain Specific	\$2,616,510.00	249
Conservation Innovation Grants	\$415,000.00	4
RCPP Contracts	\$908,177.00	20
AMA Contracts	\$115,327.00	4
Conservation Stewardship Program	Pending	-
	\$11,952,887	411

We are...
Inspired by a shared passion for conservation. Vermont NRCS collaborates with farmers, private landowners, communities, and state and local conservation partners to protect and improve natural resources on private lands.

Vermont NRCS ...

62 NRCS Employees

10 Field Offices

14 Natural Resource Conservation Districts

488,327 Acres of cropland

\$7.1 million value of partner agreements in 2015

\$19.1 million budget in 2015





Subscribe to Vermont NRCS *GovDelivery* news updates:
<http://bit.ly/VTNRCSNews>

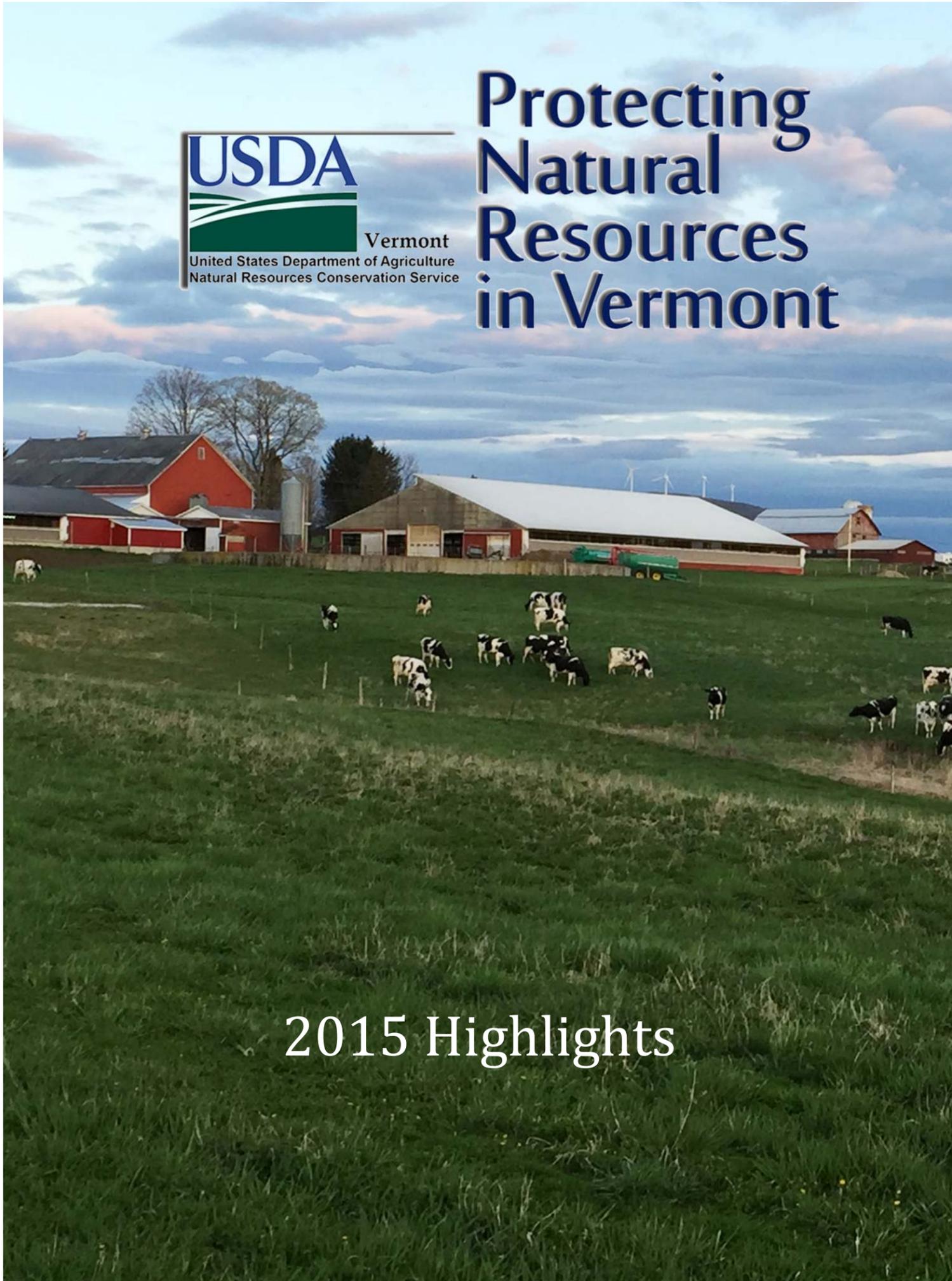
and follow us on Twitter @VermontNRCS

www.vt.nrcs.usda.gov

www.vt.nrcs.usda.gov

USDA NRCS is an equal opportunity employer, provider, and lender.

