



# New Hampshire Association of Conservation Districts

[www.nhacd.net](http://www.nhacd.net)

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## About the NHACD

In response to the Dust Bowl of the 1930s, over three thousand Soil and Water Conservation Districts were formed across the United States. New Hampshire's ten county-based Conservation Districts formed the New Hampshire Association of Conservation Districts (NHACD) in 1946 to provide statewide coordination, representation, and leadership for its members and to conserve, protect, and promote responsible use of New Hampshire's natural resources.

Each District is led by a resident Board of Supervisors familiar with the conservation needs and priorities of local land users. NHACD works collaboratively with county districts, federal, state, and local agencies, nonprofits, and other conservationists as a volunteer, tax-exempt, nonprofit organization to:

- Provides a medium through which Districts meet, exchange ideas, work cooperatively on common challenges and objectives, and reach consensus on courses of action.
- Develops resolutions outlining its position and presents them at local and national meetings.
- Cooperates with the State Conservation Committee in coordinating its activities among Districts.
- Promotes an understanding and acceptance of soil and water conservation in elementary, secondary, and post-secondary school curricula.
- Informs state and federal legislators of the objectives and needs of Conservation Districts and necessary legislation.
- Assists Districts in developing guidelines for assistance and priorities to the many and diverse cooperators and others requesting support.
- Works through sub-committees to study conservation challenges and provides support to Districts who implement solutions.
- Promotes and conducts the annual Envirothon for New Hampshire high-school students.
- Monitors and advocates legislation that supports conservation principles.
- Designs and conducts practical education workshops on topics such as flood mitigation and nonpoint source pollution prevention.
- Identifies and designs grant programs to support District initiatives.
- Hosts semi-annual meetings to provide a forum for Districts and facilitate collaboration among other conservation groups.
- Actively represents the New Hampshire at the national level through participation in the National Association of Conservation Districts meetings and initiatives.
- Conducts the annual Soil Judging competition.
- Implements strategic objectives through collaborative projects and capacity-building.

## Member Districts:

**Belknap County**  
**Carroll County**  
**Cheshire County**  
**Coos County**  
**Grafton County**  
**Hillsborough County**  
**Merrimack County**  
**Rockingham County**  
**Strafford County**  
**Sullivan County**



## Belknap County Conservation District

[www.belknapccd.org](http://www.belknapccd.org)



### Seasonal High Tunnel and Pollinator Habitat to Support Local Food Production at the Belknap County Complex

In 2015, urged by the Belknap County Commissioners to generate projects that directly serve Belknap County programs and holdings, the Belknap County Conservation District (BCCD) borrowed an idea from the Carroll County Conservation District and supplied their county complex with a seasonal high tunnel. In 2016 and beyond this seasonal high tunnel will augment two existing, larger fields being utilized by the County Jail's gardening program to provide fresh produce to the jail, nursing home, inmate run farm stand, and donations to a local food pantry. The addition of the BCCD sponsored and managed pollinator habitat will help increase food production yields and provide a much needed area offering food and shelter in this highly mowed and managed site. BCCD purchased and erected the tunnel using non-government funding,



*Area outside of tunnel set aside for pollinator and perennial plantings.*

inmate labor, and a paid consultant to provide construction oversight. The addition of the tunnel has excited the interest of the Belknap County UNH Cooperative Extension who will be taking on an increased role in guiding planting and management decisions for the jail's gardening program and farm stand.



*The metal hoop frame was installed first, and the end walls were reinforced with wooden framing.*

It has been agreed upon by the Corrections Department and BCCD that should the Corrections Department wish to discontinue use of the high tunnel it be made available for a local non-profit group like the Master Gardeners or a grass-roots effort like the Lakes Region Food Network to utilize in support of their programming. In the event that there is no longer interest to continue use of the tunnel at the Belknap County Complex, ownership reverts back to BCCD.

Other local foods projects involving BCCD are: administration and staffing of NH Gleans-Belknap County, promotion of Grow-A-Row, and membership in the Lakes Region Food Network. All these programs promote reduction of food waste, increased production and utilization of locally grown foods, and public awareness of issues influencing our food system.



*Tunnel was completed in late November 2015 and is set up for early spring planting in 2016. Water is piped underground to a faucet located just outside the high tunnel doors.*

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## Carroll County Conservation District

[www.carrollccd.org](http://www.carrollccd.org)



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### Josiah Bartlett Elementary School Demonstration Project: Japanese Knot-weed Eradication

Flowing adjacent to our school boundary is a stream, Town Brook, whose bank was completely covered by the invasive plant species, Japanese Knotweed (*Fallopia japonica*). The plant was spreading downstream and out competing native species. As a community service project, our school took measures to eradicate the species from this area and made plans to transplant native plants to the stream bank during next spring. We worked with representatives from the Natural Resource Conservation Service and the Carroll County Conservation District (CCCD) to ensure appropriate conservation methods were administered.

