

Rockingham County Conservation District

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Dedicated to the Wise Use of Our Natural Resources.

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ROCKINGHAM
COUNTY
CONSERVATION
DISTRICT

Annual Report 2013



The mission of the Rockingham County Conservation District is to conserve and sustain the natural environment for present and future generations by working to make wise land-use decisions.

110 North Road - Brentwood, NH 03833 - 603.679.2790
www.rockinghamccd.org

Board of Supervisors and Staff

Supervisors

Cynthia Smith, Chair - Greenland
Heidi Seaverns, Vice Chair - Nottingham
Robert Goodrich, Treasurer - Stratham
Joanna Pellerin, Secretary - Exeter

Associate Supervisors

Richard Lutz - Chester

RCCD Regular Staff

- Leonard A. Lord, PhD - District Manager/Ecologist, NH Soil Scientist, NH Wetland Scientist, NH Septic System Designer, NH Pesticide Applicator
- Tracy Degnan - Conservation Specialist
- Diane Knapp - Office Manager
- Vicky Stafford - Conservation Technician

RCCD As-Needed Staff & Contractors

- Michael Cuomo - NH Soil Scientist, NH Wetland Scientist, NH Septic System Designer
- David Detour - Surveyor and AutoCAD Draftsman
- Marc Jacobs - NH Soil Scientist, NH Wetland Scientist, Certified Professional in Erosion and Sediment Control
- Gerald Lang, PE - Hydraulic Engineer
- Edwin Minnick, PE - Hydraulic Engineer
- Danna Trustlow - Restoration Hydrologist

RCCD SERVICES

- | | | |
|--------------------------------------|-----------------------------------|--|
| • Non-Point Source Pollution Control | • Invasive Species Control | • IPM for Reduced Pesticide Impacts |
| • Ecological Restoration | • Stormwater Management Reviews | • Agricultural Wetland Impact Permits |
| • Sustainable Agriculture | • Septic System Design Reviews | • Soil Potential Index for Current Use Tax |
| • Conservation Easements | • Natural Resource Impact Reviews | • Historic Aerial Photography back to 1943 |

Financials

Over the past year RCCD has made a number of strides to reduce costs and increase revenues to help offset the 50% county funding cut of \$45,000 in 2011. To this end we have aggressively pursued grant and outside agency funded projects, raised our fee-for-service rates, reduced our office hours, and reduced one administrative staff position from full-time to part-time.

The RCCD Board of Supervisors appreciates the past support of our programs by the Rockingham County Commissioners and the County Delegation.



Looking Ahead to 2014

◆ Over the past 50 years habitat for the **New England Cottontail** (NEC) has been reduced, leading to declining populations. Currently, the NEC is facing placement on the federal endangered species list if their population does not improve. RCCD has an exciting opportunity through grant funding to help local landowners and conservation agencies manage targeted areas for NEC habitat management.



◆ **Controlling Invasive Pests and Reducing Pesticide Use** is expected to become an important part of RCCD programming. With at least two new invasive insect pests threatening our crops, RCCD looks forward to working with our partners at NRCS and NH Cooperative Extension to assist farmers in controlling these pests while minimizing pesticide impacts.