Cover shot by Vicky Drew. Georgia, Vermont.



Protecting Natural Resources in Vermont

2015 Highlights

Focus on Lake Champlain

In 2015-2016, Vermont NRCS has worked with partners to dedicate financial and technical resources to 4 priority watersheds in the Lake Champlain Basin.

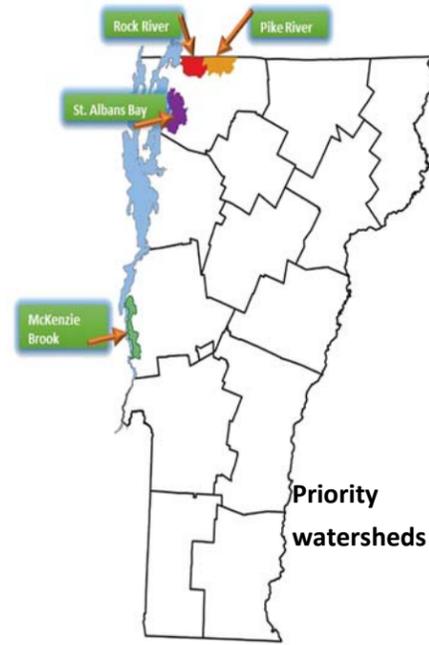
Pike River, Rock River, St. Albans Bay in Franklin County and McKenzie Brook in Addison County.

This strategic planning approach is an effort to assist farmers in meeting the phosphorus TMDL (Total Maximum Daily Load) for Lake Champlain.

NRCS identified these watersheds as impaired. They contribute heavy concentrations of agricultural phosphorus runoff to the lake, and are considered watersheds with significant public interest.

Vermont Agricultural Water Quality Partnership

- ◆ United States Department of Agriculture, Natural Resources Conservation Service (NRCS)
- ◆ Vermont Association of Conservation Districts (VACD)
- ◆ Vermont Agency of Agriculture, Food and Markets (VAAFAM)
- ◆ United States Fish & Wildlife Service (USFWS)
- ◆ University of Vermont Cooperative Extension (UVM Extension)
- ◆ United States Department of Agriculture, Farm Service Agency (FSA)
- ◆ Vermont Agency of Natural Resources, Department of Environmental Conservation (VANR-DEC)
- ◆ Lake Champlain Basin Program (LCBP)
- ◆ Vermont Housing and Conservation Board (VHCB)



Vermont NRCS, with support from our state and local conservation partners, is committed to working with farmers in the 4 priority watersheds for the next five years to help them plan and implement conservation practices which will assist in meeting the required Environmental Protection Agency (EPA) TMDL goals.

St. Albans Bay Watershed Plan

Long term ag. phosphorus reduction goal=35%

The five-year NRCS priority watershed project aims to reduce phosphorus load by 7,000 pounds per year, which is 87% of the EPA's long term goal.

Rock River Watershed Plan

Long term ag. phosphorus reduction goal=83%

The five-year NRCS priority watershed project aims to reduce phosphorus load by 7,000 pounds per year, which is 40% of the EPA's long term goal.

Pike River Watershed Plan

Long term ag. phosphorus reduction goal=83% reduction

The five-year NRCS priority watershed project aims to reduce phosphorus load by 7,967 pounds per year, which is 65% of the EPA's long term goal.

McKenzie Brook Watershed Plan

Long term ag. phosphorus reduction=60% reduction

The five-year NRCS priority watershed project aims to reduce phosphorus load by 25,966 pounds per year, which is 50% of the EPA's long term goal.

Conservation Partnership In Action in Vermont

The Regional Conservation Partnership Program (RCPP) promotes coordination between NRCS and its partners to deliver conservation assistance to producers and landowners. NRCS provides assistance to producers through partnership agreements and through program contracts or easement agreements.

