



PATRICK LEAHY

Lake Champlain
Basin Program

REPORT OF ACTIVITIES

FY2023

(October 1, 2022 – September 30, 2023)

Kerry Crowningshield

TABLE OF CONTENTS

INTRODUCTION	1
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 CLEAN WATER	3
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ENHANCED BEST MANAGEMENT PRACTICES

Irish Farm Stormwater Improvements	4
Lake Forest Condominiums Stormwater System Upgrade and Stream Daylight	5
Mt Norris Boy Scout Camp BMP Final Design	6
Nutrient Quantification and Phase 1 Restoration Design of Mill Brook Floodplain in the Winooski River Watershed	7
Planning/Prioritization for Stormwater Projects in the McCabe's Brook Watershed	8
Salt Runoff Reduction Project	9
Smugglers Notch Scenic Highway and State Park – Streambank and Roadside Revegetation BMPs	10

INNOVATIVE AGRICULTURE

Tile Drainage System Monitoring and Assessment in the Northern and Southern Lake Champlain Basin, and Comparing Two Active Media Filters to Remove Phosphorus from Tile Drainage Water in the St. Albans Bay Watershed, VT	11
--	----

LARGE IMPLEMENTATION

Burlington Country Club & Spear Street Gravel Wetland	12
Clinton County Interseeded Cover Crop Project	13
East Branch Restoration Plan – Project Area 2, Town of Jay, Ausable River Watershed	14
Essex County Riparian Buffer Program	15
Mt Norris Boy Scout Camp Stormwater and Lakeshore BMP Implementation and Lamoille Union High School Green Stormwater BMP Installation	16
Plattsburgh City/Town Illicit Discharge Detection and Elimination Study, Phase 3	17
Protecting Heart Lake's water quality and beach	18
Removal and Replacement of Road Crossing Structure - Black Falls Road, Montgomery, VT	19
Water Quality Improvement Project	20

POLLUTION PREVENTION AND HABITAT CONSERVATION

Demonstrating Nature-based Driveway Solutions in the Flower Brook Watershed	21
Lake Champlain Agrichemical and Fuel Storage	22
Michelli Drive Dry Wells	23
Plattsburgh City/Town Illicit Discharge Detection and Elimination Study, Phase 2	24
Purchase Brook AOP and Flood Resilience Culvert Replacement Design	25
Riparian buffer establishment under difficult site conditions using various management techniques	26
Siboinebi Path Habitat Restoration	27
St Catherine Court Neighborhood Stormwater Infiltration Project	28

PLANNING

Completion of the planification for the revitalization of the Lake Parker watershed by characterizing the lake's sediments in order to determine their contribution to water pollution	29
Concept Design for Ahead of the Storm Demonstration Site in Hinesburg	30
East Branch Restoration Plan - Project Area 7 Engineering Design Development Town of Jay, Ausable Watershed	31
Establishing Bankfull Discharge and Hydraulic Geometry Relationships, Ausable River Watershed	32
Identify & Advance Implementation in Winooski Conservation District	33
Illicit Discharge Detention and Elimination of Sutton, Quebec in the Missisquoi Bay, Phase 1	34
New York Non-Point Source Subwatershed Assessment Plan Update	35
Stormwater and Stream Project Development in the Poultney Mettowee Watershed	36
Stormwater Reduction in the Town of Proctor	37

Sucker Brook Phosphorus Loading Assessments	38
Warren County Culvert Assessments and Asset Mngement Plan	39

RESEARCH

Biological Index Development: A “Three-legged Assessment Stool” for Lakes within the Lake Champlain Basin	40
Discovery Acres: A Water Quality Research and Education Site in the St Albans Bay Watershed	41

TECHNICAL PROJECTS

Achieving Verifiable Phosphorus Removal from Tile Drains Discharging to Lake Carmi Tributaries	42
Agricultural Engineering Training in New York	43
Bioretention soil specifications evaluation and phosphorus reduction accounting study: combined project	44
Caspian Lake Watershed Action Plan	45
Castleton Main Street Drainage Scoping Study	46
Clinton and Essex County Small Farm Phosphorus Reduction Project	47
Consequences of winter perturbations on nutrient export to Lake Champlain	48
Cyanotoxin Monitoring in the Lake Champlain Basin 2023-2025	49
Developing a Comprehensive Binational Phosphorus Mass Balance Model for the Missisquoi Bay	51
Developing Skills of TAPs to Assist Farmers with Soil Health Strangers	52
Evaluating Performance of Media Filters to Remove Phosphorus in Stormwater Pond Outflow	53
Expanding Vermont’s Functioning Floodplain Initiative (FFI) to Advance the Science and Conservation of Healthy Stream, Riparian, Wetland, and Floodplain Ecosystems	54
Fairfield Pond Lake Watershed Action Plan	55
Flower Brook Floodplain Function and Flood Resilience Assessment	56
Forage fish community monitoring in Lake Champlain	57
Going deep: evaluating deep and shallow water drivers of mercury in Lake Champlain fish	58
Hidden View Farm Cover Crop Seeder Integration and Reduced Tillage Planting Project	59
Identifying and Fixing Erosion Issues on Private and Park Roads in the Lake Carmi Watershed	60
Improving South Hero’s Keeler Bay and Other Shoreline Areas: Project Identification through the Assessment of Adjacent Streams, Lakeshore, and Wetlands	61
Lake Assessment and Watershed Action Planning for New York Lakes	62
Lake Champlain Basin Dam Removal	63
Lake Champlain Basin Dam Prioritization Tool for New York	64
Lake Champlain Committee Volunteer Coordination and Training for the Lake Champlain 2022 Cyanobacteria Monitoring Program	65
Lake Champlain Committee Volunteer Coordination and Training for the Lake Champlain 2023 Cyanobacteria Monitoring Program	66
Lake Iroquois Watershed Action Plan	67
Lake St. Catherine Watershed Action Plan	68
Mirror Lake monitoring and Lake Champlain Basin de-icing salt study	69
New York Component of the Lake Champlain Long Term Monitoring Program 2022	70
NRCC Trees for Streams Program	71
Quantifying Phosphorus Reductions for Proposed Projects in NY Reduction Plan	72
Quantifying the road salt pollution load to Mirror Lake and the Chubb River (Lake Placid, NY)	73
Rapid detection of Atlantic salmon and trout in the Boquet and Ausable Rivers using environmental DNA	74
Reconnecting VT Rivers through Dam Removal in the Lake Champlain Basin	75
Rock River Geomorphic Assessment	76
Rock River sub-watershed drainage network system	77
Securing and Restoring Aquatic Habitat Connectivity in the North Branch Boquet River Watershed	78
Targeted interventions to reduce agricultural runoff and erosion in affected areas of the Missisquoi Bay Basin	79
Temporary Manure Stacking in Northern New York	80
Using a 3-Dimensional Coupled Hydrodynamic-Aquatic Ecosystem Model to Evaluate Alternatives for Controlling Internal Phosphorus Loading in Missisquoi Bay	81
Using multi-metric modeling, field surveys, and online spatial tools to support conservation and management for flood resilience, water quality, and native species habitat	82
Washington County Brine Maker	83

SMALL IMPLEMENTATION

Creating a Critical Mass of Lake Stewards on Lake St. Catherine: Year three of non-pointpollution source projects: An exciting new collaborative with Castleton Universityt	84
Growing a Community of Stewards on Lake St. Catherine: Continued NPS projects and collaboration with Castleton University	85

Integrating Cover Crop in Corn Silage Production Systems to Meet Agronomic and Conservation Goals	86
Pollution Reduction in Lake Champlain	87
Swanton Beach Stormwater Design and Implementation	88



Healthy Ecosystems

AQUATIC INVASIVE SPECIES SPREAD PREVENTION & MANAGEMENT

Acquisition of a Boat Wash and Decontamination Unit for Selby Lake in the Missisquoi Bay Basin in Québec	90
Adirondack AIS Spread Prevention: Protecting the Saranac and Ausable Watersheds	91
Adirondack Aquatic Invasive Species Spread Prevention Watercraft Inspector Program: Second Pond, Lake Flower, Buck Pond State Campground, and Lake Placid Village Launch	92
AIS River Steward for the Ausable River/Northern Champlain Region, NY (2023)	93
AIS River Steward for the Ausable River/Northern Champlain Region, NY (2022)	94
AIS Spread Management & Prevention Summer 2023	95
Bristol Pond and Monkton Pond Boat Launch Steward Initiative and Lewis Creek Knotweed Initiative	96
Bristol Pond and Monkton Pond Boat Launch Steward Initiative	97
Chazy Lake Watershed Initiative EWM Removal	98
Follensby Clear Pond Aquatic Invasive Species Removal 2023	99
Follensby Clear Pond Aquatic Invasive Species Removal 2022	100
Invasive species and water chestnut control at Missisquoi NWR 2023	101
Invasive species and water chestnut control at Missisquoi NWR 2022	102
Knockout Knotweed: the Knotweed Menace	103
Knockout Knotweed: Return of the Jedi	104
Lake Carmi Boat Launch Steward	105
Lake Champlain Aquatic Invasive Patrollers Project	106
Lake Dunmore Greeter Program	107
Lake Eden Aquatic Invasive Spread Prevention and Management	108
Lake Elmore Eurasian Watermilfoil Management Plan and Greeter Program	109
Lake George AIS Outreach Program 2020	110
Lake Hortonia Milfoil Management 2022	111
Preventing Aquatic Invasive Species Prevention Through Public Engagement	112
Preventing Aquatic Invasive Species Prevention Through Targeted Removal	113

BIPARTISAN INFRASTRUCTURE LAW - AQUATIC RESTORATION & IMPLEMENTATION

Assessing the Management and Impact of Private Road Crossings in the Lake Champlain Basin	114
Engineering Dam Removal in the Brewster Watershed	115
Engineering Four Winooski River Dams for Removal and Developing Corridor Protection	116
Joe’s Brook Culvert Replacement	117
Lockwood Brook Culvert Replacement	118
Mettowee River Headwaters AOP - Sugar House Lane Barrier Removal	119
Reconnecting Vermont Rivers through Dam Removal in the Lake Champlain Basin	120
Restoring Access to Upstream Habitat on a Tributary to Stannard Brook	121
Right-sizing a culvert on Phelps Brook and Roscoe Road, Boquet	122
Saranac River Reconnection Project	123

HABITAT AND NATIVE SPECIES CONSERVATION

Long-Term Monitoring of a Myco-Phytoremediation Project for Phosphorus Mitigation and Pollinator Habitat at Shelburne Farms	124
Multi-Year Habitat Monitoring at Johnsons Mill Dam Removal	125
Native Plantings and Soil Health for Healthy Streams, Ausable River Watershed	126
Siboinebi Path Habitat Restoration	127
Stewarding Riparian Forests for Clean Water and Healthy Ecosystem	128

LARGE GRANTS

Protecting 100 acres of woodlands and wetlands at the headwaters of the Pike River watershed	129
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PROGRAM GRANTS

Boat Launch Stewards 2023 (LCBP)	130
Champlain Canal Barrier - Phase 2	131
Distribution and Ecological Impacts of Round Goby in the Lake Champlain Region (Year 1 Only) 132 Lake Champlain Lake	

Lake Champlain Aquatic Nonindigenous Species Information System Creation	133
Lake Eden Eurasian Watermilfoil Aquatic Plant Survey	134
Missisquoi Bay Boat Launch Stewards 2022	135

RESEARCH GRANTS

Evaluation Functional Uplift and Microhabitat Effects of Stream Restoration Projects	136
Evaluating Habitat Function in Floodplain Natural Communities of the Lake Champlain Basin to Support Conservation and Restoration Prioritization	137
Lake Champlain Aquatic Nonindigenous Species Information System Creation	138

SMALL GRANTS

Franklin County Riparian Buffer Stewardship and Enhancement	139
Invasive Management of Delta Park	140
Native riparian species conservation and monitoring in a Lake Champlain sub-basin	141
Restoring Forest for Improved Habitat and Water Quality	142
Stewarding Riparian Forests for Clean Water and Healthy Ecosystems	143



THRIVING COMMUNITIES 145

ARTIST-IN-RESIDENCE

UnderWATER, UnderGROUND: Black/Indigenous Creatives Historize Charlotte, Vermont's Sea Change	146
Watershed Voices	147

COLLECTIONS

Canal Collections Inventory, Rehousing, and Digitization	148
Cataloging and Preservation of the Sheridan Iron Works Collection	149
James Wilson: America's Globe Maker	150
Historic Saranac Lake Collections Project	151
Renewal of the Heart's Delight Farm Heritage Exhibit Wayside Walk	152
Revolutionary War Collections Inventory	153
Stewardship, Interpretation, and Accessibility of Bixby Library's Objects and Artifacts Collections	154

CONSERVATION AND COMMUNITY

LaChute River Walk Interpretive Trail Improvement Project	155
Brome-Missisquoi's Prohibition Heritage Circuit	156
Canal Boat Photogrammetry Modeling and Outreach	157
Stewardship and Interpretation of the Interconnected Waterways of Bixby Library's Five Towns	158