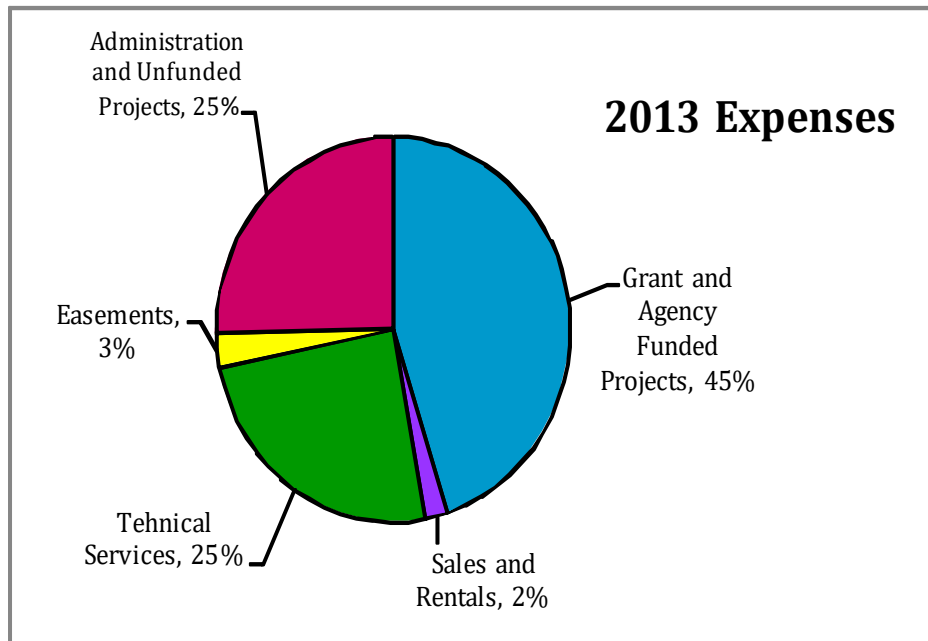
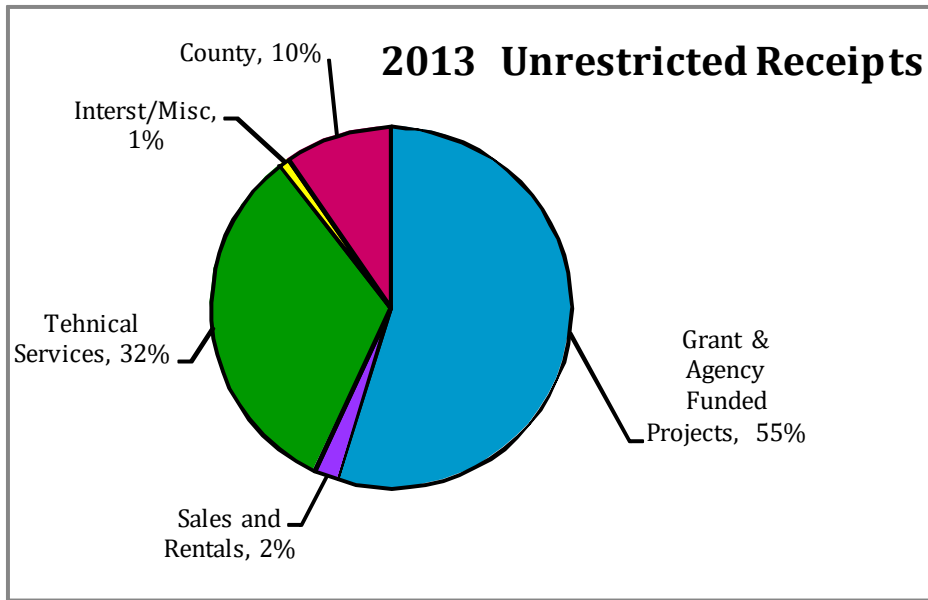
◆ RCCD will participate in a statewide initiative with other conservation districts to **promote native pollinator habitats** that help combat the pollinator challenges local farms face today.



◆ Local Agriculture is expanding in Rockingham County and the District is gearing up to work with local farmers to increase local production while maintaining stewardship of the land. RCCD will continue to assist in obtaining specialized equipment that works efficiently while also improving the protection of soil and water resources.

◆ **Stormwater Quality & Quantity Issues** will continue to become more important in the County as demonstrated by the numbers of high energy storms that are on the increase while development also increases. We will also be working with our towns and partners to help reduce nitrogen levels in Great Bay from stormwater, septic systems, and other non-point source pollution. In turn, this can help reduce the pressure to provide costly upgrades to municipal sewage treatment plants.