The land belongs to the Conway Scenic Railroad, which is supervised by the NH Department of Transportation: Bureau Rails and Transit Division (NHDOT). After determining the need for restoring the stream bank at our monthly CCCD meetings, we approached the NHDOT to gain permission to do our demonstration project. They granted us permission, and we began exploring and researching methods to control the invasive. At first, we considered using spraying herbicides, but considering the proximity to the bank, we determined that mechanical controls seemed more environmentally sound.



*Students assisting in removing the Knotweed on 200' of banking along Town Brook which is adjacent to the school boundary*

This is where the students became actively involved.

They spent their recesses and other time cutting down the stems. The maintenance department composted the remains on site, in an area already laden with knot-weed. Then, a local contractor, LA Drew, removed the roots and graded the area with an excavator for future planting. They covered the soil with 5 mil. geo-textile fabric to inhibit the photosynthesis process of the knot-weed.



*200' of Knotweed removed.*

While the children were involved in controlling the invasive on school grounds, they were also learning about other invasive species around the state. Tin Mountain Conservation Center, a local outreach school program, came into our classroom and conducted several hands-on lessons on invasive species. They even arranged an entomologist specialist from Concord to come in and teach us about invasive insects. The children were excited to participate in citizen science research. To supplement these lessons, each student is becoming an expert on one invasive species threatening New Hampshire ecosystems. They are researching

and publishing a page in a collaborative guide to the invasive species in New Hampshire, which will be made available to the community as a reference in the public library.

Through funding from the New Hampshire Association of Conservation Districts, this demonstration project was made possible. The children learned how to identify and prevent certain species that threaten New Hampshire habitats. They also became involved in and helped improve their local community.

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# Cheshire County Conservation District

[www.cheshireconservation.org](http://www.cheshireconservation.org)



## Cheshire County Pollinator Initiative

The Cheshire County Pollinator Habitat Initiative will provide needed food sources and nesting sites for pollinators that have been faced with declining habitat with the conversion of natural landscapes to commercial and residential uses. The following three objectives will be the focus of the initiative:



1. Establish up to twenty pollinator habitat sites to demonstrate innovative approaches to pollinator conservation.
2. Inventory native pollinators at four farms (apple orchard, blueberry orchard, mixed vegetable farm, meadow) to establish a baseline of native pollinators and do subsequent follow up inventories to determine impact of the pollinator habitat establishment in four unique farm settings.
3. Offer a vigorous education and outreach campaign to landowners and managers based on the successes and challenges encountered during habitat establishment.

Funding to achieve these goals has been secured through the USDA NRCS Conservation Innovation Grant, the NH State Conservation Committee Conservation Grant Program, USDA Specialty Crop Block Grant Program and private donors. Sixteen partners have been engaged with the habitat installations including private businesses such as the Keene Country Club, Institutions of Higher Education such as Franklin Pierce University, municipalities, private landowners, and farmers.

Year one of the native pollinator inventory has been completed, and will continue for the next two years. We are looking at abundance, richness, and diversity of native pollinators at the four sites. During year one there were 272 individual bees collected and of those 47 species were identified.

Educational programs have been offered to farmers and the general public focusing on pollinator ecology, integrated pest management, habitat establishment, identification of native pollinators, and seed saving for native plants.

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## Coos County Conservation District

[www.cooscountynh.us/program-services/pages/coos-county-conservation-district](http://www.cooscountynh.us/program-services/pages/coos-county-conservation-district)



### Partnership Forms Native Plant Nursery Thanks to Moose Plate Grant

In partnership with The Town of Columbia, the Coos County Conservation District is forming a native plant nursery that will be offering a diverse selection of native plant species to educational facilities, contractors and associates for bank stabilization and native plant restoration projects. The revenues earned will expand this project and provide more educational opportunities for all. Currently, there are no native plant nurseries in the area available to residents, businesses or organizations in Coos County for riparian buffer work, wildlife habitat and landscape designs. Because of the lack of accessibility and large span of area that the county covers, availability of native plants for conservation planting is at a minimum.