INTERNSHIP

Adirondack Experience Library Historical Guidebook Processing Internship	159
Collections Management training for a student of museum studies, anthropology or history	160
Graduate Internship Program – Ticonderoga Historical Society	161
Internship in Museum Interpretation for the Public	162
Internship in Object and Artifact Research and Outreach	163
Public History and Education Internship at Rokeby Museum	164

LOCAL HERITAGE

Connecting Cultures in the Missisquoi River Basin	165
Fostering Historical Thinking in Students from the North Country and Beyond 2023	166
Fostering Historical Thinking in Students from the North Country and Beyond	167
Pathway to America 250	168
STEM at the Seeds of Renewal Gardens	169
Storytelling to Build "Sense of Place" and Natural Heritage Stewardship	170
The History of the Catholic Summer School of America - Cliff Haven, New York	171

SPECIAL PROGRAM

Celebrating the legacy of the Clean Water Act in the multinational geography of the Lake Champlain Basin	172
Champlain Canal Stories	173
Exploring Our Cultural Waters	174
Signs of Agriculture in the Intervale: 13,000 Years ago to Today	175

Spitfire Preservation and Access	176
Supporting the Lake Champlain Basin Program's DEI Programming & Planning Process	177
The Champlain Canal at 200 Book Project	178
The Clean Water Act (CWA) and the Lake Champlain Basin: Origins, Implementation, and Impacts	179
The Clean Water Act at 50	180

ORGANIZATIONAL SUPPORT

Adirondack Lakes Alliance: supporting lake and river associations in the Lake Champlain Basin and beyond	181
Amplifying the MRBA's Future	182
Building Capacity to Expand Waterway Stewardship in the Lake in the Lake Champlain Basin	183
Capacity and Outreach Expansion	184
Chazy Lake Watershed Initiative Organizational Support	185
Community Outreach Equipment	186
Coordinating for a Successful Financial and Organizational Transition	187
CWICNY Strategic Planning and Development	188
Diversity, Equity and Inclusion Training	189
FNLIC Project and Organizational Outreach	190
Fostering partnerships to achieve a shared goal: Water quality improvements in the South Lake watershed	191
Franklin County Natural Resources Conservation District Organizational Support	192
Friends of Northern Lake Champlain Presentation and Office Equipment Upgrade 2021	193
Improving Inventory Tracking and Sales at the Intervale Conservation Nursery	194
Increased Organizational Capacity for Scientific River Diving and River Research	195
Justice, Equity, Diversity, and Inclusion (JEDI) as a Foundation for Clean Water Work in the Mad River Valley	196
Lake Champlain Committee Technology Upgrade	197
Lewis Creek Association Strategic Plan	198
Organizational Capacity: Technology, Financial, and Systems	199
Sparking efficient and effective growth at Poultney Mettowee NRCD	200
Strategic Planning to Build Capacity within Friends of the Mad River	201
Support for Friends of the Winooski to Increase Capacity	202
The best Strategic Planning "NOTION" to implement "Opportunities for Action" at Lake St. Catherine	203
Tree Planting Monitoring and Stewardship Training	204
Website Update	205



INFORMED AND INVOLVED PUBLIC 207

LARGE EDUCATION & OUTREACH

Ahead of the Storm Guidance Manual and Community Outreach	208
Ahead of the Storm: School Stormwater Implementation Pilot Project	209
Augmented Reality Sandbox Model	210
Continuing the New York Watershed Alliance- Year 5 education activities	211
Continuing the New York Watershed Alliance- Year 3/4 education activities	212
Developing Consistent and High-Quality Skills Training in Clean Water BMP Implementation on Sub-jurisdictional Small Sites	213
Developing the New York Watershed Alliance 2020	214
ECHO Watershed Science Education and Outreach Program	215
Education Campaign to Bring Nutrient Recycling Practices to Lake Champlain	216
Education on Agroforestry	217
Essex County Educational Events	218
Face the River: A Montpelier Collaboration	219
Free VT Rivers Dam Removal Story Map	220
From Arrowhead to Yellow Pond Lily: An Outreach Campaign for Lake Champlain's Native Aquatic Plants	221
Improving Communications through Updated Informational Kiosks at Winooski Valley Park District Parks	222
Increasing Access to Field Trips in 2022	223
Lake Champlain Mercury Community Science Program	224
Lake George Floating Classroom and Stream Monitoring 2022	225
Multi-Cultural Interpretations on how Pollution impacts the Lake Champlain Watershed	226

Protecting our Waters - An experiential learning module for elementary students that Benefits the whole community .	227
Removing Barriers to Access in 2023 .	228
Restoration Roundup: A podcast to facilitate riparian forest restoration knowledge sharing .	229
The Giant Lake Champlain Basin Map Project, Phase 2 .	230
Upping the Game! Harnessing the power of games and puzzle quests to reach new audiences and enhance Lake literacy in the Lake Champlain Basin .	231
Wind, Waves, and Variables – Lessons about the Lake Champlain Basin 2023 .	232
Wind, Waves, and Variables – Lessons about the Lake Champlain Basin .	233
Wool and Water: Using Fiber Art to Bring Science to Lake Champlain .	234
<i>Your Watershed, Your Lake</i> : an interpretive trail encouraging control .	235

PROGRAM PROJECTS

DEI Video Series .	236
Meet the Scientist and TMDL video series .	237
Public Awareness and Engagement Survey .	238
Stream Wise Award Program Development .	239
Stream Wise Data Collection Application and Streamwise Online Resource Website .	240
Stream Wise (Phase 2) .	241
Stream Wise 2023 Season in the Ausable River Watershed .	242
Stream Wise Pilot Year in the Ausable River Watershed .	243
Stream Wise 2023 Season Pilot Year in the Franklin County Watershed .	244
Stream Wise 2023 Season Pilot Year in the Lake Champlain Watershed .	245
Stream Wise 2023 Season Pilot Year in the Lamoille Watershed .	246
Stream Wise 2023 Season In Missisquoi Headwaters .	247
Stream Wise Pilot Year in the Missisquoi Bay Watershed .	248
Stream Wise Pilot Year in the Pike River (Lake Carmi) Watershed .	249
Stream Wise Pilot Year in the Saranac River Watershed .	250
Streamwise 2023 Season in the Winooski River Watershed .	251
Streamwise Pilot Year in the Winooski River Watershed .	252
Summit to Shore Media Campaign .	253
TMDL Branding and Microsite (Clean Water Commitment) .	254
Vermont Agricultural Water Quality Partnership Coordination .	255
Winooski Watershed Artist-in-Residence Project .	256

SMALL EDUCATION & OUTREACH

A Day at the River .	257
A “Spiny” Project (Phase 2): Focusing on schools and municipalities to protect the spiny softshell turtle and its habitats, Lake Champlain and its tributaries .	258
Ahead of the Storm - School Stormwater Education and Outreach .	259
Champlain-Adirondack Biosphere Network Traveling Exhibit .	260
Community News Service: Stories of the Lake .	261
Connecting the North Branch Nature Center to the North Branch River .	262
Conservation Block Parties: Inspiring Community Action for Water Quality .	263
Creating Meaningful Visitor Experience with a Museum Educator .	264
Creation and distribution of private ponds management documentation .	265
Discovering the Ausable: An Aquatic Stewardship Program 2022 .	266
Diversifying Lake Stewardship .	267
Diversity Access Initiative .	268
Dog River Conservancy Outreach 2021 .	269
Engaging Students and Volunteers in Waterway Stewardship Projects along the Saranac, Lamoille, and Missisquoi Rivers .	270
Franklin County Restoration Connections BioBlitz .	271
Growing Community Action .	272
Guided Watershed Tours: Interpretive Outdoor Trips to Educate Community Members and Inspire Stewardship .	273
Guided Watershed Tours: Interpretive Outdoor Trips to Educate Community Members and Inspire Stewardship .	274
Immersive Maritime Exploration Program .	275
Invasive Plant and Riparian Restoration of the Intervale Service Learning Curricula .	276
Lake Carmi Watershed Workshops and Lake Wise Outreach .	277

Lake Champlain Committee Water Protection Internship Program .	278
Lake Champlain Headwaters Summer Education Program .	279
Lake Champlain Lake George Regional Planning Board Septic Smart Campaign .	280
Late Night for Lake Champlain! Building Lake Champlain awareness through transformative entertainment and comedy .	281
LCC “Don’t P On Your Lawn” Campaign .	282
“Libraries Love Lakes” Events at Lake St. Catherine”, our local celebration of the 50 year anniversary of the Clean Water Act .	283
242 Main Documentary Film, Public Archive and Interactive Exhibit .	284
<i>Molly of Denali</i> PBS Kids Library Play Date Kit .	285
Montpelier Green Stormwater Infrastructure Educational Walking Tour .	286
MRBA Community Water Walks .	287
Native Plants for Water Quality .	288
North County Stormwater Tradeshow and Conference Educational Outreach Event .	289
Northern Lake Champlain Shoreline Socials Event Series .	290
Nulhegan Abenaki Cultural Education Program .	291
Public Access Site Support Program .	292
Riparian Restoration and Public Access Community Workdays at the McCuin Island Preserve, Lamoille River .	293
Saranac River Trail Phase 2 Explorations .	294
Water Quality Awareness in Champlain Basin Communities .	295
Watershed Bound! Creating Watershed Education Opportunities for Upward Bound Teachers and Students in the Lake Champlain Basin .	296
Waterways Stage Collaboration .	297

EXTERNALLY MANAGED PROJECTS 299

Aquatic Connectivity and Barrier Removal Project .	301
Bioengineering and Shoreland Best Management Practices to Restore Living Shorelands and Protect Water Quality .	302
Conservation of the Lamoille River Mudpuppy (<i>Necturus maculosas</i>) Population Using Translocation and Monitoring .	303
Deer Brook Restoration Project .	304
Education and Outreach and Planning for Flood Resiliency .	305
Enhanced Agricultural Practice Implementation 2020 .	306
Enhanced Agricultural Practice Implementation 2021 .	307
Enhanced Agricultural Practice Implementation 2022 .	308
Enhanced Agricultural Practice Implementation & Jewett Brook Treatment Train Easement .	309
Enhanced Agricultural Riparian Buffer Pilot Projects 2021 .	310
Enhanced Agricultural Riparian Buffer Pilot Projects 2022 .	311
Enhanced Implementation of Vermont Environmental Stewardship Program (VESP) .	312
Floodplain Restoration and Functional Assessment .	313
Forest Phosphorus Load Allocation: Developing Assessment and Planning Tools for Implementation of the Lake Champlain TMDLs 2020 .	314
Forest Phosphorus Load Allocation: Developing Assessment and Planning Tools for Implementation of the Lake Champlain TMDLs 2021 .	315
Green Schools Initiative to Meet the Three Acre Stormwater General Permit 2021 .	316
Green Schools Initiative to Meet the Three Acre Stormwater General Permit 2022 .	317
Green Schools Initiative to Meet the Three Acre Stormwater General Permit 2023 .	318
Growing the Lake Wise Program Through Increased Work with Bioengineering Practices .	319
Implementing Methods to Map, Inventory, and Prioritize Non-Municipal Road Improvements in Vermont 2020 .	320
Implementing Methods to Map, Inventory, and Prioritize Non-Municipal Road Improvements in Vermont 2021 .	321
Implementing Methods to Map, Inventory, and Prioritize Non-Municipal Road Improvements in Vermont 2022 .	322
Implementing Methods to Map, Inventory, and Prioritize Non-Municipal Road Improvements in Vermont 2023 .	323
Increased Implementation of Water Quality Improvement Projects in the Lake Champlain Basin of Vermont .	324
Lake Carmi Watershed Restoration .	325
Long-Term Water Quality and Biological Monitoring Project for Lake Champlain .	326
New York Enhanced Agricultural Best Management Practices (BMP) Projects (Year 1 and 2) .	327

New York Flood Resiliency Capacity Building and Implementation	328
New York Forest Loading Inventory and Mapping - Year 1 and 2	329
New York Onsite Wastewater Treatment System Education and Maintenance Incentive Program	330
New York Rural Roads BMP Implementation - Year 1, 2 and 3	331
New York Stormwater Master Planning - Year 1 and 2	332
New York Wastewater Treatment Facility Optimization to Reduce Effluent Phosphorus Year 2 and 3	333
Onsite Wastewater Treatment System Education and Maintenance Incentive Program	334
Program to Expand and Accelerate Wetland Conservation and Restoration in Vermont's Lake Champlain Basin 2019 ..	335
Priority Wetland Aquisition, Restoration, and Conservation in Vermont's Lake Champlain Basin 2020.....	336
Priority Wetland Aquisition, Restoration, and Conservation in Vermont's Lake Champlain Basin 2021.....	337
Priority Wetland Aquisition, Restoration, and Conservation in Vermont's Lake Champlain Basin 2022.....	338
Stormwater Planning, Design, and Construction of Green Stormwater Infrastructure at Public Schools and Vermont State Colleges in the Lake Champlain Basin in Vermont 2018	339
Stormwater Planning, Design, and Construction of Green Stormwater Infrastructure at Public Schools and Vermont State Colleges in the Lake Champlain Basin in Vermont 2019	340
Stormwater Planning, Design, and Construction of Green Stormwater Infrastructure at Public Schools and Vermont State Colleges in the Lake Champlain Basin in Vermont 2020	341
Targeted Organizational Capacity and Workforce Development to Support Implementation of Clean Water Projects ..	342
Targeted Organizational Capacity and Workforce Development to Support Implementation of Clean Water Projects ..	343
Using GSI (Green Stormwater Infrastructure) and Other Technologies to Reduce Combined Sewer Overflows (CSOs) ..	344
Wastewater Treatment Facility Optimization to Reduce Effluent Phosphorus 2019	345
Wastewater Treatment Facility Optimization to Reduce Effluent Phosphorus 2020	346
Water Chestnut Management Partnership 2021 - Lake Champlain Basin	347
Water Chestnut Management Partnership 2022 - Lake Champlain Basin	348
Wetland Restoration and Mapping	349
Winooski Headwaters Targeted Intervention	350

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INTRODUCTION

Record rainfall and flooding in July 2023 were a stark reminder of the water quality and ecosystem health challenges we continue to face in the Lake Champlain Basin.

