



Vermont Natural Resources Conservation Districts

ANNUAL REPORT 2020



A Letter to Vermonters

What will 2020 mean to us in 10 years? Will our masks, long since packed away, represent a time of uncertainty and turmoil, or will they evoke memories of self-reflection and a newfound appreciation for our natural environment? For Vermont's Natural Resources Conservation Districts, this challenging year has re-energized a mission crafted 80 years ago: to protect and restore Vermont's natural resources.

Though the coronavirus pandemic sometimes forced physical distance between Conservation Districts and the landowners and communities we serve, the crisis inspired new methods of engagement to continue our work. Vermonters spent more time than ever enjoying treasured landscapes and waterways. The rolling mountains and flowing streams, the quiet tranquility of lakes and buzz of diverse wildlife provided needed solace in an unpredictable year. We were ultimately gifted with a renewed sense of appreciation for the natural resources that define the state, and a deepened commitment to protect them for future generations.

This year, the mantra of “we are all in this together,” rang truer than ever. As usual, our partnerships with farmers, landowners, communities, agencies and organizations were the foundation of our programs. 2020's unique challenges fused an even greater commitment to collaborate, enabling us to advance multi-layered conservation initiatives. We are so grateful to be part of this inspiring community which, when faced with the toughest trials, dug deeper to preserve Vermont's vitality.

Sincerely,

Jill Arace, VACD Executive Director

Our Commitment to Diversity, Equity, and Inclusion

The coronavirus pandemic is not the only crisis we are facing this year. We've also had to grapple with the impacts of systemic racism and racial inequity on our country, our state, our organizations, and our communities. Individually and collectively, Natural Resources Conservation Districts are dedicated to looking deeply into our history and acknowledging our own role in perpetuating racism. It has and will require courage and humility to face our past, challenge our fears, re-envision our future, and take risks in the present to build the future we hope for. As stewards of our natural resources, we are committed to confronting injustice, in our own field and beyond, and moving step by deliberate step toward a more equitable world. Our resolve will be powered by our curiosity, learning, love, and the power to connect and create.

We encourage you to explore the vast [resources](#) available to achieve racial equity in conservation.



Fiscal Year 2020 at a Glance

Vermont's 14 Natural Resources Conservation Districts are dedicated to improving water quality, protecting the natural landscape, supporting agricultural best practices, and advancing Vermont's conservation efforts.

Photo: Pike Tributary stream restoration project in-progress by Franklin County NRCD.



171

Conservation practices and projects installed or implemented throughout Vermont

4,350

Volunteer hours spent assisting Conservation Districts in protecting natural resources

30,693

Native tree & shrub stems planted across Vermont

19,980

Linear feet of native vegetation planted to improve water quality throughout watersheds

5,463

Landowners, farms, and community members received technical & educational assistance

72

Towns implemented practices and received technical assistance through Conservation Districts

2,033

Water, soil, and manure samples collected to aid in conservation planning

Conservation Districts Work with Vermonters to Conserve and Protect Natural Resources

Vermont's Natural Resources Conservation Districts (NRCDs) or Conservation Districts were created by the Soil Conservation Act of 1940 in recognition that "the lands, water, forests, and wildlife of the State of Vermont are among the basic assets of the state, and that the preservation of these lands, water, forests, and wildlife by conservation, development, and use is necessary to protect and promote the health, safety, and general welfare of its people.*"

Today, Vermont's 14 Conservation Districts work directly with landowners, communities and partner organizations to conserve, protect, and use Vermont's natural resources. The role of each Conservation District varies depending on local concerns, but always includes assisting and encouraging the responsible use of natural resources by providing technical assistance, implementing projects, and creating educational opportunities.