State RCPP Projects

The Memphremagog Long-term Water Quality Partnership (\$674,000), led by the Orleans County Natural Resources Conservation District, target sub-watersheds where water quality sampling indicates significant contributions of phosphorus loading from agricultural lands to the phosphorus-impaired Lake Memphremagog and a nutrient-impaired stream within the Tomifobia River watershed. Partners will plan and implement key conservation practices on agricultural land to improve water quality.

The Nutrient Management Planning Training Program for Farmers and Conservation Practice Implementation Follow-up (\$800,000), is led by the Vermont Association of Conservation Districts in partnership with the fourteen Natural Resource Conservation Districts, University of Vermont Extension and VT NRCS. The project will assist small farm operators in the development of nutrient management plans in an effort to improve water quality by reducing phosphorus and other nutrient loading from small livestock farm operations in the Lake Champlain Basin and beyond.

National RCPP projects that include Vermont

Young Forest Initiative for At-Risk Species (\$5.2 million), led by the Wildlife Management Institute, will help increase technical and financial assistance to non-industrial private forestland owners who implement practices outlined in the Environmental Quality Incentives Program. The goal is to increase the quantity and quality of young forest habitats. This support is critical, since young forest habitat is necessary to meet the critical needs of several recognized at-risk species.

Accelerated Implementation of Agricultural and Forestry Conservation Practices in the Lake Champlain Watershed of Vermont and New York (\$16 million) is led by the Vermont Agency of Natural Resources-Dept. of Environmental Conservation. The project will provide financial and technical assistance to agricultural and forest landowners over the next five years, to help with development and implementation of site-specific farm and forest projects that will directly improve water quality in streams and rivers that flow towards Lake Champlain.

Long Island Sound Watershed-Development of whole-farm management certainty program (\$10 million), led by the Connecticut Council on Soil and Water Conservation will address excess nutrients that have been identified as the primary cause of hypoxic conditions in Long Island Sound. The project will develop a comprehensive, whole-farm management certainty program for farmers in the area and will utilize both working lands and easement programs to improve soil health and nutrient management, establish community resiliency areas with a focus on enhancing riparian areas, and institute a land protection program to protect agricultural and forestry areas.



Protecting and Restoring Wetlands in Vermont's Otter Creek Watershed

There's a special place in Vermont where the Otter Creek meanders through pastures and grasslands and a diversity of wildlife thrives. The Otter Creek Watershed flows to Lake Champlain and is home to many wetlands which were restored thanks to the stewardship of private landowners. These vulnerable wetlands, once altered by farm ditches, are now safeguarded by permanent easements that ensure the protection of these critical ecosystems.

The participating landowners partnered with the USDA-Natural Resources Conservation Service (NRCS) to enroll wetland acreage into the Agricultural Conservation Easement Program (ACEP). The Wetlands Reserve Easement (WRE) component of ACEP offers financial and technical assistance to landowners who want to voluntarily restore and protect wetlands.

When Jim and Lyn Des Marais bought a 1,250 farm in Brandon, Vermont in 2013, they had never heard of NRCS or ACEP. But, NRCS Soil Conservation Technician Sally Eugair helped change that. Soon after they arrived in Vermont, she visited them to let them know about NRCS' wetland easement program. Her hope was that they would be willing to enroll the nearly 500 acres of wetland acreage on their farm into ACEP. She admits that her initial visit with Jim and Lyn was one of her easiest sales pitches. "They are lifelong nature enthusiasts and firm believers in environmental stewardship," she said. The Des Marais property is farmed by a local producer as a certified organic hay operation.

Sally's outreach efforts have helped lead to a total of 23 wetland easements in Rutland County. That totals 2,148 of restored and permanently protected wetland acreage along Otter Creek. With the closing of the Des Marais wetland easement, Vermont will secure its first ACEP Wetlands Reserve Easement, and the state's largest protected wetland easement. Over 250 acres of the wetland will be restored back to original hydrologic conditions.

