

Rutland Natural Resources Conservation District (RNRCD)



Annual Report FY 2022

July 1, 2021 – June 30, 2022



Bioswale Pearl Street, Brandon

The Rutland Natural Resources Conservation District is committed to fostering an awareness of the link between stewardship of the natural environment and the agricultural community as well as other landowners, and encouraging and supporting efforts with partners, in meeting the need for natural resource conservation.

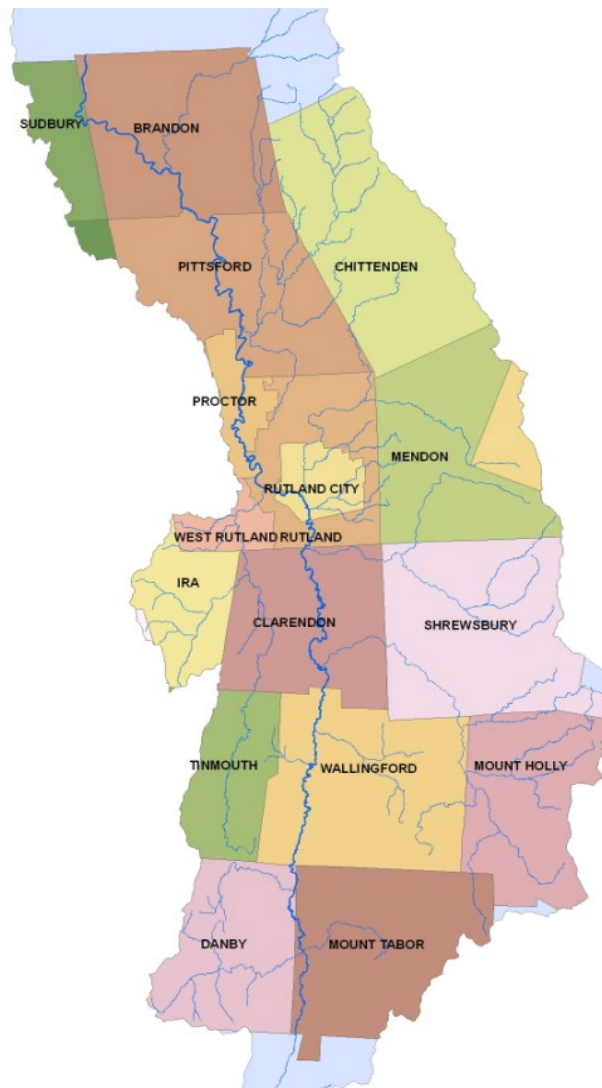
Working with Our Community to Conserve & Manage Natural Resources

A Conservation District is a political subdivision of the State of Vermont, as designated by legislation in 1939, to cooperate with farmers, other landowners, organizations and state and federal agencies to encourage and assist in the development and use as well as conservation of natural resources throughout the State.

The Rutland District was established in 1968 and is one of fourteen in the State. It includes the sixteen towns in the eastern part of Rutland County and Rutland City.

The District is partially funded with State funds allocated by the State of Vermont through the Natural Resources Conservation Council.

Fundraising/sales, workshops, support from towns and local businesses, and grants secure the remaining funding allowing the District to make progress on its mission.



The District functions under the direction of five locally elected Supervisors and a District Manager. The District holds monthly meetings (which are open to the public) to oversee and administer all programs and finances.

Board of Supervisors

Chair	Alan Shelvey	Shrewsbury
Vice Chair	Bridget Bowen	Wallingford
Supervisor	Michael Pedone	Clarendon
Supervisor	Sean Barrows	West Rutland

Staff

District Manager	Nanci McGuire
Conservation Planner	Michelle Smith
Ag. Specialist	Rachael Burt

The District shares an office and partners with the USDA Natural Resources Conservation Service. The Rutland staff of NRCS is composed of:

District Conservationist	Phylicxia Moore
Civil Engineer	Les Wright
Soil Conservationist	Johan Desrochers
Soil Conservationist	Olivia Carlson
Soil Conservation Technician	Joseph Tillman