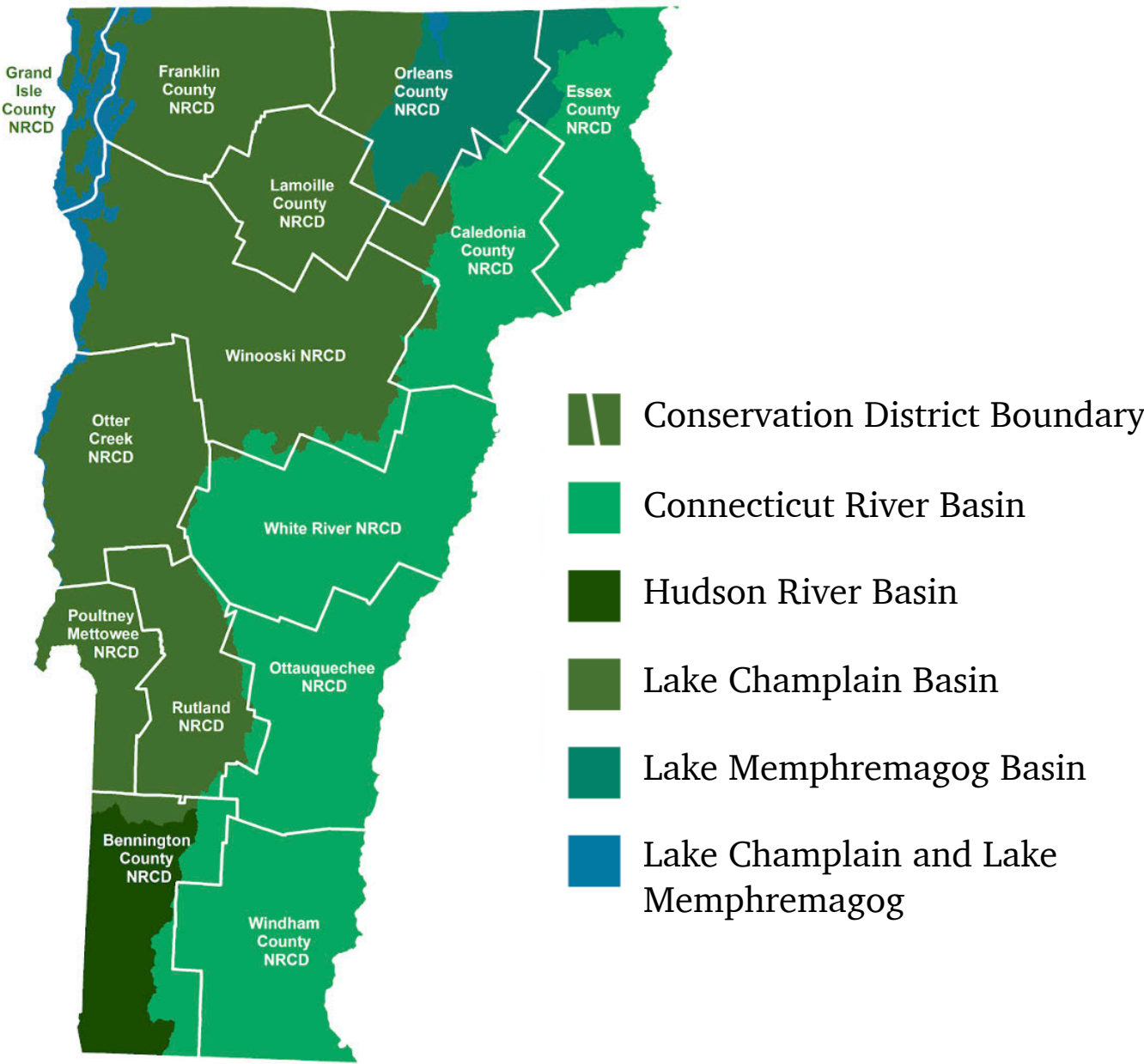
Conservation Districts are supported by **The State Natural Resources Conservation Council (NRCC)**, a state agency that provides strategic guidance, oversight, and operational support. In addition, the **Vermont Association of Conservation Districts (VACD)**, a not-for-profit membership association, represents and supports Conservation Districts, and implements state-wide programs.

[Visit our website to learn more.](#)

*10 V.S.A. § 701



Which Conservation District do you belong to?



Click to learn more

- [Bennington County NRCD](#)
- [Caledonia County NRCD](#)
- [Essex County NRCD](#)
- [Franklin County NRCD](#)
- [Grand Isle County NRCD](#)
- [Lamoille County NRCD](#)
- [Orleans County NRCD](#)
- [Ottauquechee NRCD](#)
- [Otter Creek NRCD](#)
- [Poultney Mettowee NRCD](#)
- [Rutland NRCD](#)
- [White River NRCD](#)
- [Windham County NRCD](#)
- [Winooski NRCD](#)



Agricultural programs

Conservation Districts work with farmers to collect soil and manure samples, complete Conservation and Nutrient Management Plans, and access financial assistance to implement best management practices.

These efforts enable farmers to implement practices that reduce cropland erosion, decrease sediment and nutrient losses and promote water quality and soil health.

Photo: Bennington County NRCD and volunteers planting over 200 native tree species at Merck Forest & Farmland Center.

Agricultural programs by the numbers...