We are pleased to help support the research, identify the most impactful projects, and provide the funding to help implement work needed to meet these challenges.

In FY2023, we began to bolster our regular offerings of implementation grants with grants supported by

the Bipartisan Infrastructure Law. These projects will provide trees to stabilize eroded riverbanks, protect infrastructure while restoring fish passage on our streams, and prevent the spread of aquatic invasive species.

July's storms demonstrated the value of science and informed decision-making. The network of long-term water quality monitoring stations and sophisticated new buoys that provide real-time data are critical in meeting the challenges ahead.



Megan Humphrey

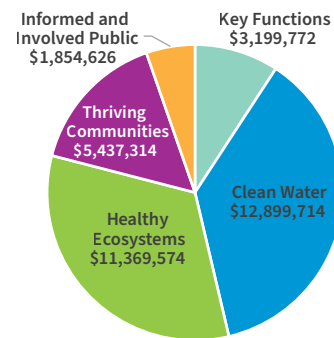
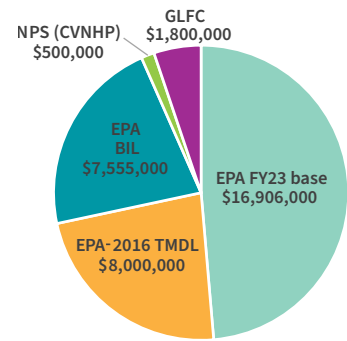


FY2023 Federal Appropriations

EPA Base Section 120	\$16,906,000
EPA-2016 TMDL	\$8,000,000
EPA Infrastructure (BIL)	\$7,555,000
NPS (CVNHP)	\$500,000
GLFC	\$1,800,000
Total:	\$34,761,000

FY2023 Budget Allocations

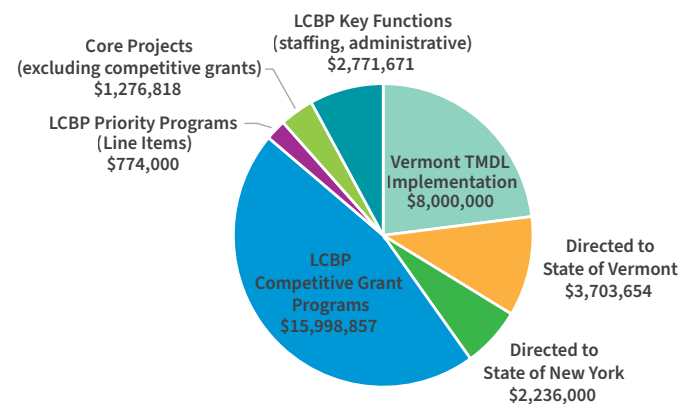
LCBP Key Functions	\$3,199,772
Clean Water	\$12,899,714
Healthy Ecosystems	\$11,369,574
Thriving Communities	\$5,437,314
Informed and Involved Public	\$1,854,626
Total:	\$34,761,000



FY2023 Funds Distribution

	LCBP	Vermont*	New York
Directed to States		\$11,703,654	\$2,236,000
Competitive Grant Programs	\$15,998,857		
LCBP Priority Programs (Line Items)	\$774,000		
Core Projects (excluding competitive grants)	\$1,276,818		
LCBP Key Functions (staffing, administrative)	\$2,771,671		
Total:	\$34,761,000		

*Includes \$8 million in TMDL Implementation Funds directed to Vermont by Congress



by the numbers

- 12** Clean Water implementation and planning grants awarded
- \$1.8M** Clean Water research grant funds awarded
- 30** quality assurance plans to ensure reliable data collection
- 4** monitoring buoys collecting real-time, high frequency data
- 15** stations on Lake to monitor water quality
- 22** stations on tributaries to measure pollutant loads

highlights

- Conducted analyses of flow conditions and pollutant loading during 2023 flood events.
- Coordinated the work of the **Technical Advisory Committee**, which provides guidance on research and funding priorities.
- Published quarterly **Science Blog** posts to communicate project results to partners and the research community.
- Conducted and presented results of **modeling** of tributary phosphorus loading.

2021 Local Implementation Grant concluded

Irish Farm Stormwater Improvements

Project Summary

This engineering design project focused on treating stormwater runoff from suburban development in the Bartlett Brook watershed. The overarching goal is to design a suite of STPs that will reduce peak stormwater discharges to Bartlett Brook, improve water quality, and reduce phosphorus transport in accordance with the Lake Champlain Phosphorus TMDL in a manner that is in line with the newest iteration of the VSMM.

Outputs:

- 100% Design Plans and Specification for the construction of a stormwater treatment practice to manage 9.3 acres of impervious surface in the Bartlett Brook watershed
- design of multiple subsurface gravel wetlands,
- a pretreatment hydrodynamic separator
- a flow-splitting catch basin

Outcomes:


- reduction in peak flows in the stormwater impaired Bartlett Brook Watershed and reduced phosphorous loading to Lake Champlain.

Organization: South Burlington Stormwater Utility
Contact Person: David Wheeler
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 South Burlington, VT 05403
Phone: 802 658-7961
E-mail: dwheeler@sburl.com
Website: www.sburlstormwater.com



Dry Detention Pond B

NEIWPCC Code: LS-2021-004
EPA: 0356-002-001
Start Date: 1/25/2021
Close Date: 4/25/2023
Grant Amount: \$40,000.00
Non-federal Match: \$10,000.00
Total Amount: \$50,000.00



2020 Local Implementation Grant concluded

Lake Forest Condominiums Stormwater System Upgrade and Stream Daylight

Project Summary

Trudell Consulting Engineers (TCE) was obtained by the Lake Forest at Oakledge Condominium Association as the engineering consultant for final design of a water quality improvement project. The Lake Forest Community is a 37-unit condo association in the City of Burlington's south end, located less than 1,000 feet of Blanchard Beach on Lake Champlain. The Lake Forest development was designed with three large ponds which have become heavily sedimented in due to lack of maintenance and access issues. As existing, the ponds are experiencing bank erosion and annual algae blooms. A previous improvement assessment was performed to identify potential water quality improvements for the site and determined that stormwater improvements as well a stream daylight and restoration would not only improve site conditions, but would also reduce phosphorus loading to the phosphorus impaired Lake Champlain.

Outputs:

- design plans for installation of bioretention filter
- 370 feet of stream will be daylighted and restored to a natural condition including a buffer
- deepen two of the three existing ponds, convert ponds to pre-treatment sediment forebays, and convert one pond into a Gravel Wetland and restoration of the stream bed
- reduce bank slopes, increase plantings along pond and stream banks, and improve stormwater conveyance for improved maintenance access.
- expected phosphorus removal of 4.89 lbs/yr through proposed stormwater improvements, and 1.62 lbs/yr through the stream


Outcomes:

- reduction of phosphorus to Lake Champlain
- improved water quality at Blanchard Beach at Oakledge Park, Burlington VT

Organization: Lake Forest At Oakledge Condominium Association
Contact Person: Craig Smith
Mailing Address: P.O. Box 3009
 Burlington, VT 05408-3009
Phone: 802-652-0908
E-mail: craigsmith23@gmail.com
Website:



NEIWPCC Code: LS-2022-019
EPA: 994-002-001
Start Date: 4/4/2022
Close Date: 7/26/2023
Grant Amount: \$32,200.00
Non-federal Match:
Total Amount: \$38,900.00



2023 Local Implementation Grant concluded

Mt Norris Boy Scout Camp Stormwater and Lakeshore BMP Implementation and Lamoille Union Highschool Green Stormwater BMP Installation

Project Summary

This project will undertake the installation of stormwater best management practices in two locations in the Lamoille River Basin. The first project, a stormwater and lakeshore BMP implementation for Mt Norris Boy Scout Camp in Eden, VT is one of 5 top ranked projects identified in Lake Eden Watershed Action Plan. It was ranked as a high priority due to the estimated nutrient and sediment loading from the site into Lake Eden and, subsequently the Lake Champlain Basin. The full design and its intended implementation will address the full scope of the reservations stormwater mitigation needs and subsequently conform with the General Permit 3-9050 "3-acre General Permit" needs. The implementation project will also provide educational opportunities for the boy scouts and the informational signage to be included will provide ongoing education outreach to the general public and partnering agencies regarding successful stormwater and lakeshore BMPs.

The second BMP installation will take place at the Lamoille Union High School. The proposed retrofit for this site involves rerouting the existing storm line to a subsurface storage and infiltration system under the paved parking lot located northwest of the School. The resulting water quality treatment of 2.62 acres would result in an estimated phosphorus removal of .56 lbs. and 564 lbs. of suspended solids per year. Additionally, educational signage will be included on site as well as an academic curriculum and educational outreach materials based upon BMP.

Outputs:

- rerouting of existing storm line
- educational signage will be included on site as well as an academic curriculum and educational outreach materials based upon BMP.

Outcomes:

- reduce sediment and nutrient loading from forested and developed lands into Lake Eden and the Lamoille River watershed.

Organization: Lamoille County NRCDC
Contact Person: Peter Danforth
Mailing Address: 109 Professional Dr., Suite #2
 Morrisville, VT 05661
Phone: (802) 521-3004
E-mail: lccddirector@gmail.com
Website: <http://www.lcnrcd.com/>



NEIWPCC Code: LS-2023-001
EPA: 364-002-001
Start Date: 2/16/2020
Close Date: 7/31/2023
Grant Amount: \$232,505.00
Non-federal Match: \$11,000.00
Total Amount: \$243,505.00

2021 Local Implementation Grant concluded

Nutrient Quantification and Phase 1 Restoration Design of Mill Brook Floodplain in the Winooski River Watershed

Project Summary

This project is the critical research component of a multi-part restoration strategy for the confluence of Mill Brook and the Winooski River in Jericho, Vermont. The confluence occurs on farmland owned by Jericho Settlers Farm that was conserved with a Vermont Land Trust easement in 2014. Mill Brook has been moving dramatically since that time, eroding acres of farmland and coming closer to VT Rt 117, a busy state highway. Vermont Land Trust worked with the farmer landowners to retire the land from agriculture with a floodplain overlay easement in 2021, and has engaged volunteers to plant trees in the floodplain area and implement process-based restoration in a nearby small stream.

This project aimed to elucidate hydrologic and hydraulic dynamics in the Mill Brook floodplain, quantify phosphorus and sediment being lost from the site, and develop a robust restoration plan that would stabilize the road interface while also promoting ecological values and floodplain function in the former farmland. By showing the concerning high erosion rates and phosphorus migration out of the site as the brook moves closer to the road, the project underscored the need for thoughtful restoration that enhances floodplain function. The preferred alternative emerging from the field work and analysis here involves removing two historic areas of rock armor – one on Mill Brook and one on the Winooski – and constructing a flood bench and a ballasted engineered log jam in the reach of Mill Brook closest to the road. Vermont Land Trust and its partners are currently seeking funding to implement this plan.

Outputs:

- Phase 1: gather baseline nutrient, hydraulic, and geomorphic data; consider alternative designs; and commission plans for streambank and instream structures for the lowest reach of Mill Brook, from Rt. 117 to the Winooski mouth

Outcomes:

- floodplain restoration work that will enhance the nutrient and sediment retention and habitat functions of the floodplain

Organization: Vermont Land Trust
Contact Person: Allaire Diamond
Mailing Address: 8 Bailey Avenue
 Montpelier, VT 05602
Phone: 802-879-6672
E-mail: allaire@vlt.org
Website: www.vlt.org



The newly establishing Mill Brook channel and floodplain in December 2020. A bus traveling on VT Rt. 117 is visible in the center of the photo. The bank closest to the road, snow-free, visibly eroding and with no woody buffer in the photo, is the site for the design work funded by this grant. Photo by Allaire Diamond



NEIWPCC Code: LS-2021-001
EPA: 0356-002-001
Start Date: 2/10/2021
Close Date: 11/14/2022
Grant Amount: \$36,170.00
Non-federal Match:
Total Amount: \$36,170.00

2021 Local Implementation Grant concluded

Planning/Prioritization for Stormwater Projects in the McCabe's Brook Watershed

Project Summary

to review project suggestions from a 2010 LaPlatte watershed study, which included the McCabe's Brook watershed with documented stormwater/stream corridor erosion pollution problems. In addition to reviewing these projects, potential new projects were identified. Lewis Creek Association hired engineering firm SLR and partnered with the towns of Shelburne and Charlotte and the Vermont Department of Conservation, to review water quality improvement project suggestions from a 2010 LaPlatte watershed study (funded by a Clean and Clear grant), which included the McCabe's Brook watershed with documented stormwater/stream corridor erosion pollution problems. In addition to reviewing these projects, potential new projects were identified by project partners, identified in the geomorphic assessment and corridor plan, identified with mapping review, and during site visits.