Cooperating Agencies/Partners

ANR, Dept. of Environmental Conservation
City of Rutland DPW
City of Rutland Parks and Recreation
Community College of Vermont
Farm Service Agency
Lake Champlain Basin Program
Rural Development
Rutland Regional Planning Commission
Rutland County Solid Waste District
Stafford Technical Center, Natural Resources & Forestry
Towns in the District – Danby, Mt. Tabor, Tinmouth, Wallingford, Mt. Holly, Ira, Clarendon, Shrewsbury, W. Rutland, Brandon, Proctor, Mendon, Chittenden, Pittsford, Sudbury, and Rutland City
U.S. Forest Service (Green Mountain National Forest)
U.S. Fish & Wildlife
UVM Extension System
UVM Lake Champlain Sea Grant Program
VT Agency of Agriculture Food and Markets
VT Association of Conservation Districts
VT Dept. of Forests, Parks & Recreation
VT Dept. of Fish & Wildlife
VT Natural Resources Conservation Council
VT Land Trust
Vt River Conservancy
Many Local Businesses and Landowners

District Activities Fiscal Year 2022

Education:

Vermont Envirothon

The District participates in promoting the Vermont Envirothon program. The Envirothon works to strengthen environmental curriculum at the high school level. Teams of high school student's focus on Vermont's environmental issues related to aquatics, forestry, soils, and wildlife resources through real-world learning in a teamwork environment and are also challenged to research an assigned environmental issue and answer questions about that issue at a statewide competition. Scores are then calculated to determine the winning team.

Outreach:

NRNCD Website and Facebook - The District continues to maintain a website to supply information regarding agriculture and natural resource conservation to the public. <https://www.vacd.org/conservation-districts/rutland/>

Search for us on Facebook.

Products & Services:

Seedling Sale

In an effort to encourage landowners to increase plantings for wildlife habitat, conservation and aesthetics, bulk purchases of evergreen and hardwood trees, wildlife/songbird trees, shrubs, apple trees and blueberry, raspberry and strawberry plants are made available to the public. This year over 100 customers participated in the seedling program which is a source of revenue that helps to fund our programs.

Trout Sales

The District also sponsors a Spring Trout Sale that provides pond owners with trout for stocking.

Organization:

Local Work Group

The District participates in Local Work Group meetings to assist USDA in setting local priorities for Cost Share Programs administered by the Natural Resources Conservation Service (NRCS).

Programs:

Land Treatment Planning (LTP)

The District works with a Land Treatment Planner who provides technical assistance to farms in writing their land treatment plans and nutrient management plans (NMPs). The land treatment plan is a farm-specific resources assessment and the base for NMPs. One of the goals of having a NMP is to develop field-specific nutrient application recommendations. This can help the farm more efficiently apply manure and fertilizer based on crop needs and reduce off-farm soil and nutrient movement.

Agricultural

The District in cooperation with the Poultney Mettowee and Bennington Conservation Districts have an Agricultural Specialist who assists small farm owners by assessing on-farm water quality concerns, providing technical assistance, and supporting implementation of Best Management Practices (BMP's). The Agricultural Specialist also assists farmers in writing and maintaining Nutrient Management Plans and to meet the Required Agricultural Practices.

Portable Skidder Bridges

The District has a portable skidder bridge available for rent to loggers and consulting foresters. Portable skidder bridges when properly installed and used as a temporary stream crossing structure, will reduce streambank and streambed disturbance as compared to other alternatives, thus minimizing the potential for sedimentation.

Watershed Planning

Activities for FY 2022 include:

Floodplain Restoration

The District was awarded funding through the Vermont Department of Environmental Conservation (VTDEC), Clean Water Incentive Program to implement the removal of a berm in the Cold River Watershed in the Town of Clarendon, to restore floodplain function. The berm was created after the floods of the 1970's.

Through a bidding process the District hired K.T. Hathaway, LLC to remove material that was acting as a berm and preventing the stream to access a large, forested floodplain. The berm was located on the east side of Middle Road.

Removal of this berm will address sediment and nutrient loading in the Cold River by allowing it to access the floodplain, thus reducing flood heights, slowing velocities which reduces erosion and providing ample storage of sediment within the river corridor.