610

Farms assisted by Conservation
Districts across Vermont

47

Best management practices installed to
reduce sediment and pollutants from
agricultural land

95

Nutrient Management Plans
developed and updated

12,527

Acres of agricultural land assessed
for water quality concerns

1,091

Soil samples collected and analyzed

9,128

Tree & shrub stems planted to filter
runoff from agricultural land

861

Water quality monitoring samples
collected and analyzed

13,264

Linear feet of fencing installed to keep
livestock away from streams to improve
water quality

32.63

Acres of protective vegetative
plantings completed on farms



Planting Trees for Streams

Merck Forest and Farmland Center has been operating as a non-profit, demonstrating sustainable farming and forestry practices for over 60 years. In 2019, **Bennington County NRCD** and Merck planted 212 trees along a small stream to establish a permanent riparian zone that will help reduce nutrient runoff and soil erosion and improve aquatic habitat. Water drained from this area will filter through the newly planted area before traveling downstream.

Over the next two years, the **Bennington County NRCD** will work to maintain and protect the trees. Merck will support these efforts for a total of ten years. The goal is to optimize carbon sequestering capabilities and ecosystem services provided by the riparian zone.

Photo: Bennington County NRCD and volunteers planting over 200 native tree species at Merck Forest & Farmland Center.

Reducing Phosphorus with Best Management Practices


Orleans County NRCD and partners have focused on improving water quality through the use of Best Management Practices (BMPs) throughout the Stearns Brook watershed, listed as stressed waters by Vermont DEC due to agricultural and gravel runoff. Morin Farm, within the Stearns Brook Watershed, sought to place a permanent conservation easement on the farm, 32 years after the original purchase. As part of the easement agreement, the landowner agreed to address all Required Agricultural Practices (RAPs), including improved herd management practices in a heavy use production area adjacent to the waterway.

Elevated levels of phosphorus were discovered in the unnamed waterway that runs through the Morin farm by the **Orleans County NRC**D through the LaRosa Volunteer Water Quality Monitoring program. Samples were collected in 2017, 2018 and 2019 at two locations, above and below the farm. In 2019, a new heavy use area barnyard project was installed with funding from the VT Agency of Agriculture, Food and Markets' Best Management Practices program. Additionally, with funding from the **Orleans County NRC**D **USDA Regional Conservation Partnership Program**, exclusion fencing, alternative watering system, stream crossings and laneway projects were installed. Water samples from below the farm saw an 84% reduction in phosphorus loading, a testament to implementing Best Management Practices to meet the RAPs!

Photos: Morin Farm before & after best management practices, including livestock exclusion, were implemented.

[Click here for the full story.](#)





Andre Morin believes that farm conservation work that helps water quality *“is good because everybody uses rivers and lakes and if we don’t keep them clean then we will all pay the price. When one farm here and another farm there does a project like this it adds up to have a bigger effect, and I am proud to be a part of that work.”*

Photo: Landowner Andre Morin on his farm Vermont.

A black sign with white text and a logo, standing in a green field with mountains in the background. The sign reads "Thank our farmers for the view!" and includes the Lamoille County Conservation District logo, Instagram handle "@lamoillecountycd", and website "www.lcnrcd.com".

Thank our farmers for the view!


@lamoillecountycd
www.lcnrcd.com

Education & Outreach

Conservation Districts work with communities, land users, towns, students and groups around the state to increase education and training opportunities centered around Vermont's natural resources.

Photo: "Thank our Farms for the View!" sign on the border of working land within Lamoille County.

Education & Outreach by the numbers...

130

Online educational materials
produced

147

Workshops & Outreach events
hosted by Conservation Districts

3,333

Participants engaged in district
workshops & outreach events

1,360

Youth reached through Conservation
District outreach efforts

656

Customers for Conservation District
Plant, Trout, and Bulb Sales

37

Scholarships, camperships, and
internships offered through
Conservation Districts

62

Town meetings attended or presented
at by Conservation Districts

A Special Thank You to Our Farmers

In order to best support local farms, the **Lamoille County NRCD** created a multi-layered educational initiative. The first objective was to help residents, and the annual leaf peepers, understand that farmers have opened up some of Vermont's most inspiring and beautiful landscapes. "Thank Our Farmers for the View" signs across county fields reminded residents that a beautiful landscape is a working one. Ultimately, the goal of the signs was to promote awareness of troubles plaguing small Vermont farms, and to support them by encouraging local buying.

A cultural celebration featuring local artists and students from People's Academy culminated this initiative. They visited area farms, drawing inspiration from the landscape through paintings, prose, and historical research. The paintings were displayed at River Arts, a non-profit community arts center.

The work with farmers also inspired the creation of the Lamoille County Farm Grocery Guide, a local buying resource that helps to connect county residents with their neighboring farms, keeping more dollars within the county.

Photo: Art inspired by Lamoille County farms, displayed at River Arts, a non-profit community center.



Taking Conservation to the Web

Kristen, Conservation Specialist for the **Winooski NRC**D, hosted a virtual workshop on how to build a rain barrel through her work with the Rethink Runoff Stream Team.