Financials



2013 Highlights

2013 was another year of growth for the District. While we are still working to overcome our funding cut from 2011, we have made headway and are working on repaying loans and rebuilding our cash reserves. The District had another busy year with a number of our own grant and agency funded restoration projects in full swing, along with funding from our partners at the Natural Resources Conservation Service to manage a number of their restoration projects. As we move forward, however, many of the grant programs that funded these projects have either disappeared or have become extremely competitive. Once again the District had a successful year partnering the Strafford County Conservation District on the Great Bay Nutrient Management Initiative. The Great Bay watershed covers nearly all of Rockingham and Strafford Counties. By partnering and combining resources, we are able to provide more services that result in VOLUNTARY reductions in stormwater pollutants that ultimately enter Great Bay. Reducing pollutant loading in runoff is expected to decrease the pressures on municipal wastewater treatment plants to reduce nutrient loading through extremely expensive upgrades.

For every dollar provided by the County in 2013, RCCD leveraged \$9.32 from other sources.

RCCD leverages more outside funding than any other conservation district in NH.

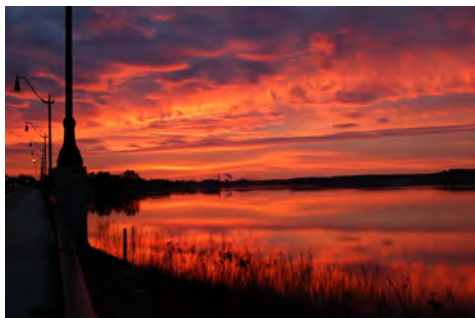
**NEW HAMPSHIRE STATUE
TITLE XL
SOIL CONSERVATION AND FARMLAND PRESERVATION
Conservation Districts**

432:8 Declaration of Policy. – It is hereby declared to be the policy of the state to provide for the establishment of conservation districts under the supervision of a state conservation committee, said districts are to be composed of landowners and land occupiers within the district, who may join together in the interest of the conservation and development of the soil, water, and related natural resources and preventing soil erosion, floodwater and sediment damages. It is the intent of this subdivision to facilitate the joint effort of landowners, land occupiers, and units of government in carrying out measures for the conservation and development of lands within the district, voluntarily and with such assistance as may be available for this purpose from local, state, or federal governmental agencies.

432:11 Duties. – The state conservation committee shall:
IV. Seek the cooperation and assistance of the United States, of this state, and of town and county governments, in the work of such districts, and receive funds from such agencies or from any other source and use such funds to carry out the purposes of the state conservation committee and the conservation districts.

Great Bay Nutrient Management Initiative

The RCCD had a successful year in 2013 partnering with the Strafford County Conservation District (SCCD) to assist farmers in VOLUNTARILY reducing nutrient inputs to Great Bay. In New Hampshire, the Great Bay watershed encompasses most of Rockingham and Strafford Counties. Through conversations with local farmers, the Districts learned that the best equipment available for efficient farming and nutrient management is typically too expensive for individual farmers to own. The Districts obtained grant funding to purchase a wood ash/lime spreader, a soil aerator, and a no-till drill for farmers to rent at low cost. These three pieces of equipment were used on over 450 acres in the watershed in 2013 to manage soil pH, compaction, and soil structure. The Districts also held soil health workshops and demonstrations of the equipment, including a demonstration at the Rockingham County Farm in April. These workshops were designed to educate farmers about the importance of soil health and efficient nutrient management practices. Learn more about the equipment rentals and the importance of soil tests in other sections of this report.



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Soil Aerator



One piece of the fleet of soil health equipment is an AerWay Soil Aerator purchased with funding from the New Hampshire Association of Conservation Districts Innovative Demonstration Projects in partnership with the Natural Resource Conservation Service. Compacted soils affect soil health in a variety of ways including limiting normal water infiltration, and limiting plant root access to nutrients. The aerator will loosen compaction without damaging soil structure as often happens with tilling practices. This piece of equipment was used on 95 acres in 2013.

Aeration increases soil permeability and productivity without using fertilizers.