Outputs:

- 30+ projects were prioritized in July 2022 for design and implementation work.
- prioritization scheme took into account the fact that the 3-acre permit will require improvements on certain properties in the near future. Three projects for two swirl separators, and one series of settling basins with filter berms were then progressed to 30% design phase in December 2022 after additional site visits and soil borings, and some additional projects were scoped to make future design work easier.

Outcomes:

- reduction of stormwater/stream corridor erosion pollution problems
- prioritization of nutrient reduction projects in an impaired Lake Champlain watershed.

Organization: Lewis Creek Association
Contact Person: Katherine Kelly
Mailing Address: PO Box 313
 Charlotte, VT 05445
Phone: (802) 488-5203
E-mail: lewiscreekorg@gmail.com
Website: www.lewiscreek.org



Mass failures along McCabe's Brook (T1.05B) near the Route 7 crossing will be reevaluated as potential sources of sediment and phosphorus requiring mitigation.

NEIWPCC Code: L-2021-033
GLFC: 100-328-002
Start Date: 3/9/2021
Close Date: 3/28/2023
Grant Amount: \$35,289.00
Non-federal Match:
Total Amount: \$35,289.00



2020 Local Implementation Grant concluded

Salt Runoff Reduction Project

Project Summary

This project intended to move the existing town Salt storage facility away from the Castleton River and out of the floodway. The new facility would be moved to town owned property on what was the former Municipal Airport. The new location and facility would have improved salt retention, save the town money through the reduction of the loss and would have removed salt infiltration into the Castleton River from our salt pile, all of which were goals of the project.

The town contracted with an engineering firm to design and permit the project which had an original completion date of December 2020. Unfortunately, the project got underway just as the COVID pandemic hit. The closure of the economy because of the pandemic put the project behind by a year. When the economy reopened our project experienced inflationary pressures caused by supply and labor shortages. These economic drivers pushed the cost of our project from \$210,000 to about \$700,000; a 230% increase. Even after rescoping the project and reducing the size of the building the project was still over budget by \$310,000. These extreme cost increases made it impossible to complete the project.

The town is still committed to moving the salt shed and the entire town garage away from the river when pricing becomes more doable.

Outputs:

- construction of a new and improved salt storage facility.

Outcomes:

- decreased amount of chloride flowing to Lake Champlain.

Organization: Town of Fair Haven
Contact Person: Joseph Gunter
Mailing Address: 5 North Park Place
 Fair Haven, VT 05743
Phone: 802-265-3010 ext 5
E-mail: fhmanager@comcast.net
Website: http://www.fairhavenvt.org/



existing shed

NEIWPCC Code: L-2020-004
GLFC: 100-316
Start Date: 2/10/2020
Close Date: 11/14/2022
Grant Amount: \$ 50,952.00
Non-federal Match: \$152,000.00
Total Amount: \$202,952.00



2021 Local Implementation Grant in progress

Smugglers Notch Scenic Highway and State Park – Streambank and Roadside Revegetation BMPs

Project Description

In the headwaters of the Winooski Watershed Towns of Stowe and Cambridge, and the Lamoille County Planning Commission (LCPC), in partnership with the Smugglers Notch Partners, will implement high impact streambank and roadside revegetation best management practices to reduce environmental degradation, sedimentation, and excessive nutrient transport. Stormwater runoff originates from informal illicit parking areas along Route 108 through Smugglers Notch (The Notch) in the Towns of Stowe and Cambridge –including several areas located directly on the streambank. The need to revegetate these illicit parking areas, revegetate the roadside, and restore natural vegetated stream buffers is identified in several plans and studies, as well as the Winooski Tactical Basin Plan. The LCBP Grant will result in implementation in two locations, accounting for a reduction of approximately 22,000 square feet of impervious surfaces.

Outputs:

- close and revegetate two roadside parking areas that pose significant negative environmental impacts
- reduction of approximately 22,000 square feet of impervious surfaces
- interactive, interpretive display at the Barnes Camp Visitors Center regarding the importance of headwaters to water quality and watershed health

Outcomes:

- protection of the headwaters of the Winooski Watershed through streambank and roadside revegetation
- reduction of environmental degradation, sedimentation, and excessive nutrient transport.

Organization: Lamoille County Planning Commission
Contact Person: Seth Jensen
Mailing Address: P.O. Box 1637
 Morrisville, VT 05661
Phone: 802.888.4548 (direct) 802.851.6337
E-mail: seth@lpcvt.org
Website: lpcvt.org



Current conditions on VT Rt. 108 being addressed and restored



NEIWPCC Code: LS-2021-054
EPA 0356-002-001
Start Date: 4/27/2021
Close Date:
Grant Amount: \$100,000.00
Non-federal Match: \$24,500.00
Other Sources: \$ 16,800.00
Total Amount: \$141,300.00

2018 Local Implementation Grant concluded

Tile Drainage Systems Monitoring and Assessment in the Northern and Southern Lake Champlain Basin, and Comparing two active Media Filters to Remove Phosphorus from Tile Drainage Water in the St Albans Bay Watershed, VT

Project Summary

Stone Environmental, Inc. worked in close consultation with the LCBP on an innovative project aimed at increasing scientific knowledge and understanding concerning the impacts of subsurface agricultural tile drainage systems on water quality and exploring cost-effective methods to remove phosphorus from tile drainage water in the Lake Champlain Basin (*Opportunities for Action*, Objectives I.A and I.C). In this project, we combined two studies – a Tile Drain Monitoring Study and a Tile Drain Treatment Study

Outputs:

- evaluate nutrient outputs from agricultural tile drains in the northern and southern Lake Champlain Basin and assess the significance of these loadings to Lake Champlain.
- extend monitoring of five of the twelve existing tile drain stations in the Jewett Brook watershed to build a more robust dataset
- expand monitoring to five new tile drains in Addison and Rutland Counties to represent typical field conditions in the southern Lake Champlain Basin.
- dataset produced through this study will help the State understand the scope of the potential problem as well as the effects of field management and conservation practices.
- the design, construction, and evaluation of an innovative, in-ground phosphorus (P) removal system using different locally sourced filter media to treat tile drainage water on a commercial dairy farm in the St. Albans Bay watershed

Outcomes:

- to inform decision making regarding installation and management of tile drainage systems in the Lake Champlain Basin
- The filter design and associated procedures and guidance will provide managers and technicians in the LCB with a tested and documented approach for reducing P contributions from tile drains.

Organization: Stone Environmental, Inc.
Contact Person: Dave Braun
Mailing Address: 535 Stone Cutters Way
 Montpelier, VT 05602
Phone: (802) 229-4541
E-mail: dbraun@stone-env.com
Website: http://www.stone-env.com/



Phosphorus filters filled with media, prior to placing on lids. Filter B (left) was comprised of limestone “bedding sand” and Filter A (right) contained drinking water treatment residuals.



NEIWPCC Code: L-2018-008
EPA 993-003-001/994-002-001
Start Date: 7/17/2018
Close Date: 4/18/2023
Grant Amount: \$226,400.00
Non-federal Match: \$ 6,101.00
Total Amount: \$232,501.00

2022 Large Implementation Grant

in progress

Burlington Country Club & Spear Street Gravel Wetland

Project Description

The City of South Burlington will construct a gravel wetland to treat approximately five acres of impervious surface from an approximately 80-acre drainage area that currently discharges untreated to Potash Brook. The proposed project will utilize available space on Burlington Country Club (BCC) property to treat runoff from the golf course (privately owned), Spear Street (City owned) and recreation path (City owned). This project has been identified in the Potash Brook Flow Restoration Plan (FRP) and the City's Phosphorus Control Plans (PCP). In addition to abetting the City's goal of MS4 compliance, the project supports Burlington Country Club's advance toward 3-9050 permit compliance. The project will reduce the amount of phosphorous going to Lake Champlain by 10.5 kg per year.

Outputs:

- construction of a gravel wetland to properly treat runoff
- MS4 compliance and 3-9050 permit compliance

Outcomes:

- reduce the amount of phosphorous going to Lake Champlain by 10.5 kg per year.

Organization: City of South Burlington
Contact Person: Christine Gingras
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 South Burlington, VT 05403
Phone: (802) 658-7961 x6111
E-mail: cgingras@southburlingtonvt.gov
Website: <http://sburlstormwater.com/>



Harrington Village Gravel Wetland constructed in 2014 to treat stormwater in Shelburne, VT is similar to the gravel wetland to be implemented at Burlington Country Club.



NEIWPCC Code: LS-2022-046
 EPA 0357-002-001
 Start Date: 4/26/2022
 Close Date:
 Grant Amount: \$ 125,000.00
 Non-federal Match: \$ 125,000.00
 Total Amount: \$250,000.00

2022 Large Implementation Grant

in progress

Clinton County Interseeded Cover Crop Project

Project Description

This project proposes to purchase a 6-row cover crop interseeder to help corn growers to establish multi-species cover crops earlier in the season. This equipment will be shared with farmers and the Soil & Water District will provide coordination, technical assistance and a per-acre cost share. The proposed project will reach out to farms on the NY side of Lake Champlain in Clinton County to offer both the use of equipment and cost sharing of a multispecies cover crop seed mix.

Outputs:

- purchase a 6-row cover crop interseeder
- planting coordination and technical assistance

Outcomes:

- awareness of the benefits of cover crops and interseeding to reduce erosion and improve water quality

Organization: Clinton County SWCD
Contact Person: Peter Hagar
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 Plattsburgh NY 12901
Phone: 518-561-4616 ext 3532
E-mail: Peter.hagar@ccsoil-water.com
Website:



NEIWPCC Code: LS-2022-014
 EPA 0357-002-001
 Start Date 2/22/2022
 Close Date:
 Grant Amount: \$61,930.00
 Non-federal Match: \$ 7,940.00
 Total Amount: \$69,870.00

2023 Large Implementation Grant

in progress

East Branch Restoration Plan – Project Area 2, Town of Jay, Ausable River Watershed

Project Description

The restoration of Project Area 2 will seek to improve geomorphic, physicochemical, and biological function in an impaired reach on the East Branch Ausable River. Presently, this overwidened segment of the river has poor habitat diversity, eroding banks that threaten critical infrastructure and homes in the hamlet of Upper Jay, and poor sediment transport capacity that exacerbates the formation of ice jams that can trigger flooding in late winter/early spring. The objective is to implement a restoration, design engineered to address the causes of impairment and improve function through this portion of the East Branch Ausable River.

Outputs:

- NYS Dept. of Environmental Conservation (DEC) Temporary Revocable Permit
- establishment of construction staging areas
- public outreach and signage
- natural materials acquisition
- construction of stream channel enhancements
- progress updates and public tour(s)

Outcomes:

- restoration of approximately 2,900 feet of river channel
- creation of aquatic habitat
- restoration of approximately 2.5 acres or 3,200 linear feet of riparian habitat.

Organization: Ausable River Association
Contact Person: Gary Henry
Mailing Address: PO Box 8
 Wilmington, NY 12997
Phone: 518-637-6859
E-mail: gary@ausableriver.org
Website: ausableriver.org



Site map showing upstream and downstream limits of construction. Inset map shows location of site within the Lake Champlain Basin.

NEIWPCC Code: LS-2023-011
EPA: 0364-002-001
Start Date: 5/8/2023
Close Date:
Grant Amount: \$175,000.00
Non-federal Match: \$500,000.00
Total Amount: \$675,000.00



2022 Large Implementation Grant

in progress

Essex County Riparian Buffer Program

Project Description

The goal is to improve as well as increase the capacity and impact of our riparian restoration program. District staff will consult with peers with strong buffer programs such as the Upper Susquehanna Buffer Program and members of the Lake Champlain Basin Riparian Practitioners' group on best practices and some available trainings. Essex County Soil & Water Conservation District has regularly planted trees in buffer areas through the Trees for Tribs Program run by the NYSDEC, in partnerships with other organizations including Trout Unlimited (TU) and the Boquet River Association (BRASS), in partnership with landowners, as well as on our own. Riparian buffers improve water quality and provide a variety of benefits for aquatic organisms, wildlife, and the environment. Riparian buffers reduce excess sediment, organic material, nutrients, and pesticides in surface runoff, all while stabilizing streambanks and shorelines. The District has already worked with BRASS, TU, and the Ausable River Association, and all are interested in partnering on this project. These organizations help connect the District with landowners and areas in need of buffer enhancement, can collaborate on species and locations, and round up volunteers for some of the plantings. Time for partners and volunteers will be utilized as match.