[Watch video here.](#)



Youth Creates Nature Guides

To connect community with conservation, Franklin County NRC D created nature guides with help from Richford and St. Albans day campers. The guides feature camper observations of the natural world.

[Click here for the full nature guides.](#)

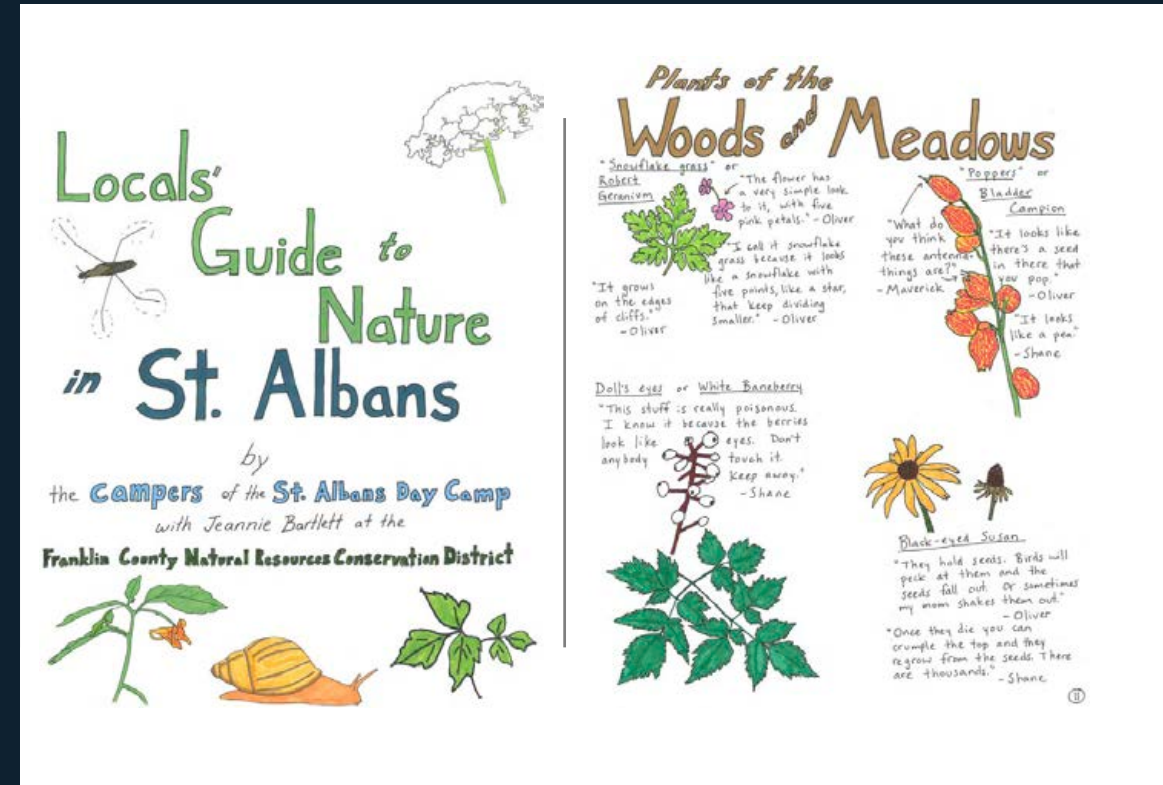


Photo: Pages taken from the Local's Nature Guide to St. Alban's, created by Franklin County NRC D.

Workshops And Webinars Hosted By Conservation Districts

Backyard Invasives ✨ Birding On The Farm ✨ Build Your Own Rain Barrel
✨ Christmas Tree Growing ✨ Dam Safety And Ownership Rules ✨ Farmer's
Forum: Building A Producer Social Network ✨ Forests In Peril: The
Emerald Ash Borer In Vermont ✨ Growing Hemp In Vermont ✨ Growing
Shiitake Mushrooms ✨ Horse Owners: Water Quality Protection
Regulations For Farmers ✨ How To Launch Clean Water Projects ✨ Intro To
Invasive Plants ✨ Invasives In The Woods ✨ Non-chemical Invasive
Species Management ✨ Preventing Establishment Of Invasive Species ✨
Responsible Herbicide Use In The Control Of Invasive Plants ✨ Sustainably
Managing Your Sugarbush ✨ Today's Farmers, Tomorrow's Watershed
Contractors ✨ Trees For Streams: Working Woodlands ✨ Water Quality In
Lake Champlain Public Forum



Conservation & Restoration Work

Conservation Districts regularly implement conservation projects and coordinate with partners to protect and restore waterways, wetlands, and natural resources across the state.

These projects improve river corridor and floodplain function, support lake restoration and forestry conservation, and strengthen rural fire protection efforts.

Photo: Greeter, Sam Koslowsky, performs an inspection at Harriman Reservoir.