As part of the project, the Vermont River Conservancy acquired River Corridor Easements (RCE) on the 10 acres of forested floodplain located on two properties. The RCE is a permanent conservation tool to compensate landowners for allowing their land to flood and provide for needed river functions.

The project was funded by the Clean Water Fund Grants with matching funds from the Town of Clarendon.

Stormwater Master Planning in the Town of Proctor

The District was awarded funding through LCBP/NEIWPCC – Clean Water & Healthy Ecosystem Grant to hire a consultant to develop a Stormwater Master Plan (SWMP) for the Town of Proctor.

Through a bidding process the District hired Watershed Consulting Associates to develop this plan.

The goal of this project is to work with the Town of Proctor on treating and reducing overall stormwater volume by developing a Stormwater Master Plan.

The overall objective is to provide the Town of Proctor with a strategic approach for meeting stormwater management needs in the Otter Creek watershed, in order to address pressing water resource concerns in an efficient and targeted manner.

The SWMP will identify a mix of distributed Green Stormwater Infrastructure (GSI) practices, end-of-pipe stormwater solutions, and practices that will address runoff from roads and onto roads from private properties. Project selection and ranking will follow identification and prioritization guidelines developed by the Vermont Department of Environmental Conservation (VT DEC).

For further information regarding Stormwater Master Planning visit the VTDEC website

<https://dec.vermont.gov/water-investment/cwi/solutions/developed-lands/municipal-stormwater>

Phosphorus Control Plan for the City of Rutland

The District was awarded funding through LCBP/NEIWPCC - Best Management Program Grant to hire a consultant to complete a Phosphorus Control Plan for the City of Rutland.

Through a bidding process the District hired Fitzgerald Environmental Associates to complete this plan. The goal of the Phosphorus Control Plan (PCP) is to provide a plan for the City to achieve the percent phosphorus (P) reduction target for the Otter Creek segment of Lake Champlain. This work will build upon the work completed during the Moon Brook Flow Restoration Plan (FRP) completed by Watershed Consulting Associates, LLC December 1, 2019.

The existing projects identified within the City and the proposed stormwater treatment practices were assessed for credit towards the phosphorus reduction goal. Good housekeeping practices and implementation of Municipal Road Standards were also considered during the existing conditions assessment. The existing and proposed structural and non-structural practices were modeled using the methodology developed by the VT Department of Environmental Conservation (VT DEC) and the City's phosphorus reduction credit was calculated. Proposed practices were ranked by factors including cost effectiveness and a project schedule was developed.

This plan is available by visiting the Districts website https://vacd.wpenginepowered.com/wp-content/uploads/2022/10/2022-07-29_Rutland_PCP_Final.pdf

Stormwater Reduction in the City of Rutland

The District was awarded funding through a Natural Resources Conservation Council (NRCC) Block Grant to work with the Rutland Recreation and Parks Department at Rotary Park to rehabilitate an infiltration trench that was installed in 2013 to provide extra capacity for stormwater runoff and install a new bioretention facility designed by Watershed Consulting Associates, LLC.

The bioretention system is designed to overflow into the subsurface perimeter drain system that surrounds the new playing fields.

The Park is owned by the Rutland Recreation and Parks Department and is located along the banks of Tenney Brook which is degraded due to uncontrolled stormwater runoff and development encroachment.

The Rotary Park project was completed in September 2021 and will serve to infiltrate and filter stormwater from the parking lot and access road into the park thereby reducing stormwater volume, peak flow rates and pollutant discharge to Tenney Brook.

The Rutland Natural Resources Conservation District would like to thank Rutland Recreation & Parks Department staff for constructing these stormwater practices.