NRCS Accomplishments for 2013

NRCS Funds in Rockingham County – Fiscal Year 2013

Technical Assistance	Amount	Description
	\$282,060	Field Office Personnel
	\$151,717	Share of Statewide Personnel
	\$70,587	Support Costs
Total	\$504,355	

The USDA Natural Resources Conservation Service provides technical and financial assistance to farmers, ranchers, and forest landowners to voluntarily put conservation on the ground. This helps them to implement practices which improve environmental and agricultural quality.



NRCS Contracts and Agreements in Rockingham County

Financial Assistance	# of Contracts	Amount	Conservation Program
	26	\$154,650	Environmental Quality Incentive Program
	2	\$1,193,953	Farm and Ranchland Protection Program
	1	\$23,700	Wildlife Habitat Incentive Program
	7	\$1,129,714	Wetland Reserve Program
Total	36	\$2,502,017	

Total Technical and Financial Assistance: \$3,006,317

Natural Resources Conservation Service Partnering



RCCD continues to partner with NRCS to identify and address natural resource concerns in local communities and to coordinate public and private resources to meet local needs on a grassroots level. The District worked with NRCS during 2013 to provide assistance to landowners and producers to carry out environmentally sound practices that benefit all residents of the County under the 2008 Farm Bill.

The Natural Resources Conservation Service is a core partner of the Rockingham County Conservation District. The partnership between the NRCS and Conservation Districts is one that was carefully designed to foster a unique and productive relationship to get conservation implemented on a VOLUNTARY BASIS and to provide federal resources at a local level.

Locally Led Conservation

Conservation Districts are in a unique position to provide guidance on local conservation needs and priorities to our federal partners at the NRCS. During the summer of 2013 RCCD administered a survey to local organizations, producers, and landowners to identify local environmental and natural resource concerns. In the fall RCCD gathered the results and convened related conservation agencies, forming a local work group to prioritize local natural resource needs and concerns.



This information is used to help guide NRCS funding priorities for Rockingham County. RCCD is proud to be the local voice for conservation priorities and looks forward to the 2014 local work group meeting. If you would like more information about the 2014 local work group meeting or would like to be on our survey mailing list, please contact the District.

District led Local Work Groups establish spending priorities for NRCS that are based on local concerns.

Great Bay Nutrient Management Initiative Ash Spreader No-Till Drill

Wood Ash Spreader

As part of the Great Bay Nutrient Management Initiative, a Stoltzfus Wet Lime Spreader was purchased with funding through the NH State Conservation Committee Grant Program. To combat the growing challenges created by New Hampshire's acidic soils, this



Wood ash facilitates increased soil nitrogen without fertilizers and is a great way to recycle wood ash generated by biomass energy facilities, such as the one at the Rockingham County Complex.

piece of equipment is available for rent to spread wood ash or lime, which will help modify soil pH. Soils that are less acidic or soils with a pH closer to neutral are better environments for legumes and other nitrogen fixing plants. This piece of equipment has been used to spread 750 tons of lime/wood ash on 315 acres since its purchase.



No-Till Drill The great plains 606NT no-till seeder arrived in the summer of 2013 and is now available for rent to farmers. The no-till drill reduces soil disturbance and conserves organic matter, improving soil properties. The drill also aids in the use of cover crops which can loosen com-

compaction, add organic matter and important nutrients to the soil. The drill was used to seed 65 acres in 2013.

Rental: For more information on how to rent the equipment, contact the District office.

The drill will lead to reduced runoff of sediments and excess nutrients into surrounding waterways and will ultimately help improve the water quality of Great Bay.