Conservation & Restoration by the numbers...

18

Rural fire protection projects installed

61

Landowners received technical assistance or partnered on conservation projects

21.46

Acres of vegetative buffers planted to protect streams

15,110

Tree stems sold by Conservation Districts to be planted across Vermont

6

Stream miles reconnected to restore natural flow

6,455

Tree and shrub stems planted across Vermont

72

Towns received technical assistance or partnered on conservation projects

1,300

Linear feet of berm and high shoulder removal to encourage better drainage

35

Conservation and restoration projects designed



A Lesson in Strategic Conservation

Once established, an invasive species is almost impossible to eradicate. This year, **Windham County NRCD** worked to prevent the introduction of aquatic invasive species, such as the Eurasian milfoil, to maintain the quality of Harriman Reservoir, Somerset Reservoir and Lake Raponda. With a sharp uptick in boat traffic this year, due to socially distanced recreational activities, the **Windham County NRCD** supported the management of greeters and volunteers at public access boat launches. This long-term, sustainable plan of educating the public about best practices, and performing boat inspections, not only prevents unwanted introductions but collects valuable data on potential routes for spread.

Photo: Volunteer greeters staff the boat launch at Lake Raponda.

Celebrating Lakeshore Landowners

This year, **Poultney Mettowee NRC**D and the Lake St. Catherine Association presented 9 shoreline property owners with 11 Lake Wise Awards, recognizing their outstanding efforts to protect the water quality and habitat along the shoreline of Lake St. Catherine.

Assessments of their properties led to the implementation of 25 water quality projects. Led by **Poultney Mettowee NRC**D, projects included buffer plantings, rain gardens, infiltration steps, and improved culvert outfalls.

Learn more about the [Lake Wise program](#).





Improving Flood Resilience on Forest Roads

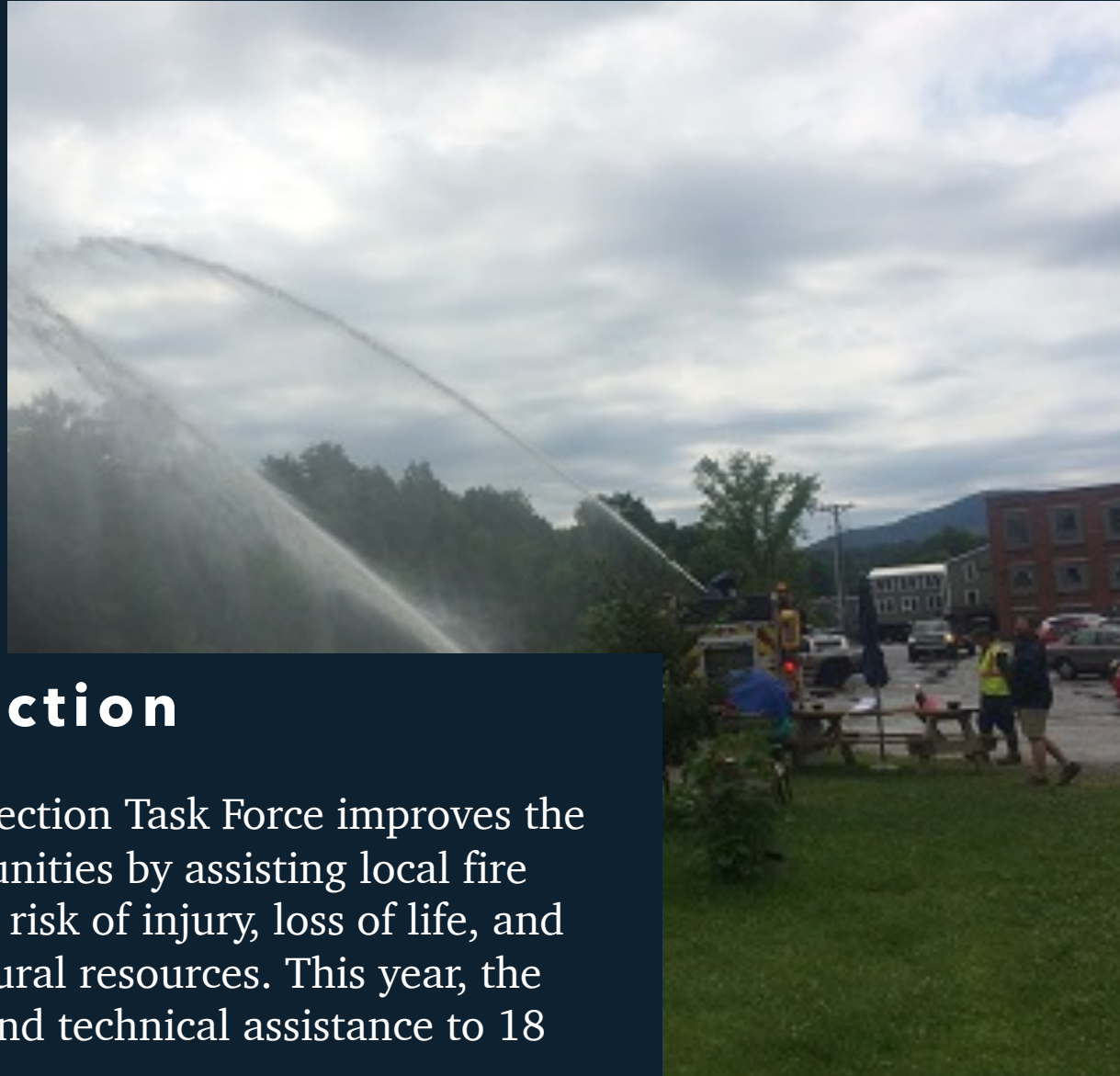
Poultney Mettowee NRCDC utilized funds from a Lake Champlain Basin Program Pollution Prevention grant to help landowners in the high-quality Mt. Hoag forest block decrease erosion on their forest roads. Three property owners participated, and the Poultney Mettowee NRCDC worked with a local excavator operator to decommission steep sections of road, add water bars, and stabilize erosion steps where steep seasonal drainage ways crossed logging roads. This work was part of a larger watershed-scale flood resilience project undertaken in partnership with the High Meadows Fund and the Rutland Regional Planning Commission.