Stormwater Reduction in the Town of Brandon

The District was awarded funding through LCBP/NEIWPCC - Best Management Program Grant to hire an Engineering Consultant to complete final designs for two Best Management Practices (BMP's) identified in the Stormwater Master Plan for the Town of Brandon and a Construction Contractor to implement these BMP's

Project #1 - Pearl Street

A series of streetscape bioretention practices (bio-swales) along Pearl Street. The water quality benefits are as follows:

- Total suspended solids (TSS) removed – 5,509 lbs/yr
- Total phosphorus (TP) removed – 6.49 lbs/yr
- Impervious area treated – 0.99 acres
- Total drainage area – 2.44 acres

Project #2 - Café Provence

An 8' concrete dry well to replace the existing catch basin in the upper portion of the parking lot and a bioretention practice along the edge of the parking lot to capture and filter sheet flow runoff from the majority of the parking lot's surface in addition to portions of surrounding rooftops.

The water quality benefits are as follows:

- Total suspended solids (TSS) removed – 978 lbs/yr
- Total phosphorus (TP) removed – 0.105 lbs/yr
- Impervious area treated – 0.282 acres
- Total drainage area – 0.316 acres

Through a bidding process the District hired Watershed Consulting Associates, LLC to complete the designs and Lowell Landscaping to install these practices.

An operation and maintenance plan for each site was developed and reviewed with the Town, as it is anticipated that the Town will assume maintenance obligations.

This project was a collaboration among RNRCD, Lake Champlain Basin Program (LCBP) and the Town of Brandon.

Dam Removal

The District was awarded funding through the VT State Clean Water Initiative Program, Ecosystem Restoration Grants Program to hire an Engineering Consultant to complete a final design for removal and site restoration of Youngs Brook dam located in West Rutland. Through a bidding process the District hired SLR International Corporation to complete the design.

The dam is downstream of a 1.85 square mile watershed, was built circa 1920, and was last repaired circa 1945. The dam is a former municipal water supply that was taken off-line, underwent unsafe dam proceedings in the mid-1990s, and was partially breached, but never fully removed. As a result, the dam remains in the State's Dam Safety Program database.

The design includes plans to fully remove the remaining dam components and remove a portion of the impounded sediments. This will result in a reduction of sediments and adverse water quality impacts, improve floodwater storage, restore the adjacent Class 2 wetlands, and move Youngs Brook toward natural stream balance (dynamic stream equilibrium). Ultimately, the dam removal will reduce future erosion and release of sediments and associated nutrients into the Lake Champlain watershed, in particular the nutrient phosphorous which contributes to Cyanobacteria algae blooms in Lake Champlain.

Final design plans include riparian re-vegetation for erosion and nutrient run-off control. The removal of dams and associated ecological and community flood resiliency benefits have been well documented in the research conducted in the U.S. and elsewhere in the world. Other ecological benefits for the West Rutland Community include the restoration of fish passage and wildlife habitat and habitat connectivity in the Youngs Brook stream corridor.

The next step is to find funding for removal of the dam.

Stormwater Reduction in the Town of Wallingford

The District was awarded funding through a Southern Windsor County Regional Planning Commission (SWCRPC) Block Grant to hire an Engineering Consultant to complete a final design for a Stormwater Best Management Practice (BMP) located within the parcel boundaries of the Wallingford Elementary School.

Through a bidding process the District hired Watershed Consulting Associates to complete the design. The final design was developed by Watershed Consulting Associates in partnership with Lakeside Environmental Group (LEG) and Trafton Engineering Associates.

The design consists of a gallery of stormwater infiltration chambers buried beneath the grass recreational field to the west of the school. The drainage area includes the school roof, as well as the paved parking areas and walkways adjacent to the school. The system will also intercept runoff from an existing stormwater conveyance network in the State's right of way (ROW) on School Street

This project will reduce sediment, phosphorus, and flow to the Roaring Brook.

The next steps in this project are to find funding for implementation and to get responsible party and landowner to sign an Operations & Maintenance Plan.

Once implemented, the project should be maintained for a design life of 20 years. There are three principal components to the operations and maintenance (O & M) of this project: 1) the chambers, 2) manholes and catch basins, and 3) cleanouts.

Future Project Development

The District will continue to work with the City of Rutland, Towns, and landowners to develop and prepare projects for future design and implementation. These projects have been identified in Stormwater Master Plans or other reports.

The District appreciates the cooperation that we receive and is looking forward to continuing to work with our partners to meet the need for natural resource conservation.