Great Bay Nutrient Management Initiative

Soil & Manure Testing Facilitation

Soil health and soil chemistry can dramatically affect crop or turf health when properly managed. Soil testing is the best way to assure that nutrients and physical conditions are in the proper range to enable successful crop and lawn growth without negative side effects. Soil testing is also recommended before spreading with the wood ash spreader or before using the no-till drill for reseed-



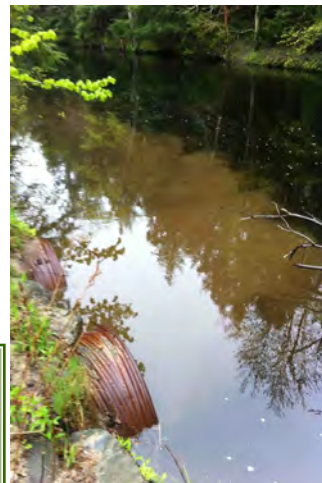
ing. Soil compaction testing, which is part of the Cornell Soil Health test, also enables targeted use of the aerator, which can be used to increase water and nutrient infiltration to the root zone where it is needed. In 2014, the District will continue to provide training for landowners interested in taking their own soil health samples as part of soil health workshops. The District will help facilitate the delivery of a soil sample to UNH or Cornell. Samples can be dropped off at the District office, or for a fee, the District will collect soil samples at the site.

When soil chemistry is out of range or nutrients are over-applied, the result can be nutrient runoff that eventually makes its way into Great Bay .

Programs

Municipal Technical Assistance

RCCD continues to be relied upon as an objective provider of technical expertise to municipalities and landowners. RCCD provides technical assistance to municipalities for services such as stormwater management and related site engineering design reviews, erosion & sediment control reviews, test pit witnessing for subdivision and septic system designs, septic system design reviews, septic system installation reviews, wetland and other natural resource impact reviews, as well as monitoring of town held conservation easements.



In 2013 RCCD staff spent 2,392 hours providing technical assistance to municipalities

All programs are offered on a non-discriminatory basis without regard to race, color, national origin, religion, sex, age, marital status, disability or political beliefs.

Grant and Agency Funded Projects

River Road Salt Marsh, New Castle



RCCD completed this project in 2013 in partnership with the Town of New Castle. The River Road salt marsh restoration project is expected to serve as a flagship project to build community support for salt marsh restoration throughout New Castle. Degraded salt marshes have less wildlife value, reduced species diversity, greater mosquito production, and have detrimental effects on landscape aesthetics. The River Road salt marsh was impact-

ed during the early 1970's by the placement of a sewer line along approximately half of its perimeter. This led to the filling in of a stream through sedimentation that ultimately has led to an expanding population of invasive *Phragmites*. The goal of this project was to remove the *Phragmites* and restore the stream channel, which is also expected to reduce mosquito production in the marsh. A path connecting the restored marsh to the nearby elementary school makes this marsh a prime outdoor educational



laboratory to study the salt marsh ecosystem and involve students in the restoration process.

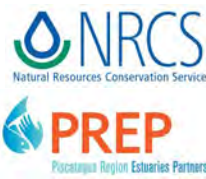
Partners & Funders include: New Castle Conservation Commission, NHDES Aquatic Resource Mitigation Fund, NH Department of Agriculture, Markets, and Food, Integrated Pest Management Grant Program, and project landowners. The feasibility portion of this project was funded in part by a grant from the Piscataqua Region Estuaries Partnership in 2010.



Grant and Agency Funded Projects

Goss Farm, Rye

RCCD and the Rye Conservation Commission began work restoring the Goss Farm, Rye in 2011. A conservation easement for the 10 acre parcel was procured through the Farm and Ranch Lands Protection Program grant from the Natural Resources Conservation Service. Over the past three years, RCCD has worked with the Town of Rye with funding from NH Department of Agriculture, Markets and Food, Integrated Pest Management Grant, the Piscataqua Region Estuaries Partnership, and funds of the Conservation License Plate (Moose Plate) through the NH State Conservation Committee Grant Program to manage invasive species on the property and restore agricultural functions. Community and school gardens have been put in place. The main farm field is now ready to be managed by an individual farmer in 2014.