Photo: The Mt. Hoag forest sprouting new life after construction to decrease erosion on forest roads.

A dry hydrant installation in North Bennington



A successful flow test of a newly installed dry hydrant



Firefighters in Townshend ensuring the dry hydrant intake is properly placed



Rural Fire Protection

The Vermont Rural Fire Protection Task Force improves the safety and welfare of communities by assisting local fire departments in reducing the risk of injury, loss of life, and damage to property and natural resources. This year, the program provided funding and technical assistance to 18 towns across the state.

A photograph of a dirt road curving through a forested landscape. On the right side of the road, a new stone-lined ditch has been installed, filled with grey gravel. The background features a steep hill covered in dense evergreen trees. A red-roofed house is visible on the right side of the hill. Power lines run across the sky. A dark blue text box is overlaid on the left side of the image.

Stormwater Projects

Conservation Districts work with towns and landowners to implement rain gardens, construct sediment basins, restore natural infiltration systems, reduce causes of erosion, retrofit existing stormwater practices and more to reduce and treat runoff.

Photo: Newly installed stone-lined ditches by Essex County NRCD on Todd Hill Road in Cannan, VT.

Stormwater Projects by the numbers...

71

Stormwater practices identified
within the creation of 4 new
Stormwater Master Plans

7

Acres of impervious surfaces
treated for stormwater runoff

12

Landowners supported the
installation of practices identified in
Stormwater Master Plans

47

Acres of total drainage treated

15

Towns partnered with on municipal
stormwater efforts

7

Road inventories completed to aid in
the reduction of stormwater-related
erosion

37

Stormwater projects designed and
ready for implementation



A Stormwater Retrofit

An eroding stormwater system in Lyndonville, flagged in the town's Stormwater Master Plan, was retrofitted to improve performance deficiencies. Implemented by **Caledonia County NRCD**, storage capacity of the stormwater basin was increased, eroding flow paths were stabilized, and the outlet was raised to promote greater infiltration.

The project significantly reduced the amount of sediment entering the stormwater system and discharging to the Passumpsic River, effectively treating drainage from 19 residential acres, of which 3.27 acres are impervious surface.

Photo: Armored spillway on left; expanded sediment basin in background with new raised outlet grate to promote infiltration and drop out sediment.

Better Roads for Vermont

Essex County NRCD assisted 4 towns in completing required Road Erosion Inventories for the Municipal Roads General Permit (MRGP). Through the analysis of the road slope, soil erodibility, and proximity to streams, roads are rated to highlight the town's priorities over the next several years. Plans include updating drainage systems to meet basic standards and reducing stormwater-related erosion to meet a TMDL or water quality restoration effort. To help towns meet permitting requirements, **Essex County NRCD** implemented projects including culvert replacements, stone-lined ditches, road crown improvements and hydroseeding, with their very own *Shared Hydroseeder Program*, to mitigate stormwater discharges.