Outputs:

- development of a 3-year plan identifying potential sites
- purchasing of plants, prepping sites
- maps of areas with buffers planted

Outcomes:

- improve as well as increase the capacity and impact of riparian restoration program
- improve water quality and benefits for aquatic organisms, wildlife, and the environment.

Organization: Essex County SWCD
Contact Person: Alice Halloran
Mailing Address: PO Box 407
 Westport, NY 12993
Phone: 518-962-8225
E-mail: ahalloran@westelcom.com
Website: <http://www.essexcountyswcd.org/>



Top: Plantings along the Boquet River in Elizabethtown. Bottom: A planting event on the Ausable River in North Elba.

NEIWPCC Code: LS-2022-022
EPA: 0357-002-001
Start Date: 4/28/2022
Close Date:
Grant Amount: \$78,000.00
Non-federal Match: \$8,500.00
Total Amount: \$86,500.00



2023 Large Implementation Grant

in progress

Mt Norris Boy Scout Camp Stormwater and Lakeshore BMP Implementation and Lamoille Union High School Green Stormwater BMP Installation

Project Description

This project will undertake the installation of stormwater best management practices in two locations in the Lamoille River Basin. The first project, a proposed stormwater and lakeshore best management practice (BMP) implementation for Mt Norris Boy Scout Camp in Eden, VT is one of 5 top ranked projects identified in Lake Eden Watershed Action Plan. It was ranked as a high priority due to the estimated nutrient and sediment loading from the site into Lake Eden and, subsequently the Lake Champlain Basin.

The second BMP installation will take place at the Lamoille Union High School. The resulting water quality treatment of 2.62 acres would result in an estimated phosphorus removal of .56 lbs. and 564 lbs. of suspended solids per year. Additionally, educational signage will be included on site as well as an academic curriculum and educational outreach materials based upon BMP.

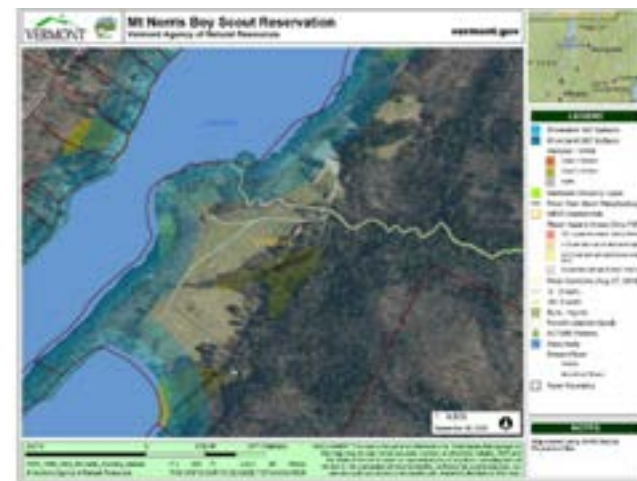
Outputs:

- stormwater mitigation needs
- conform with the “3-acre” General Permit 3-9050
- educational opportunities for the boy scouts
- informational signage will provide ongoing educational outreach to the general public and partnering agencies regarding successful stormwater and lakeshore BMPs
- rerouting the existing storm line to a subsurface storage and infiltration system under the paved parking lot located northwest of the High School

Outcomes:

- decreased nutrient and sediment loading
- improved water quality

Organization: Lamoille County Conservation District (LCCD)
Contact Person: Peter Danforth
Mailing Address: 109 Professional Dr., Suite # 2
 Morrisville, VT 05661
Phone: (802) 521-3004
E-mail: lccddirector@gmail.com
Website: <http://www.lcnrcd.com/>



NEIWPCC Code: LS-2023-012
EPA 0364-002-001
Start Date June 1, 2023
Close Date:
Grant Amount: \$232,505.00
Non-federal Match: \$ 11,000.00
Total Amount: \$243,505.00

2022 Large Implementation Grant

in progress

Plattsburgh City/Town Illicit Discharge Detection and Elimination Study, Phase 3

Project Summary

Having completed a comprehensive survey of dry weather flows from all of Plattsburgh’s (City and Town) known separate storm drain outfalls in Phase 1 and Phase 2, the project team will follow up on suspected illicit discharges in Phase 3. Recently completed (2015) stormwater infrastructure mapping will be used to guide this effort. The monitoring conducted in Phase 1 and Phase 2 indicated that there is wastewater contamination present in 22 storm drainage systems. The project team will continue to perform advanced investigations (AI) begun in Phase 2, including bracket sampling to identify specific segments of closed drainage systems where illicit discharges originate, and will work with the City and Town of Plattsburgh to conduct tracing techniques, such as dye or smoke testing. When sources of illicit discharges are identified, the contractor and Vermont Department of Environmental Conservation (VTDEC) partner will assist the City and Town in planning and implementing corrective measures.

Outputs:

- Purchase supplies and assemble equipment
- Conduct reassessments/bracket sampling
- Identify contaminant sources and plan repairs

Outcomes:

- elimination of illicit discharges of wastewater connected to separate storm drain system
- reduction of phosphorus, pathogen, and toxin loading to Lake Champlain

Organization: City of Plattsburgh
Contact Person: Jonathan Ruff
Mailing Address: 41 City Hall Place
 Plattsburgh, NY 12901
Phone: 518-726-6377
E-mail: RuffJ@cityofplattsburgh-ny.gov
 Jim.Pease@vermont.gov
Website: <http://www.cityofplattsburgh.com/198/Environmental-Services>



Example of an illicit discharge in Montpelier, VT



NEIWPCC Code: LS-2022-048
EPA 0357-002-001
Start Date 5/4/2022
Close Date:
Grant Amount: \$ 37,500.00
Non-federal Match: \$ 5,000.00
Total Amount: \$42,500.00

2023 Large Implementation Grant

in progress

Protecting Heart Lake's water quality and beach

Project Description

The site is located at the Heart Lake Program Center, a private land holding of the non-profit Adirondack Mountain Club within the Eastern Zone of NY State's Adirondack High Peaks Wilderness Area. This location is the busiest trailhead in the State with over 100,000 recreators visiting the site annually. The Heart Lake Program Center has a 200-car capacity parking area, an information and retail building, snack shop, education program yurts, a wilderness campground with three cabins, two bath houses, and 55 campsites (i.e., lean-tos, yurts, canvas and rustic cabins, primitive tent sites). The site also has the 38-person capacity, full-service Adirondak Loj (i.e., lodge) which sits on the edge of Heart Lake, a 26-acre headwater lake where visitors can swim at the beach, paddle, or hike around the lake to the adjacent Mount Jo. The land uses addressed by this project include forested and recreation lands and aquatic habitat.

Outputs:

- new septic system, including tank, lift station, and cleaning of the seepage pits, will be installed at the Adirondak Loj
- series of interpretive posted at the Adirondak Loj and in the environs of Heart Lake to inform visitors about the importance of maintaining and cleaning septic systems

Outcomes:

- prevent septic and effluent pollution of a clean and pristine headwater lake
- prevent beach closures at Heart Lake due to E. coli contamination

Organization: Adirondack Mountain Club
Contact Person: Julia Goren
Mailing Address: PO Box 867
 Lake Placid, NY 12946
Phone: (518) 523-3480 x 116
E-mail: julia@adk.org
Website: www.adk.org

NEIWPCC Code: LS-2023-018
EPA 0364-002-001
Start Date 4/12/2023
Close Date:
Grant Amount: \$80,709.00
Non-federal Match: \$ 4,029.00
Total Amount: \$84,738.00



2022 Large Implementation Grant

in progress

Removal and Replacement of Road Crossing Structure – Black Falls Road, Montgomery, VT

Project Description

The road crossing structure at the intersection of Black Falls Road and a tributary of Black Falls Brook in Montgomery, VT is geomorphically incompatible with the stream channel and is contributing a significant amount of phosphorus to Missisquoi Bay, as well as providing a barrier to movement for native Brook Trout. The Northwest Regional Planning Commission will implement an appropriate structure replacement. The design and implementation planning process will be completed in partnership with the United States Fish and Wildlife Service (USFWS) and the Town of Montgomery. The completion of this project will result in reduced phosphorous loading to Missisquoi Bay, stabilization of the stream reach's unstable bank, reduced risk of severe road damage, and provide access to around 2.5 miles of high-quality habitat for use by aquatic wildlife.

Outputs:

- Structural replacement of a road crossing structure
- reconnection of 2.5 miles of high-quality habitat for use by aquatic wildlife

Outcomes:

- reduced phosphorous loading to Missisquoi Bay
- stabilization of the stream reach's unstable bank
- reduced risk of severe road damage

Organization: NWRPC
Contact Person: Bethany Remmers
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 St. Albans, VT 05478
Phone: 802-524-5958
E-mail: bethany@nrpcvt.com
Website: nrpcvt.com



Detailed project area map

NEIWPCC Code: LS-2022-013
EPA 0357-002-001
Start Date: 8/2/2022
Close Date:
Grant Amount: \$125,000.00
Non-federal Match: \$ 10,000.00
Total Amount: \$135,000.00



2022 Large Implementation Grant

in progress

Water Quality Improvement Equipment

Project Description

The proposed project is for equipment purchase, installation, and control module upgrades for the Town of Willsboro's Wastewater Treatment Plant. The plans and specifications are approved by the New York State Department of Environmental Conservation. The equipment will be a Fine Screen, which will be installed into a screw conveyor. This screen is a very detailed integration into a Membrane Bioreactor (MBR) Plant and is extremely important for emergency overflows during the treatment process. The control system and sampling system must be operated and used in conjunction with the screening and maintenance of the Plant, which will create water-use and power efficiencies throughout. The controls can adapt to higher frequencies and are able to detect high loading to trigger automatic sampling procedures. This will result in a power (electrical) reduction, as it will not trigger sampling, unless it is necessary. It will also result in more efficient and accurate sampling results, due to the technology of the control and sampling equipment. The Membrane Bioreactor Plant is one of the most advanced wastewater treatment systems in the world. The outcome of this project will be reduced pollution to Lake Champlain and tributaries, specifically a reduction of phosphorus loading to Lake Champlain through the Boquet River in the Town of Willsboro, NY. The impact of this project will be improved water quality of a water body that serves as a source of drinking water for numerous municipalities throughout the Lake Champlain Basin and provides a recreational resource that local and regional economies depend on.

Outputs:

- equipment purchase and installation of a Fine Screen
- control module upgrades

Outcomes:

- reduced pollution to Lake Champlain and tributaries, specifically a reduction of phosphorus loading to Lake Champlain through the Boquet River

Organization: Town of Willsboro
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NEIWPCC Code: LS-2022-041
EPA: 0357-002-001
Start Date: 4/20/2022
Close Date:
Grant Amount: \$125,000.00
Non-federal Match: \$ 89,000.00
Total Amount: \$214,000.00



2020 Local Implementation Grant

concluded

Demonstrating Nature-Based Driveway Solutions in the Flower Brook Watershed

Project Summary

This project addressed erosion and water pollution from private driveways located in a subwatershed of southern Lake Champlain. Gravel inputs to Flower Brook have created documented flood vulnerabilities and degraded water quality in the brook. This grant focused on implementing drainage projects, adapting green stormwater practices to rural driveways, and demonstrating innovative ways to mitigate runoff in headwater watersheds.

Outputs:

- implementation of multiple drainage practices along two rural driveways off Little Village Road in Danby, VT in the Flower Brook watershed, reducing an estimated 5.71 Kg of phosphorus per year.
- one online driveway drainage and maintenance workshop held in July 2022 with 12 participants
- e-newsletter article, postcard, and handout distributed to Danby and Pawlet Town Select Boards and Planning Commissions detailing the project and its results
- one 'stormwater management on driveway' workshops as the driveway implementation work is being completed; one with homeowners and one with contractors who maintain driveways

Outcomes:

- reduced gravel entering Flower Brook to protect the town of Pawlet from flooding, improve fish spawning habitat, and decrease nutrient levels entering Lake Champlain
- resource conservation staff, consultants, landowners, contractors, and town officials have received hands-one experience with or information about driveway maintenance and driveway drainage improvements in a setting that is local, familiar, and accessible
- this project provided education about a relatively inexpensive way to manage stormwater runoff on unregulated and possibly 1/3 of the road miles in

Organization: Poultney-Mettowee NRCDC
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 Poultney, VT 05764
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Website: www.pmnrcd.org



Installation of the cross culvert on one private driveway

- Vermont, leading local homeowners and driveway maintenance contractors to address driveway-related drainage using a variety of infiltration and clean water diversion practices, improving water quality and increasing flood resilience

NEIWPCC Code: L-2020-025
GLFC: 0100-328-002
Start Date: 3/26/2020
Close Date: 3/28/2023
Grant Amount: \$19,992.00
Non-federal Match: \$ 4,070.00
Total Amount: \$24,062.00



2020 Local Implementation Grant

concluded

Lake Champlain Agrichemical and Fuel Storage

Project Summary

The Lake Champlain Agrichemical and Fuel Storage project was a response to recognized resource concerns on farms in the Basin. Some farms have aging fuel storages without secondary containment and some lack appropriate agrichemical facilities, which increase the potential for water and soil contamination. This project involved reaching out to as many farms as possible in the NY portion of the Lake Champlain Basin to inform them of this opportunity to improve their on-farm storage facilities. Three farms agreed to improve their fuel storage facilities. One fuel storage was completed in 2021 and two are currently in the process of improvement. The project had several challenges, including high costs and difficulty obtaining supplies, but these were overcome by finding supplemental funding and waiting until costs stabilized. This project brought attention to the need for improved storages in the area and has increased interest in better on-farm practices with regards to fuel and agrichemicals.