Work on the project will happen over a 2 year span and start off this spring with the installation of a road off of Route 3 that leads to the nursery site. Lime and fertilizer will be applied in the suggested amounts according to a recent soil test and a cover crop will be planted to prepare the soil for future plantings. The whole Coos County Conservation District board and other volunteers will gather this fall to install a deer fence surrounding the 1 acre area to protect the future native plant stock. The next step is to install the tool shed, irrigation system and starter plants. By next summer we plan to start our public awareness program that will include workshops with information on native plant identification, native landscape designs and ways in which the propagated plants may be of service to such habitats. We will also share effective planting tips that will help native plants prosper and highlight characteristics of many local native groundcovers, shrubs and trees.

The primary goal of the project is to improve soil stability and native plant diversity throughout Coos County by making these plant species available to the area. Native plants can meet the requirements of wildlife (including food and cover) without causing long-term harm to local plant populations. As more people make use of native plants, it adds to the existing habitat for wildlife and supports the community as a whole. By partnering with the Town of Columbia and creating a native plant nursery with affordable and local native plant species it will help correct erosion problems within Coos County and surrounding regions.

This project is supported by funds from the sale of the Conservation License Plate (Moose Plate) through the NH State Conservation Committee grant program.



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# Grafton County Conservation District

[www.graftonccd.org](http://www.graftonccd.org)



## Grafton County Conservation District Highlight 2015

Grafton County Conservation District (GCCD) and interested landowners learned firsthand what's new, and what works when it comes to beneficial conservation practices on the GCCD Fall Tour of Conservation Practices, on Friday, October 16, 2015. At the **Grassland Habitat Restoration Project** at the Grafton County Farm, John Lanier of the Wildlife Management Institute discussed grassland habitat restoration work completed in Fall 2014. Grassland bird habitat was enhanced using a brontosaurus to remove unwanted understory and create uneven-aged soft edges around a mowed field. The County Farm maintains several smaller fields that are prime habitat for woodcock, grouse, songbirds and other wildlife, and are right in the CT River Flyway used by migratory birds. The group looked at several sites at the County and discussed management strategies. It is beneficial to have soft edges surrounding grasslands and forest openings at different stages of growth, offering food, shelter and protection. Diversity is the key.



**StoneFen Farm, LLC:** Owners Steve and Lora Goss developed a conservation plan with Natural Resources Conservation Service (NRCS) to manage abundant water in the rotational grazing pastures. Lora has installed several grassed waterways, and recently installed a low



New low-water stream crossing during construction.

water stream crossing to protect water quality. She built fencing for the rotational grazing system and two season extension high tunnels for berry production. Using a no-till seeder, Lora planted a cover crop mix to improve soil health in the grazing pastures.

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## Hillsborough County Conservation District

[www.hillsboroughccd.com](http://www.hillsboroughccd.com)



Hillsborough County Conservation District

### Hillsborough County Conservation District Hosts Soil Health & Equipment Demonstration Workshop Series

The Hillsborough County Conservation District (HCCD) held a series of three educational workshops geared towards local farmers interested in learning more about soil health and how to utilize various pieces of heavy equipment in order to reach their operation goals. Funding for these workshops was provided by the NH Conservation Moose Plate grant program.

The first workshop was held on July 2, 2014 at Lavoie's Farm in Hollis. The focus was on no-till, cover crops and mulching. Thirty-five agricultural producers attended the educational event. Chad Cochran, District Conservationist, USDA Natural Resources Conservation Service led the group through the basics of the importance of playing close attention to the health of their soil. Adrien Lavoie (Lavoie's Farm and host) offered hands-on demonstrations of the roller crimper and zone builder.



After the demonstrations, Adrien spoke about his experience with implementing these new zone-till and cover crop practices on his farm. Rich Bonanno, UMass Extension, spoke about nutrient and pest management. George Hamilton, UNH Cooperative Extension, offered information on how he has seen these practices work with other farmers around the county.



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# Hillsborough County Conservation District

[www.hillsboroughccd.com](http://www.hillsboroughccd.com)



Hillsborough County Conservation District

## Hillsborough County Conservation District Hosts Soil Health & Equipment Demonstration Workshop Series (Continued)

The second workshop was held on August 12, 2015 at Temple-Wilton Community Farm in Wilton. The focus was on taking a detailed look at the Cornell Soil Health Assessment. Thirty-five agricultural producers attended this twilight event. Chad Cochran and Peter Whitcomb, USDA NRCS led the group discussing the importance of soil health, ways to increase the soil's potential, utilizing cover crops and paying attention to nutrients and pests. Chad and Peter showcased the new soil health test kit offering the first demonstration in the state! The farmers from the Temple-Wilton Community Farm (Andrew Kennedy, Anthony Graham and Lincoln Geiger) were generous hosts



and spent a great deal of time speaking and showing the group some of the new practices they have been busy implementing on their farm. As with Lavoie's workshop, George Hamilton was able to speak about the benefits he has seen around the county of farmers who have utilized the Cornell Soil Health test.