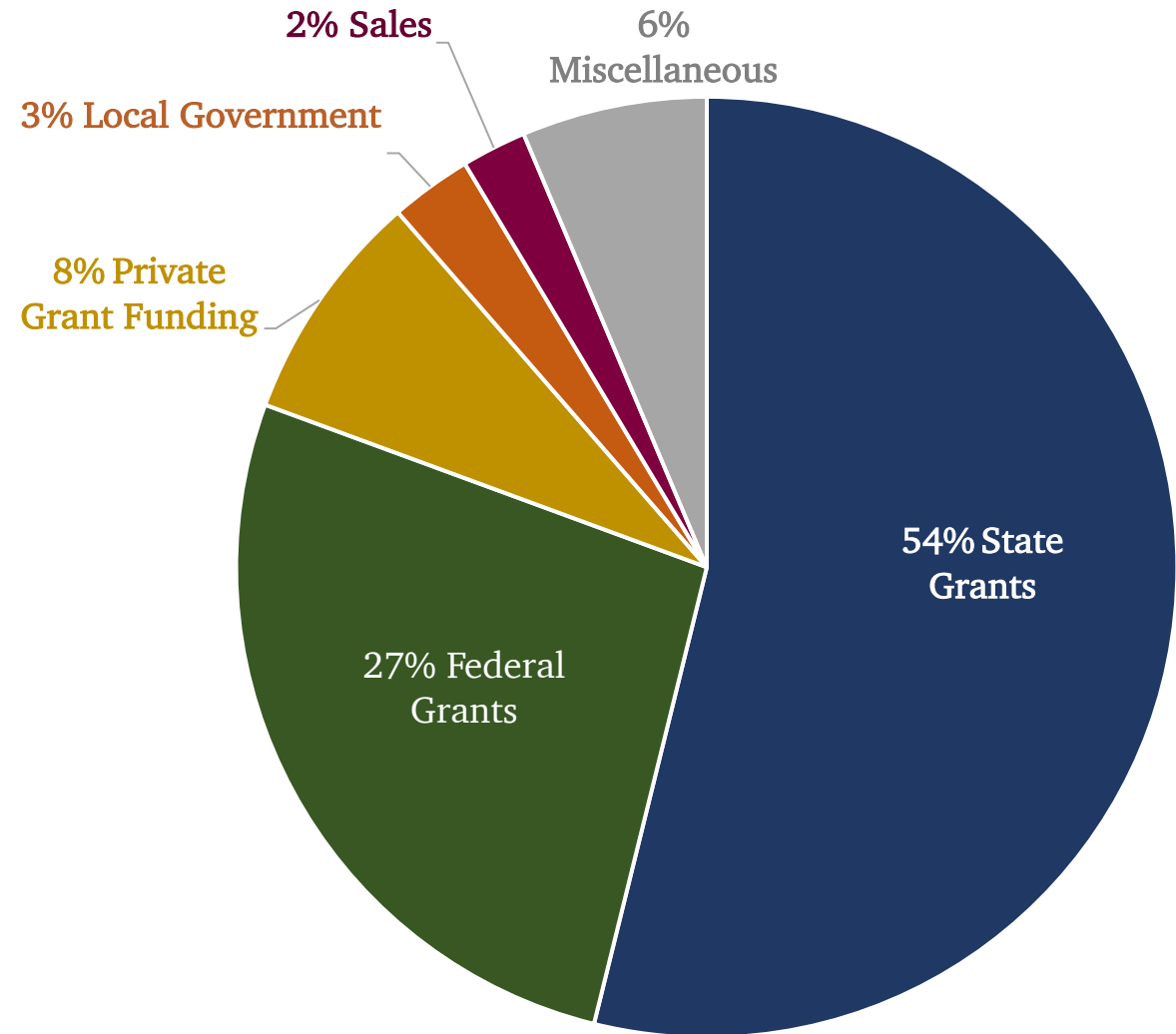


Photo: Before & After a culvert replacement in the town of Victory, Granby Road. Replacement completed by Essex County NRCD through a Better Roads grant.

Total Fiscal Year 2020 Funding

The Vermont Natural Resources Conservation Districts, along with VACD and NRCC, had a combined budget of \$3.7 million. Districts and VACD staff managed a total of 140 grants, a record number across the organizations.