Outputs:

- three fuel storage areas or agrichemical storage facilities designed and constructed on three different farms

Outcomes:

- safer storage of fuel and agrichemicals including secondary containment and enclosed storage ensuring safety and spill prevention R
- reduced pollution to Lake Champlain, education on the importance of properly storing fuels and agrichemicals

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 Westport, NY 12993
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E-mail: ahalloran@westelcom.com
Website: <http://www.essexcountyswcd.org/>



Essex County Soil and Water Conservation District



NEIWPCC Code: LS-2020-012
 EPA 346-002-001
 Start Date 3/26/2020
 Close Date: 6/23/2023
 Grant Amount: \$20,000.00
 Non-federal Match: \$ 2,782.00
 Total Amount: \$22,782.00

2020 Local Implementation Grant

in progress

Michelli Drive Dry Wells

Project Summary

The Lake George Association (LGA) will install three (3) dry wells along Michelli Road in Lake George. A stormwater study was completed by Chazen Engineering to identify ways to reduce the amount of stormwater that was coming from the Michelli Road area. The study identified 3 locations for the placement of dry wells in this small sub-watershed of Lake George. The Outputs of the project include the installation of the dry wells. The subsequent Outcomes of the project will reduce the amount of stormwater that is reaching Lake George as well as reducing the erosion that the stormwater is producing on its way to the Lake.

Outputs:

- installation of 3 dry wells

Outcomes:

- reduction of stormwater reaching Lake George
- reduction of erosion from stormwater

Organization: Lake George Association
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 Lake George, NY 12845
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Website: www.lakegeorgeassociation.org



Image of a dry well getting installed on a previous Lake Champlain Basin Program funded project in the Town of Lake George. The Town of Lake George Highway Department installed the structure.



NEIWPCC Code: LS-2020-011
 EPA 346-002-001
 Start Date: 2/27/2020
 Close Date:
 Grant Amount: \$13,000.00
 Non-federal Match: \$ 2,560.00
 Total Amount: \$15,560.00

2021 Local Implementation Grant

concluded

Plattsburgh City and Plattsburgh Town Illicit Discharge and Detection Elimination Study - Phase 2

Project Summary

This project was the second phase of work to identify and correct illicit discharges into stormwater drainage systems in the City of Plattsburgh, NY following separation of the formerly combined sewer system. In this phase, 28 storm drains were assessed for the presence of illicit discharges by undertaking water quality analyses to test for indicators of wastewater contamination or the presence of common cleaning products, which could suggest contamination from residential or commercial sources. Four storm drains previously identified as having suspected illicit discharges underwent advanced investigations to bracket the sources of contamination.

Outputs:

- continuation of comprehensive assessment of dry-weather flows from all of Plattsburgh's (City and Town) known separate storm drain outfalls
- identification of sources of illicit discharges
- assessment of 28 storm drains and advanced assessment of 4 suspected illicit discharges
- planning and implementing corrective measures.

Outcomes:

- reduce phosphorus, E.coli and toxics discharged through Plattsburgh's urbanized stormwater outfalls to Lake Champlain and its tributaries

Organization: City of Plattsburgh
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 Plattsburgh, NY 12901
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 Jim.Pease@vermont.gov
Website: <http://www.cityofplattsburgh.com/198/Environmental-Services>



NEIWPCC Code: LS-2021-043
EPA 0356-002-001
Start Date: 4/23/2021
Close Date: 6/6/2023
Grant Amount: \$19,605.00
Non-federal Match: \$ 1,000.00
Total Amount: \$20,605.00

2021 Local Implementation Grant

concluded

Purchase Brook AOP and Flood Resilience Culvert Replacement Design

Project Summary

To improve water quality, flood resiliency, aquatic organism passage (AOP) and increase public awareness for stream health, the Bennington County Conservation District (BCCD) in conjunction with Stone Environmental (Stone) and other project partners, analyzed three different designs to replace the existing culvert at the Purchase Brook crossing on Greene Hill Road in Danby, VT. The project was first identified as part of an ongoing flood resilience project in the Flower Brook Watershed, work undertaken by the Poultney Mettowee Natural Resources Conservation District (PMNRCD) and supported by the High Meadows Fund Watershed Resilience Program.

Outputs:

- three engineering design alternatives. Two initial alternatives explored, included: an open bottom concrete box culvert with pre-cast flared wingwalls designed to a 30% level and a corrugated aluminum single arch culvert designed to 60%.
- the selected alternative, a skewed steel stringer bridge was developed to a 75% design level. This option was selected as the best alternative due to site constraints and a desire to limit the project footprint and costs.
- Town of Danby staff/select board members, abutting landowners, the general public and project partners were invited to a field site visit.

Outcomes:

- increased flood resiliency, water quality, aquatic organism passage (AOP) for species like Brook Trout
- increased public awareness for stream health and AOP.

Organization: Bennington County Conservation District
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 Bennington, VT 05201
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Website: www.bccdvt.org



Purchase Brook culvert with roughly 2' drop to water surface at outlet and high levels of scour downstream of the culvert.



NEIWPCC Code: LS-2021-005
EPA 0356-002-001
Start Date: 2/16/2021
Close Date: 6/5/2023
Grant Amount: \$20,000.00
Non-federal Match: \$ 1,000.00
Total Amount: \$21,000.00

2020 Local Implementation Grant

concluded

Riparian buffer establishment under difficult site conditions using various management techniques

Project Summary

In riparian areas of the northeastern United States, well-established reed canary grass (*Phalaris arundinacea*) stands are common and have proven to be a challenge for the success of tree plantings during riparian forest restoration projects. To address the opportunity for widespread forest restoration and the challenge of reed canary grass (RCG) infestations, the purpose of this experiment was to assess survival of native trees subject to glyphosate, till and mowing management techniques vs. herbicide-free till and mowing management techniques, and to compare RCG density between plots under varied treatments over time.

The data suggest that preparing plots by tilling and the application of herbicide (glyphosate) combined with two mowing events in each of the two growing seasons did not result in higher tree stem survival rates than the treatment plots that were prepared by tilling only and were mowed four times in each of the two growing seasons. As was expected, plots treated with glyphosate, significantly reduced reed canary grass density in the first growing season. However, after the second growing season the percent cover of RCG in the mechanically treated and chemically treated plots was not statistically different. This suggests that the mechanical prescription was as effective at RCG suppression than the chemical, during the second year. Furthermore, the odds ratio produced by the binary logistic regression models in this study can be useful to practitioners and landowners when considering which methods of management to use in restoration projects.

Outputs:

- treatment plots of ten species of native tree stems were planted at eight sites and stem survival was assessed over two growing seasons.
- development of news stories picked up by local media as well as UVM and published by Lake Champlain Sea Grant and the Watershed Forestry Partnership
- featured in a Restoration Roundup podcast of the Watershed Forestry Partnership. A master's thesis and scientific manuscript were developed, and a guidance document for individuals within the basin was prepared

Organization: UVM Extension
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 Berlin, VT 05641
Phone: 802-476-2003
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Website:



Outcomes:

- riparian buffer establishment



NEIWPCC Code: L-2020-024
GLFC: 0100-328-002
Start Date: 4/17/2020
Close Date: 8/9/2023
Grant Amount: \$19,995.00
Non-federal Match:
Total Amount: \$19,995.00

2021 Local Implementation Grant

concluded

Siboinebi Path Habitat Restoration

Project Summary

The goal of this project was to restore riparian habitat along the length of the Siboinebi Path by removing woody invasive species and replacing them with native trees and shrubs. The Siboinebi Path is a paved, accessible path that runs along the Winooski River through downtown Montpelier. The first part of this project involved hiring the Montpelier Youth Conservation Corps (MYCC) in summer of 2021 to aid in woody invasive species removal. The next part of the project was planting native trees and shrubs with the help of volunteers in order to permanently displace invasive species and increase the aesthetic value of the bike path.

Outputs:

- development of a longer-term vision for the restoration and improvement of the path
- 200 native tree stems planted
- area of river corridor stabilized, pounds of trash removed, and the people involved (MYCC crew and community volunteers).

Outcomes:

- long-term stabilization of the river bank
- a bike path surrounded by a rich and diverse riparian community
- reduced sediment erosion, reduced trash and chemical leakage, and youth community engagement.

Organization: Montpelier Parks and Trees Department
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 Montpelier, VT 05602
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Website: <https://www.montpelier-vt.org/210/Parks-and-Trees>



MYCC members Ben and Izzy haul invasive plant material along the path.



NEIWPCC Code: LS-2021-017
EPA: 0356-002-001
Start Date: 3/24/2021
Close Date: 12/19/2022
Grant Amount: \$19,909.00
Non-federal Match: \$ 8,985.00
Total Amount: \$28,633.00

2021 Local Implementation Grant

concluded

St Catherine Court Neighborhood Stormwater Infiltration Project

Project Summary

The goal of this project is for partners including PMNRCD, the Lake St Catherine Conservation Fund, and the Town of Wells, to address a high priority stormwater issue via a series of planned infiltration areas in a 14-acre neighborhood adjacent to Lake St Catherine. This project consisted of four main components: landowner outreach, project identification and design, project implementation, and community awareness. PMNRCD, working in conjunction with the Champlain Valley Native Plant Restoration Nursery (CVNPRN), developed and utilized technical educational materials for use in outreach efforts to recruit landowner participation. Working with a contractor, PMNRCD identified projects and generated designs based on individual properties.

Outputs:

- design and implementation of six green stormwater projects.
- development of outreach materials

Outcomes:

- local education about the effects of land use changes at a watershed scale on lake water quality
- improved water quality
- promotion of purposeful management of stormwater
- decreased sediment and nutrients to Mill Brook and Lake Champlain
- increased use of native plants in the neighborhood for birds and pollinators.

Organization: Poultney-Mettowee NRCD
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St Catherine Court site runoff post project implementation.



NEIWPCC Code: LS-2021-018
EPA 0356-002-001
Start Date: 3/5/2021
Close Date: 6/30/2023
Grant Amount: \$20,000.00
Non-federal Match: \$ 3,956.00
Total Amount: \$23,956.00

2022 Planning Grant

concluded

Completion of the planification for the revitalization of the Lake Parker watershed by characterizing the lake's sediments in order to determine their contribution to water pollution

Project Summary

This project collected bathymetry, sedimentology, and physiochemical data on Lake Parker, at the headwaters of the Missisquoi Nord river. These data will be used to inform recommendations on a lake watershed action plan to implement restoration actions that will restore the health of the watershed.

Outputs:

- complete high-resolution bathymetry of the lake
- sediments analysis to determine composition
- watershed management plan recommendation

Outcomes:

- data to inform development of a management plan allowing managers to take the right actions to restore the water quality of the lake

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Website: <https://obvbm.org/>



Closer view of Lake Parker from Mount Orford in the west direction



The core sample was saved for an off-line laboratory analysis



NEIWPCC Code: L-2022-055
GLFC 0100-334-002
Start Date: 5/4/2022
Close Date: 6/23/2023
Grant Amount: \$ 20,873.00
Non-federal Match: \$ 4,860.00
Total Amount: \$25,733.00

2022 Planning Grant

in progress

Concept Design for Ahead of the Storm Demonstration Site in Hinesburg

Project Description

Lewis Creek Association (in cooperation with the Lyman Meadows Condominium Association) will use these funds to create a concept design for stormwater treatment in the central green area of the Lyman Meadows Condominiums in Hinesburg, Vermont, and to make recommendations regarding flooding issues in a swale north of the condos. The concept design output will address water quality issues while also providing an Ahead of the Storm demonstration site and education for citizens and students in Hinesburg. The project will display optimal flood resiliency and pollution prevention practices that can be implemented at strategic locations throughout the watershed; outcomes will include a better-informed public about optimal stormwater management practices.

Outputs:

- creation of a concept design for stormwater treatment
- recommendations regarding flooding issues
- an Ahead of the Storm demonstration site

Outcomes:

- better-informed public about optimal stormwater management practices.

Organization: Lewis Creek Association
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 Charlotte, VT 05445
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Website: www.lewiscreek.org



Lyman Meadows central green area with erosion/flooding problems. Photo credit: Jim Jarvis



NEIWPCC Code: LS-2022-012
 EPA 0357-002-001
 Start Date 2/22/2022
 Close Date:
 Grant Amount: \$ 18,526.00
 Non-federal Match: \$ 515.00
 Total Amount: \$19,041.00

2023 Planning Grant

in progress

East Branch Restoration Plan – Project Area 7 Engineering Design Development Town of Jay, Ausable River Watershed

Project Description

The Ausable River Association (AsRA) will be moving a priority river restoration project, Project Area (PA) 7, in the Town of Jay to shovel-ready status. PA7 sits just upstream of the hamlet of Jay on the East Branch Ausable River. The project is integral to flood resilience, ice jam mitigation, public safety, stream function, and habitat restoration while enhancing wetland environments and increasing floodplain access. The development of construction-ready design plans stamped by a NYS-licensed engineer would allow AsRA to help the Town of Jay continue progress on implementation of the East Branch Restoration Plan.