Programs

Integrated Pest Management Plans



Rockingham County has seen a tremendous increase in local farming over the last decade. This has provided local jobs, high quality local farm products, increased local food security, and is an income producing alternative to development that helps preserve the character of our county. With this rise in local agriculture has also come an increase in pesticide use. Integrated pest management (IPM) takes a common sense approach to pest control by considering pest life cycles, economic impact thresholds, pest monitoring, and both chemical and non-chemical approaches.

IPM plans consider human health risks, soil-pesticide interactions, impacts to sensitive areas, and ways to mitigate pesticide impacts.

Most recently a new pest from Asia known as the spotted wing drosophila was introduced to NH in 2011. In 2012 the pest is reported to have caused \$1.5 million in damages to fruit crops in the state. RCCD is working with our partners to better understand ways to control this pest while minimizing pesticide impacts.



Spotted wing drosophila and blueberry damage. A pest from Asia new to NH in 2011 (Photos UNH CE)



Programs

Conservation Easements

In addition to protecting open space, conservation easements protect communities from higher taxes, help keep government and government services small, protect town character and aesthetics, and protect natural resources for future generations. RCCD is legally responsible for monitoring 103 conservation easements on approximately 4,600 acres of land throughout the county. As part of our new business model, RCCD has greatly reduced the number of new easements it is now able to accept due to our limited staff. RCCD staff spent 468 hours managing easements in 2013.

Grant and Agency Funded Projects

Odiorne Point State Park, Rye

In 2013 RCCD completed its fourth year of habitat restoration at Odiorne Point State Park in Rye. This effort will not only have environmental benefits, but is expected to improve the quality of the park for recreation, aesthetics, education, and safety. Odiorne Point State Park includes some of New Hampshire's rarest



native ecosystems such as coastal pitch pine forest, dunes, salt marshes and barrier marshes; however, these habitats have become degraded over time due to past disturbances and human impacts that have promoted infestation by invasive species. To date, RCCD has conducted work on 80 +/- acres within and adjacent to the park, including restoration of populations of at least three rare species.



Partners & Funders: NOAA/NHDES Coastal Program Grant, NHDRED Division of Parks and Recreation, NH Corporate Wetland Restoration Partnership, USDA Forest Service, University of New Hampshire, NHDES Aquatic Resource Mitigation Fund, NH Department of Agriculture Markets and Food, Integrated Pest Management Grant, NHDRED Natural Heritage Bureau, Seacoast Science Center, Coastal Wetland Invasive Plant Partnership, Natural Resources Conservation Service, United Way Day of Caring volunteers, Town of Rye Conservation Commission, Timberland Earth Day volunteers, and many local schools. This project is also 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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Grant and Agency Funded Projects

Exeter River, Brentwood

In 2013 RCCD completed the final year of work along the Exeter River in Brentwood in partnership with the Brentwood Conservation Commission. This project includes stormwater treatment, riverbank stabilization, and a conservation easement on 18 acres to protect over 5,600 feet of river frontage. This work is expected to improve water quality of the Exeter River, which feeds into Great Bay.



Partners & Funders: RCCD is managing this project in partnership with, and through funding provided to the Town of Brentwood. Funding for this project was provided in part by a Watershed Assistance Grant from the NH Department of Environmental Services with Clean Water Act Section 319 funds from the U.S. Environmental Protection Agency. This project is also supported by funds from the sale of the Conservation License Plate (Moose Plate) through the NH State Conservation Committee Grant Program. Additional project partners include NH Trout Unlimited, Exeter River Local Advisory Committee, and project landowners.



Grant and Agency Funded Projects

Wetland Restoration Projects



In 2013 25 new projects were added to the existing 32 projects currently being managed by RCCD through a cooperative agreement with the Natural Resources Conservation Service. The Wetland Reserve Program gives landowners the ability to improve wetland habitat for water quality, flood storage, and wildlife habitat. The project involves site evaluations, selection of contractors, permit preparation, and management of project implementation to complete wetland restoration projects according to plans prepared by the NRCS. Many of the 32 original WRP projects were completed in 2013. Projects completed involved forest access stabilization, invasive plant control, habitat restoration, and improved stream crossings.

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