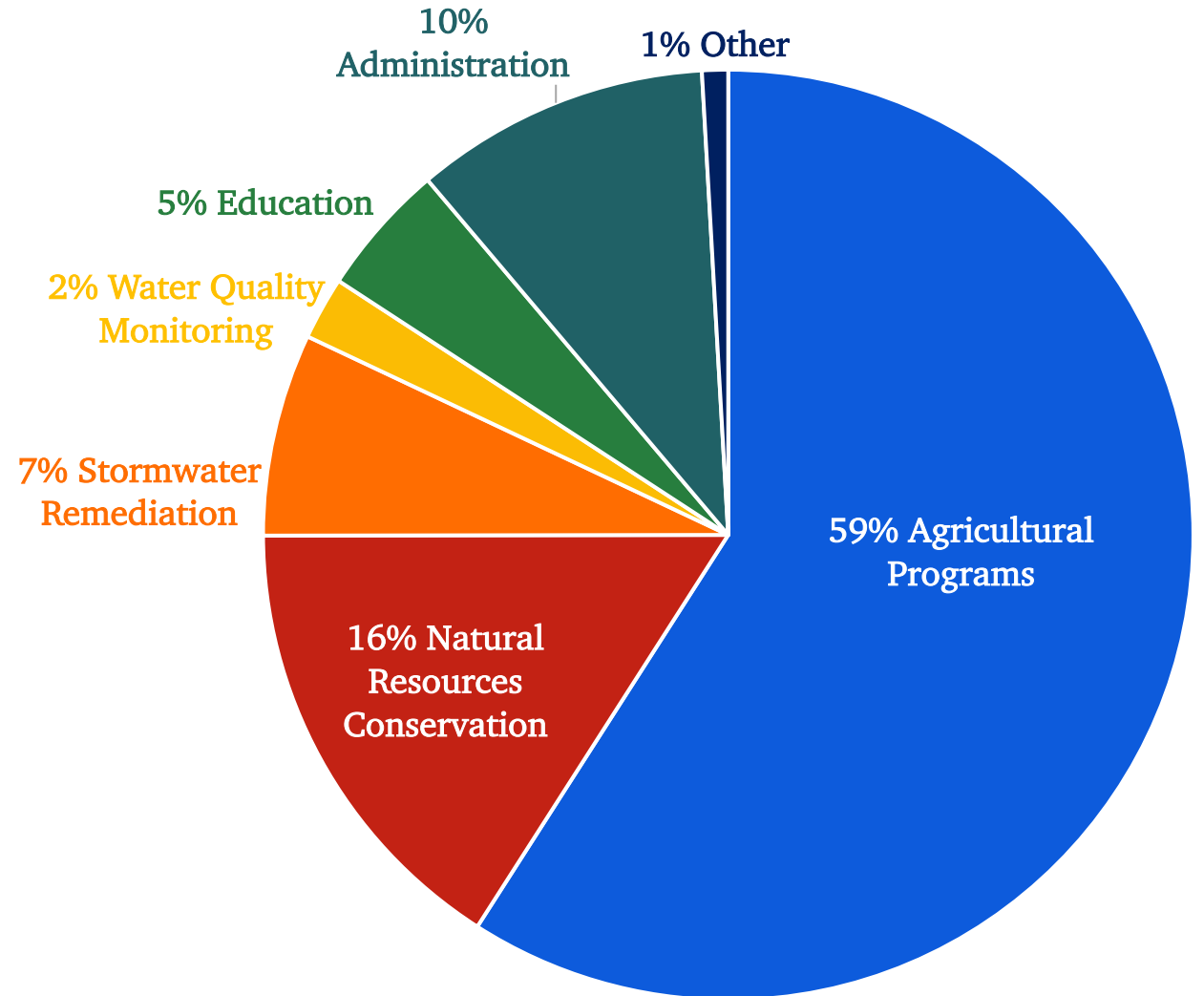
FISCAL YEAR 2020 TOTAL FUNDING



Vermont NRCDs Fiscal Year 2020 Programs

Vermont's 14 Natural Resources Conservation Districts act as facilitators linking communities, landowners, and producers with the appropriate federal, state, local, and private programs to meet their management objectives. Our program focus also aligns with the state's objective of meeting water quality restoration targets outlined in the Total Maximum Daily Loads (TMDL), or the maximum amount of a pollutant a waterbody can receive and still meet Vermont water quality standards. Through TMDL source assessment, Conservation Districts were able to tailor their programs to address the unique needs of their communities and Vermont's environmental concerns, specifically water quality.

FISCAL YEAR 2020 STAFF SUPPORT OF PROGRAM FOCUS AREAS



Thank you to our Partners!

USDA Natural Resources Conservation Service

Vermont Agency of Agriculture, Food & Markets

Vermont Department of Environmental Conservation

Lake Champlain Basin Program

U.S. Fish & Wildlife Service

PUR Projet

Vermont Division of Public Safety, Division of Fire
Safety

VT Department of Forests, Parks and Recreation,
Green Mountain National Forest

USDA Farm Service Agency

National Association of Conservation Districts

Connecticut Council on Soil and Water Conservation

University of Vermont Extension

Vermont Housing & Conservation Board

Vermont's Regional Planning Commissions

Watersheds United Vermont

**...and to the landowners, towns, communities, students,
watershed groups, and land trusts that make our work
possible!**

Contact your Natural Resources Conservation District

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