Outputs:

- engineered design plans for river channel restoration and floodplain access
- preparation of a USFWS federal landowners agreement
- draft bid documents.

Outcomes:

- reduced nutrient loading
- understanding impacts of climate change on clean water
- habitat conservation for ecosystem function

Organization: Ausable River Association
Contact Person: Gary Henry
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 Wilmington, NY 12997
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E-mail: gary@ausableriver.org
Website: https://www.ausableriver.org/



Site map showing PA7. Project area includes the channel and floodplain along NYS Route 9N. Inset map shows location of site within the Lake Champlain Basin



NEIWPCC Code: LS-2023-015
 EPA 0364-002-001
 Start Date: 4/4/2023
 Close Date:
 Grant Amount: \$75,000.00
 Non-federal Match: \$ 3,200.00
 Total Amount: \$78,200.00

2022 Planning Grant

in progress

Establishing Bankfull Discharge and Hydraulic Geometry Relationships, Ausable River Watershed

Project Description

As the number of potential and active stream restoration sites has grown in the Ausable River watershed, the need for regional guidance on bankfull discharge and hydraulic geometry specific to the watershed has also increased. Existing curves are based on a much larger area, encompassing physiographic areas beyond the Adirondacks, where much of the present restoration work in the Ausable watershed is taking place. The Association proposes to work with a national expert in the development of regional curves to generate a set of curves based on reference reach sites located within the Ausable River watershed. This project will greatly improve the ability to work with partners at the US Fish and Wildlife Service and others to design and construct projects more effectively and efficiently.

Outputs:

- development of a set of regional bankfull discharge and hydraulic geometry curves that are specific to the Ausable River watershed

Outcomes:

- more effective and efficient project design and construction

Organization: Ausable River Association
Contact Person: Gary Henry
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 Wilmington, NY 12997
Phone: 518-637-6859
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Website: www.ausableriver.org



Map of the area used to develop regional bankfull discharge and hydraulic geometry relationships in Northern New York (from Mulvihill et al., 2007). Gage sites in the Ausable watershed are circled in red.



NEIWPCC Code: LS-2022-020
EPA 0357-002-001
Start Date: 3/23/2022
Close Date:
Grant Amount: \$49,961.00
Non-federal Match: \$ 2,500.00
Total Amount: \$52,461.00

2022 Planning Grant

in progress

Identify & Advance Implementation in Winooski Conservation District

Project Description

Storm Smart is a residential site assessment program that guides property owners in the identification, prioritization, and implementation of practices that reduce negative impacts of stormwater. The objective of this program is to improve the water quality in the Lake Champlain Basin by reducing stormwater runoff from private residential and small-scale development before it causes erosion, degrades water quality, destroys sensitive habitat, and accumulates in volume. WNRCD, working in partnership with Friends of the Mad River (FMR) and Friends of the Winooski River (FWR), will complete 125 assessments and prescription cards using the Storm Smart Assessment framework. This framework will be updated in advance of each field season to incorporate lessons learned. This will result in creating a list of prioritized stormwater projects ready for design or implementation.

Outputs:

- update of the Storm Smart assessment protocol and framework
- 125 assessments and prescription cards using the Storm Smart assessment framework
- list of prioritized stormwater projects ready for design or implementation

Outcomes:

- reduction of stormwater runoff from private residential and small-scale development
- increased preparedness of organizations and communities to implement water quality improvement projects
- increased understanding of and appreciation for Basin resources, the related threats, and the priority actions needed to address them
- adoption of behavioral change that reflects personal commitment to protecting and improving resources in the Lake Champlain Basin

Organization: Winooski NRCD
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 Berlin VT 05602
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Website: www.winooskinrcd.org



Diagram showing stormwater implementation projects (rain barrel, rain garden, waterbar, no-mow and low-mow zones) identified through a theoretical Storm Smart assessment on private residential land.



NEIWPCC Code: LS-2022-062
EPA 0357-002-001
Start Date: 5/20/2022
Close Date:
Grant Amount: \$ 100,000.00
Non-federal Match: \$ 5,034.00
Total Amount: \$105,034.00

2023 Planning Grant

in progress

Illicit Discharge Detention and Elimination for Sutton, Quebec in the Missisquoi Bay, Phase 1

Project Description

This project includes the creation of an accurate stormwater infrastructure mapping database, dry weather outfall survey, and bracket sampling to identify potential illicit connections to the stormwater system and thus discharges to surface waters.

Outputs:

- stormwater infrastructure database
- a web map of stormwater infrastructure
- results and summary report of stormwater outfall dry weather survey including the results of up to three bracket sampling investigations and recommendations for intervention to correct illicit discharges
- community outreach materials including a handout and press release
- identification of locations for potential stormwater best management practices (BMPs).

Outcomes:

- reduced phosphorus loading to Lake Champlain's Missisquoi Bay through the Sutton River via the identification and correction of illicit discharges
- a more informed public on illicit discharges and phosphorus levels in the Missisquoi Bay watershed.

Organization: Watershed Consulting Associates, LLC

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Burlington, VT 05401

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E-mail: andres@watershedca.com

Website: <https://watershedca.com/>



GPS equipment will be used to map stormwater infrastructure including culvert inlets



NEIWPCC Code: L-2023-014
 GLFC 0100-337-002
 Start Date 4/10/2023
 Close Date:
 Grant Amount: \$74,621.00
 Non-federal Match:
 Total Amount: \$74,621.00

2022 Planning Grant

in progress

New York Non-Point Source Subwatershed Assessment Plan Update

Project Description

The Lake Champlain Lake George Regional Planning Board will update the 2018 *Lake Champlain Non-Point Source Pollution Subwatershed Assessment and Management Plan*. Staff will update all relevant information included in the original plan as well as provide updates on completed projects and compile a list of new priority projects to improve water quality throughout the subwatershed. Outputs from this project include five public outreach events, stakeholder interviews, a public survey, a compilation of new water quality improvement projects and a completed plan update document. Outcomes include better informed municipalities, Departments of Public Works (DPWs), and other watershed partners regarding what projects need to be completed to achieve water quality improvements. This document will also provide a benefit to watershed municipalities and partners when pursuing implementation funding for water quality concerns.

Outputs:

- five public outreach events, stakeholder interviews, and a public survey
- compilation of new water quality improvement projects
- completed plan update document.

Outcomes:

- better informed municipalities, Departments of Public Works (DPWs), and other watershed partners regarding what projects need to be completed to achieve water quality improvements.

Organization: LCLGRPB

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NEIWPCC Code: LS-2022-017
 EPA 0357-002-001
 Start Date: 3/8/2022
 Close Date:
 Grant Amount: \$47,785.00
 Non-federal Match:
 Total Amount: \$47,785.00

2022 Planning Grant

in progress

Stormwater and Stream Project Development in the Poultney Mettowee Watershed

Project Description

Poultney Mettowee NRCDC (PMNRCDC) will work with the Lake St Catherine Association (LSCA), a hired consultant and local partners to develop 10-12 stormwater projects identified in the 2019 Lake St Catherine Stormwater Master Plan to 100% design and 8-10 stream and floodplain restoration and conservation projects identified in Phase 2 Stream Geomorphic Assessments to 30% design within the Poultney Mettowee watershed. This project development will efficiently prepare a suite of projects in a subsection of the South Lake Watershed for implementation through the formula grants being provided to Vermont Clean Water Service Providers in 2023.

Outputs:

- 10 to 12 high quality stormwater projects designed to 100% and ready to implement upon securing funds
- Prioritized list of stream and floodplain restoration/conservation projects from Phase 2 Stream Geomorphic Assessments
- 8-10 stream and floodplain restoration/conservation projects designed to 30% conceptual design standards

Outcomes:

- involvement of local landowners throughout the process including during project prioritization
- informed community that is supportive of clean water project implementation
- increased capacity for project implementation at the PMNRCDC and LSCA
- more efficient South Lake Clean Water Service Provider rollout
- decreased phosphorus loading into local streams and Lake Champlain

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Website: www.pmnrcd.org



Stormwater project implementation in Wells, VT



NEIWPCC Code: LS-2022-063
EPA 0357-002-001
Start Date 6/23/2023
Close Date:
Grant Amount: \$100,000.00
Non-federal Match: \$ 9,400.00
Total Amount: \$109,400.00

2022 Planning Grant

in progress

Stormwater Reduction in the Town of Proctor

Project Description

In an effort to reduce stormwater runoff in the Otter Creek watershed the RNRCD will hire an Engineering Consultant to develop a Stormwater Master Plan (SWMP) for the Town of Proctor. The goal of this project is to work with the Town of Proctor on minimizing stormwater volume by developing a Stormwater Master Plan. The overall objective of this project 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.

Outputs:

- development of a Stormwater Master Plan

Outcomes:

- reduced stormwater runoff

Organization: Rutland NRCDC
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 Rutland, VT 05701
Phone: 802-775-8034 ext. 117
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Website: https://www.vacd.org/conservation-districts/rutland/

NEIWPCC Code: LS-2022-033
EPA 0357-002-001
Start Date: 4/12/2022
Close Date:
Grant Amount: \$37,132.00
Non-federal Match:
Total Amount: \$37,132.00



2023 Planning Grant

in progress

Sucker Brook Phosphorus Loading Assessments

Project Description

Conduct Phase 2 Rapid Geomorphic Assessment (RGA) of the North Branch of Sucker Brook to assess sources of sediment and identify actions to reduce sediment and phosphorus (P) loading to Lake Dunmore and Otter Creek and make measurements of this loading from the Sucker Brook/Dutton Brook watershed. Outputs would be An outcome is

Outputs:

- a report assessing streambank erosion risk from North Sucker Brook and 2+ years of flow, turbidity and total phosphorus (TP) measurements on Sucker Brook.

Outcomes:

- better understanding of phosphorus loading into Lake Dunmore to guide future mitigation actions
- reduction of nutrient inputs from forested lands

Organization: Lake Dunmore Fern Lake Association (LDFLA)
Contact Person: David Johnson
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 Leicester, VT 05733
Phone: 609-203-9242
E-mail: dawajo48@gmail.com
Website: LDFLA.com



NEIWPCC Code: LS-2023-016
EPA 0364-002-001
Start Date 4/7/2023
Close Date:
Grant Amount: \$22,300.00
Non-federal Match: \$10,630.00
Total Amount: \$32,930.00

2023 Planning Grant

in progress

Warren County Culvert Assessments and Asset Management Plan

Project Description

The Warren County Department of Public Works (DPW) will hire an engineering firm to perform a comprehensive assessment of the county's culverts within the Lake Champlain watershed. The objective of the project is to gain comprehensive knowledge of the county's culvert assets and ascertain each culvert's risk of failure. The output is to use that information to.

Outputs:

- assessment and prioritization of culverts for repair/ replacement and include the data in the county's digital asset management program

Outcomes:

- reduction in the number of culvert collapses and emergency culvert and streambank repairs.

Organization: Warren County
Contact Person: Kevin Hajos
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 NY 12885
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Website: www.warrencountyny.gov



NEIWPCC Code: LS-2023-041
EPA 0364-002-001
Start Date: 8/22/2023
Close Date:
Grant Amount: \$75,000.00
Non-federal Match: \$ 7,650.00
Total Amount: \$82,650.00

2023 Research Grants

in progress

Biological Index Development: A “Three-legged Assessment Stool” for Lakes within the Lake Champlain Basin

Project Summary

Tetra Tech will use existing biological data, supplemented by additional sampling, to create three indices of biological integrity (IBIs) – for diatoms, macroinvertebrates, and macrophytes – that qualify the condition of inland lakes within the Lake Champlain Basin. Tetra Tech will coordinate with VT DEC and NYSDEC to find opportunities to establish or continue monitoring that would enhance applications of the “three-legged biological assessment stool” in this basin. NY has a long-standing history of biological assessment and established standard operating procedures that inform integrated reporting efforts. This project and its deliverables may be informative for development of broader statewide monitoring and analytical tools in NY but will not be directly applicable to NY integrated reporting and no reports of biological condition will be made for NY waterbodies.

Outputs:

- technical documentation and databases
- R-Shiny-based IBI calculator tools
- non-technical educational content such as an ArcGIS StoryMap.

Outcomes:

- will aid resource managers to determine which lakes and sub-watersheds are in need of pollution interventions and prioritize allocation of limited resources to places and projects that are most likely to make the largest improvement in water quality in individual lakes and in the entire LCB

Organization: Tetra Tech
Contact Person: Benjamin Jessup
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 Montpelier, VT 05602
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E-mail: Benjamin.Jessup@tetrattech.com
Website: <https://www.tetrattech.com/en/one-water>



Lakes, like this one, scattered across the Lake Champlain Basin will be sampled for this project.