The Des Marais wetland easement is part of a cluster of easements that continues to grow along Vermont's Route 73. Jim Eikenberry is Vermont NRCS' Wetland Specialist. "With the addition of this large easement, and another easement downstream which will soon be secured, over seven miles of wetlands and riparian areas along the Otter Creek will be conserved," he says. He also explained that the restoration has a positive impact on water quality. "Restoring the wetlands here will also improve the floodwater, sediment and nutrient retention values of these wetlands and will benefit Lake Champlain's water quality goals."

Lyn Des Marais grew up on a dairy farm in New Braintree, Massachusetts. She says, "My mom made me an environmentalist and my grandfather made me a farmer." Sally helped them realize just how remarkable the property was and how they could return the wetlands back to their original ecological functions. "I knew we had a very special place here," says Lyn. The Des Marais property was once farmed and the area was ditched to control water flow.



The restoration plan will plug the ditches so that water can flow naturally again throughout the wetland. In addition, small depressions will be added to provide improved habitat for migratory waterfowl, shorebirds, and amphibians. **The Des Marais' are living their dream in Brandon, Vermont.** The view from their kitchen window, which frames the wetland, clearly illustrates why they love living here. "We feel incredibly fortunate to own this beautiful and historic property, and our goal is to preserve and protect it," explains Jim. He says he doesn't know if their children will one day choose to live here, but his wish is that, "the future owners will treasure this property as much as we do."



Vermont Dairy Farm Protects Natural Resources and Ensures Animal Health with Bedded Pack System

By Amy Overstreet, USDA NRCS, Colchester, Vermont



The Hullet family own and operate Deer Flats Farm, in Pawlet, Vermont. Dick and his son Richard co-manage the operations of the 1,000-acre cattle operation which includes crop and woodland. Richard and Mandy married in 2002 and have a daughter and son (ages thirteen and eleven) who are homeschooled by Mandy. Mandy provides management assistance on the farm as well. The family has worked with the USDA Natural Resources Conservation Service (NRCS) to implement a bedded pack system for 145 animal units. "These barn systems provide manure storage and animal comfort and health," explained Sally Eugair, an NRCS Soil Conservation Technician.

She has worked with the family since 1998 to protect and improve natural resources on their farm through a conservation plan and financial assistance through the Environmental Quality Incentives Program (EQIP).

Richard grew up on the farm which his parents, Dick and Jennifer, purchased in 1960. His wife Mandy majored in animal science at Cornell University, so her educational background has helped the family achieve an outstanding level of stewardship and herd health. As a result of their exemplary efforts, Deer Flats has been named a *Vermont Dairy of Distinction Farm* for several years. They are also members of the Dairy Farmers of America Gold Standard Dairy Program which sets industry-wide guidelines for animal care and wellness best practices.

Prior to the bedded pack, the cattle were on pasture. "It was a mess," explained Richard. They were concerned that water quality in the nearby river would be negatively impacted. The farm is located in the Poultney Mettowee Watershed of Vermont. The Mettowee River has a length of 17 miles within Vermont and a drainage area of 137 square miles. The Hullett's commitment to conservation prompted them to invest their own money and time, aided by Farm Bill financial assistance, to improve their operation and ensure sustainability, as well as the health of their herd.

Bedded pack can help improve the herd and the farm. Bedded pack barns are covered by a roof and filled with bedding material. The Hullett barn is filled with dried wood chips which helps reduce moisture. Bedding costs are much higher for a bedded pack than for any other housing, but can improve herd health. They are comfortable places for herds to spend the winter months, provide excellent storage for manure, and after composting the pack, provide an outstanding nutrient source for pasture. Mandy explained that they till the wood chips daily to keep it healthy and aerated. This makes great compost to fertilize pastures and hayfields, and using composted bedding from a pack system can provide healthy organic matter and biological activity that may improve soil quality and resiliency to drought and pest damage.

The addition of an alleyway in the Hullett barn provides a clean place for the animals to eat and drink. This is an element they added to the barn without EQIP financial assistance. At the advice of a representative at Cornell University, Mandy explained that they "separated the pack from the feed space to keep the cows cleaner and allow us to clean the facility in a way that makes sense." Evidence suggests that herds on bedded pack have lower incidences of mastitis and other health issues, and the system may require less labor and fuel inputs than a conventional housing and manure storage system. Their EQIP contract helped provide financial assistance to install just over 14,000 square feet of roof on the barn and install heavy use area protection which provides a stable, non-eroding surface and helps protect water quality by reducing runoff.