The third and final workshop was held on October 7, 2015 at Normanton Farm in Litchfield. This workshop was co-hosted by Hillsborough and Strafford County Conservation Districts. The focus was on pasture and grazing management techniques. Twenty-eight agricultural producers attended the afternoon event. Chad Cochran, NRCS led the group through the basics of soil health, and offered the soil health test kit demo again. Dorn Cox, farmer from Strafford County, led the live equipment demonstrations of the Yeoman's plow and Soil Aerator.

The third and final workshop was held on October 7, 2015 at Normanton Farm in Litchfield. This workshop was co-hosted by Hillsborough and Strafford County Conservation Districts. The focus was on pasture and grazing management





# Merrimack County Conservation District

www.merrimackccd.org



## Innovative Heavy Use Area for Bison using Wood Chip Pads

Buffalo farming is an increasing market for agricultural producers. Buffalo meat is increasingly sought after by local markets for its health benefits. Buffalo tend not to eat much in the winter, making them more economically sustainable in years when winter feed is expensive and hard to come by.



Buffalo, like all large animals, produce considerable waste. This is all too noticeable at Yankee Farmers Market and evident from their Comprehensive Nutrient Management Plan. Brian and Keira Farmer, owners of Yankee Farmers Market, want to implement their nutrient management plan and address nutrient management concerns considering they are uphill from the Contoocook River watershed. Knowing that they had to do something but funds were limited, as they often are on farms, Yankee Farmers Market applied and received a USDA NRCS Conservation

Innovation Grant for an innovative heavy use area (HUA) suitable for bison and cattle. The cost of this HUA is still significant but has potential for NH's growing buffalo industry. Due to that, the Merrimack County Conservation District Board of Supervisors voted at their August 2014 meeting to support this innovative endeavor and assist through the submission of a Mooseplate grant proposal, which was also awarded.

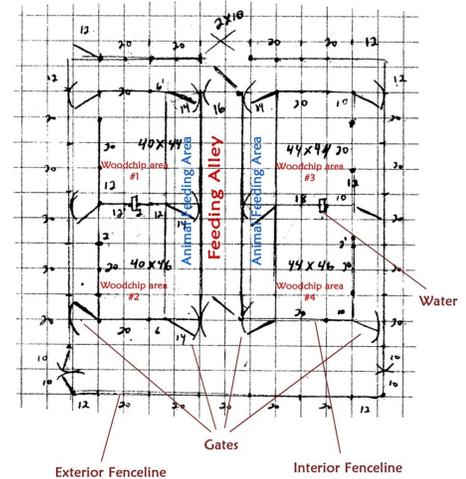
The project's innovative approach should address the needs of the operations, the buffalo's unique characteristics, while improving water quality/nutrient management concerns, thus having less of an environmental impact on land and water quality.

Creation of a more efficient feeding/holding area (HUA) with the use of concrete and wood chips that will:

- Improve water quality
- More effectively collect, store and minimize nutrient run off
- Reduce stress for animals & improve Animal health and gains
- Minimize feed waste
- Increase operational efficiency
- Allow for more vegetative buffers
- Increase pasture health

This project will create a model in the area for a wood chipped heavy use area and show how partnerships work. This project was made possible by the cooperative work of Yankee Farmers Market, Merrimack County Conservation District, USDA Natural Resources Conservation Service, the State Conservation Committee Mooseplate Grant Program, and technical assistance from the UNH Cooperative Extension. Educational programs demonstrating this practice will occur in 2016.

Proposed Heavy Use Area for Buffalo  
approx size 120'x140'



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# Rockingham County Conservation District

[www.rockinghamccd.org](http://www.rockinghamccd.org)



## Reducing Nitrogen in Great Bay

A significant focus in the Rockingham County Conservation District's current programming is promoting voluntary approaches to reducing the amount of nitrogen that enters Great Bay. Great Bay has been identified in New Hampshire as an impaired water body for excess total nitrogen levels. Many non-point sources have been identified, including 29% coming from septic systems. In 2014, RCCD was awarded a Watershed Assistance Grant from the New Hampshire Department of Environmental Services with funds from the Environmental Protection Agency to set up demonstration sites for a new technology, called a Permeable Reactive Barrier (PRB), to help reduce the amount of nitrogen leaching from septic systems. This patented passive technology (Nitrex System) can control nitrogen with



a formulation of wood chips, exchange media, and sand or gravel to biologically transform inorganic nitrogen to nitrogen gas. The Nitrex is placed in a trench to intercept and treat groundwater moving away from the leach field before entering surface waters. Over the past two years, in partnership with the Strafford County Conservation District, the Town of Durham and the Town of Brentwood, RCCD have been installing monitoring wells, completing preliminary water

quality monitoring, and coordinating the designs of the PRBs. The first installation at a demonstration site was completed in October 2015 at Windsor Meadows Condo Association, in Brentwood, NH. Two rounds of post installation monitoring have taken place and two more are planned for 2016, and the data is being compiled. The second installation is taking place near a residential system in Durham, NH, and is scheduled for March 2016. The data are still being compiled, but the initial results look very promising. RCCD is hopeful that the results of this study will show that PRBs are an effective and low cost way for homeowners to reduce the nitrogen coming from their septic systems.



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# Strafford County Conservation District

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## The Yeoman's Plow

A Yeomans plow is a useful tool for breaking up deep soil compaction. Some soils are, or become, compacted at levels deeper than traditional tillage equipment can reach. This prevents water and roots from infiltrating deeper soils, leading to shallow roots and excessive water runoff. The Yeomans plow helps to alleviate this compaction. This means more productive crops, less water runoff, leaching, and erosion, and healthier soils.

Strafford County Conservation District obtained funds through the NH State Conservation Committee's Moose Plate Grant in order to build and demonstrate a Yeomans plow. The plow was finished in 2015, and it was featured at two soil health workshops. There are at least two more workshops planned for 2016, and in early 2016 the plow will be available for farmers to rent.

On September 12, 2015, SCCD hosted a workshop on the Yeomans Plow and Keyline Soil Formation, led by Abe Collins of Collins Grazing, LLC, based in Vermont. Keyline Soil Formation is a landscape-scale theory of management that uses the Yeomans plow to build healthy soils with improved hydrology. Abe led a hands-on workshop to teach the attendees how they can apply this theory to their own farms.

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SCCD and Hillsborough County Conservation District held a workshop on October 7, 2015 as a part of HCCD's Building Healthy Soils workshop series. The Yeomans Plow and soil aerator were demonstrated on a compacted pasture, and the role of this equipment in soil health was discussed.

Farmers can rent the Yeomans Plow for a small fee from SCCD. All they need is a tractor and a soil compaction problem! Soil compaction can be measured using a penetrometer, avail-

able from NRCS or Conservation District staff. Alternatively, the Cornell Soil Health Assessment is a soil test that analyzes several soil health parameters, including soil compaction. These tools can help farmers determine whether or not they would benefit from using a Yeomans Plow on their fields. NRCS also has financial assistance available through the Environmental Quality Incentives Program to implement practices addressing soil health problems.

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# Sullivan County Conservation District

[www.sullivancountynh.gov/conservation.html](http://www.sullivancountynh.gov/conservation.html)



## State-wide Pollinator Promotion

Pollination by wild and managed bees is a critical component to food production. Thanks to a Specialty Crop Block Grant from the NH Department of Agriculture, Markets and Food, the Sullivan County Conservation District successfully managed a year-long NHACD project aimed at promoting crop pollinators throughout New Hampshire. The state-wide project consisted of a three-fold approach: county-level workshops to raise awareness of the importance of pollinators and their promotion;



*Sumac is an important early food source for many species of bees.*

demonstration sites to showcase best management practices for bee pollinators; and, a Pollinator Summit to bring together farmers, experts and organizations concerned with pollination. 14 workshops, attracting 280 participants, were given around the state, hosted by the ten NH Conservation Districts. The Districts then installed demonstration sites featuring a variety of strategies available to farmers and land managers for promoting pollinators. Many of these sites will remain open through 2016, and printed brochures are available on the Districts' websites. The project culminated in the New Hampshire Pollinator Summit, which was held at the Concord Grappone Center on November 2, 2015 in partnership with NH



*Fireweed visited by bumble bees*

Department of Agriculture, Markets and Food, the Natural Resources Conservation Service, and the University of New Hampshire's Cooperative Extension. The event featured many state and regional pollinator experts, and was attended by 260 people including farmers, landscapers, bee-keepers, landowners, gardeners and natural resource service providers.

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