NEIWPCC Code: L-2023-006
EPA: 064-003-001
Start Date: 4/4/2023
Close Date:
Grant Amount: \$295,000.00
Non-federal Match:
Total Amount: \$295,000.00

2022 Research Grants

in progress

Discovery Acres: A Water Quality Research and Education Site in the St Albans Bay Watershed

Project Summary

Discovery Acres is a research demonstration site on an active dairy farm in northwestern Vermont, that will provide farmers with important, place-specific information about the impacts of best management practices on water quality and soil health. Specifically, Discovery Acres will help increase our understanding of environmental stewardship on tile-drained fields in Vermont and expand sub-watershed monitoring. Knowledge gained from Discovery Acres will be used to provide technical assistance to local organizations to implement edge-of-field and sub-watershed monitoring. Farmers in Vermont will also have a better understanding of the impact of cover crop termination methods and manure management strategies on water quality, soil health metrics, and crop viability. As a result of data gathered and outreach provided, we can expect farmer behavior to change and therefore increase water quality in the Lake Champlain Basin by reducing nutrient and pesticide loss through surface runoff and tile drainage.

Outputs:

- knowledge gained from Discovery Acres will be used to provide technical assistance to local organizations to implement edge-of-field and sub-watershed monitoring

Outcomes:

- increased understanding of environmental stewardship on tile-drained fields in Vermont and expand sub-watershed monitoring
- increase water quality in the Lake Champlain Basin by reducing nutrient and pesticide loss through surface runoff and tile drainage

Organization: UVM & State Agricultural College
Contact Person: Heather Darby
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 St. Albans, VT 05478
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E-mail: heather.darby@uvm.edu
Website: <https://www.uvm.edu/extension/nwcrops>



NEIWPCC Code: LS-2023-035
EPA: 0364-002-001
Start Date: 4/14/2023
Close Date:
Grant Amount: \$300,000.00
Non-federal Match:
Total Amount: \$300,000.00

2022 Program Grants

in progress

Achieving Verifiable Phosphorus Removal from Tile Drains Discharging to Lake Carmi Tributaries

Project Summary

Stone will design, construct, monitor, and analyze the performance of reactive media filters to remove phosphorus (P) from four tile drainage systems discharging to Lake Carmi tributaries (Opportunities for Action, Strategy I.C.2.e). Implementation of tile drain P filters will reduce discharge of P to Dewing and Kane's Brooks and dissolved and particulate P loading to Lake Carmi and Missisquoi Bay of Lake Champlain. The primary outputs of the project will be treatment of phosphorus in tile drainage water from cropland receiving injected dairy manure, filter design drawings, and filter performance data. Development and demonstration of the tile drain P filters should provide farmers and resource conservation staff in Vermont with a tested and proven practice to reduce P loading from tile drainage systems.

Outputs:

- treatment of phosphorus in tile drainage water from cropland receiving injected dairy manure
- filter design drawings, and filter performance data
- development and demonstration of the tile drain P filters
- tested and proven practice to reduce P loading from tile drainage systems.

Outcomes:

- reduction of P discharge to Dewing and Kane's Brooks
- reduction of dissolved and particulate P loading to Lake Carmi and Missisquoi Bay of Lake Champlain

Organization: Stone Environmental, Inc.
Contact Person: Dave Braun
Mailing Address: 535 Stone Cutters Way
 Montpelier, Vermont 05602
Phone: (802) 272-8819
E-mail: dbraun@stone-env.com
Website: <http://www.stone-env.com/>



Constructing a P filter at the outlet of a tile drain in St. Albans



NEIWPCC Code: L-2021-090
EPA: 0357-002-001
Start Date: 2/10/2022
Close Date:
Grant Amount: \$ 147,962.00
Non-federal Match: \$ 4,000.00
Total Amount: \$151,962.00

2021 Program Grants

concluded

Agricultural Engineering Training in New York

Project Summary

This project used PRO-DAIRY experience and personnel to increase the private sector agricultural engineering capacity in the New York Lake Champlain Basin (LCBP). The private sector firms can then better adapt agricultural engineering projects that are compliant with current NRCS-NY standards into their service model.

To facilitate the private sector engineering services for BMP implementation PRO-DAIRY will be offering two one day training sessions divided into class time in the morning and farm visits in the afternoon. The BMP topics presented will focus on manure storage, manure transfer, barnyard runoff control and milking center waste management. Program opportunities from both NRCS and NY AG & Markets and SWCDs will be included. The farm visits will focus on the priority BMPs on farms that have successfully installed and maintained them as well as farms that yet need to install them. The power point presentations will be placed on the PRO-DAIRY website PRO-DAIRY | CALS (cornell.edu) for future reference. A list of those attending the training

Outputs:

- two one day training sessions divided into class time in the morning and farm visits in the afternoon
- power point presentations available on the PRO-DAIRY website
- design review for up to ten private sector engineering designs

Outcomes:

- help the private sector to effectively and efficiently deliver the engineering services to the agricultural community.
- reduction of phosphorous nonpoint runoff from animal agriculture within the Lake Champlain watershed
- acceleration of installation and maintenance of Best Management Practices

Organization: Cornell Pro-Dairy
Contact Person: Peter Wright
Mailing Address: 425 Riley Robb Hall
 Ithaca NY 14853
 (112 Walnut Street, Auburn N 13021 during COVID remote work)
Phone: 585-314-5314
E-mail: pew2@cornell.edu
Website: <https://cals.cornell.edu/pro-dairy>



Photo taken by Myra Lawyer, LCBP Agronomist, at the October 2021 training. Peter Wright, trainer, is showing and describing the manure storage at Ideal Dairy.



NEIWPCC Code: LS-2021-069
EPA: 0356-002-001
Start Date: 7/23/2021
Close Date: 3/14/2023
Grant Amount: \$25,000.00
Non-federal Match:
Total Amount: \$25,000.00

2021 Program Grants

in progress

Bioretention soil specifications evaluation and phosphorus reduction accounting study: combined project

Project Summary

Stone Environmental, Inc. (Stone) and the University of Vermont (UVM) Ecological Landscape Design Lab, within the Plant and Soil Science Department, will work in close consultation with the LCBP to evaluate the water quality best management practice (BMP) design standard for bioretention soil media outlined in the 2017 Vermont Stormwater Management Manual (VSMM), analyzing the soil media's ability to remove sediment, nutrients, and heavy metals, while supporting plant health. To do this the Stone-UVM team will first produce a literature review of nationwide bioretention soil specifications and performance studies to provide comparison to the VSMM soil specification and insight to potential additives with low nutrient leaching. Following the literature review, the team will monitor a series of replicate bioretention planters with one set containing the VSMM-specified soil with compost added at the plant's root base, a second set designed and built to VSMM standards, a third set consisting of sand with compost added at the plant's root base, and a fourth control set filled with only sand. This research will take place in a controlled greenhouse environment, allowing an extended growing season/monitoring period, as well as the use of lab-produced "simulated stormwater" with known concentrations of pollutants that can be passed through the bioretention planters at controlled volumes and flow rates so that the pollutant removal efficacy of each planter can be measured. This study supports the Vermont Agency of Natural Resources (ANR) to produce effective BMP standards that will ultimately bring Vermont closer to compliance with the Lake Champlain Phosphorus Total Maximum Daily Load (Phosphorus TMDL) and reduce stormwater pollutants of concern overall.

Outputs:

- produce a literature review of nationwide bioretention soil specifications and performance studies
- monitor 4 sets of replicate bioretention planters
- produce effective BMP standards that will ultimately bring Vermont closer to compliance with the Lake Champlain Phosphorus Total Maximum Daily Load

Outcomes:

- reduce stormwater pollutants of concern

Organization: Stone Environmental
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 Montpelier, VT 05602
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Contact Person Project A: Polly Crocker
Phone: 703-606-4252
E-mail: pcrocker@stone-env.com
Contact Person Project B: Amy Macrellis
Phone: 802-229-1884
E-mail: amacrellis@stone-env.com



This project combines:

- [Project A](#) *Efficacy of the 2017 Vermont Stormwater Management Manual Bioretention Soil Specification in Removing Pollutants and Supporting Plant Health*
- [Project B](#) *Uniform Accounting of Soil and Sediment P Reductions in Evaluation of WQ Project Benefits in VT*



NEIWPCC Code: L-2020-090
EPA: 0356-002-001
Start Date: 12/17/2021
Close Date:
Grant Amount: \$203,014.00
Non-federal Match: \$ 53,917.00
Total Amount: \$256,931.00

2022 Program Grants

in progress

Caspian Lake Watershed Action Plan

Project Summary

The Caspian Lake Community Engagement and Watershed Action Plan will provide a synthesis of all available data, sector-based assessments, estimated total phosphorus contributions from sub-watersheds, and a list of the five highest priority projects and overall strategies that will reduce sediment and nutrient loading to Caspian Lake, and restore and support aquatic habitat functions.

Outputs:

- Caspian Lake Watershed Action Plan
- five 30% best management practice project designs

Outcomes:

- the Caspian Lake community will have a clear list of achievable projects that, when implemented, will contribute to reducing phosphorus runoff to Caspian Lake.
- another year of visible, on-the-ground projects implemented through the Lake Wise program will inspire other lakeshore owners to participate in the Lake Wise program, also resulting in reduced nutrient and sediment runoff to the lake from lakeshore properties
- the Greensboro community will have a greater awareness of actions they can take to protect the lake.

Organization: Orleans County NRCD
Contact Person: Sarah Damsell
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 Newport, VT 05855
Phone: 802-334-6090 ext. 7008
E-mail: sarah.damsell@vt.nacdnet.net
Website: www.vacd.org/conservation-districts/orleans-county



View of Caspian Lake from Lake Shore Road



NEIWPCC Code: LS-2021-097
EPA: 0357-002-001
Start Date: 1/6/2022
Close Date:
Grant Amount: \$ 48,668.00
Non-federal Match: \$ 2,338.00
Total Amount: \$51,006.00

2022 Program Grants

concluded

Castleton Main Street Drainage Scoping Study

Project Summary

PMNRCD and partners conducted a stormwater scoping study on Main Street in Castleton, focusing on inputs from Seminary Street, Elm Street, and the surrounding area to define the volume of stormwater generated, identify infiltration opportunities, assess existing stormwater infrastructure, consider alternatives, and choose a final plan for holistically improving stormwater drainage within the project area and retrofitting the stormwater outfall near the Castleton River.

Outputs:

- assessment of the drainage and stormwater infrastructure in downtown Castleton
- investigate the water quality and public safety issues on Main Street in Castleton
- develop and evaluate green storm water project alternatives to address nutrient runoff from impervious surfaces
- implementation plan

Outcomes:

- improved water quality
- nutrient run-off reduction

Organization: Poultney Mettowee NRCD
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 Poultney, VT 05764
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E-mail: hilary@pmnrcd.org
Website: <https://www.pmnrcd.org/>



NEIWPCC Code: LS-2021-072
EPA: 0357-002-001
Start Date: 10/25/2021
Close Date: 9/15/2023
Grant Amount: \$ 24,500.00
Non-federal Match: \$ 3,000.00
Total Amount: \$27,500.00

2022 Program Core Grants - NY Agronomy

in progress

Clinton and Essex County Small Farm Phosphorus Reduction Project

Project Summary

The Soil & Water Conservations Districts' of Clinton and Essex County in Northern New York, will work with farmers with in New York State's portion of Lake Champlain basin to design and implement phosphorus reducing soil-based practices. Our field workshop on soil-based management practices, will give agricultural professionals and local landowners an opportunity to learn the importance of the phosphorus in the soil. This workshop will also provide examples of implementation practices to better utilize phosphorus in soil for agricultural production. Over 90 acres of soil-based practices will be installed across the counties to reduce phosphorus loading in the Lake Champlain Basin.

Outputs:

- 90 acres of soil-based practices will be installed across the counties

Outcomes:

- reduced phosphorus loading in the Lake Champlain Basin

Organization: Clinton County Soil and Water
Contact Person: Peter Hagar
Mailing Address: 6064 Route 22, Suite 1
 Plattsburgh NY 12901
Phone: (518) 561-4616 ext. 3
E-mail: peter.hagar@ccsoil-water.com
Website: <http://clintoncountyswcd.org/>



NEIWPCC Code: LS-2023-007
EPA: 037-002--003
Start Date: 3/14/2023
Close Date:
Grant Amount: \$25,000.00
Non-federal Match:
Total Amount: \$25,000.00

2021 Program Grants

in progress

Consequences of winter perturbations on nutrient export to Lake Champlain

Project Summary

Preliminary data suggest that winter runoff events are disproportionately important contributors to annual nutrient loads in the Lake Champlain Basin (LCB), but very little is known about the magnitude and drivers of these mid-winter fluxes. The proposed project will winterize an in-place sensor network and use sampling campaigns to determine how winter perturbations impact the timing and magnitude of watershed nutrient export and loading to Lake Champlain and identify critical source areas and flowpaths for these winter events. The research will address LCBP *Opportunities for Action* 1 by combining a targeted monitoring campaign with winterized nutrient sensors capable of collecting high frequency in-situ soils and streams data to quantify winter nutrient loading and the conditions and land uses that promote high loading. These data will also be made available to better constrain watershed nutrient loading models and inform policies aimed at suppressing winter nutrient export.

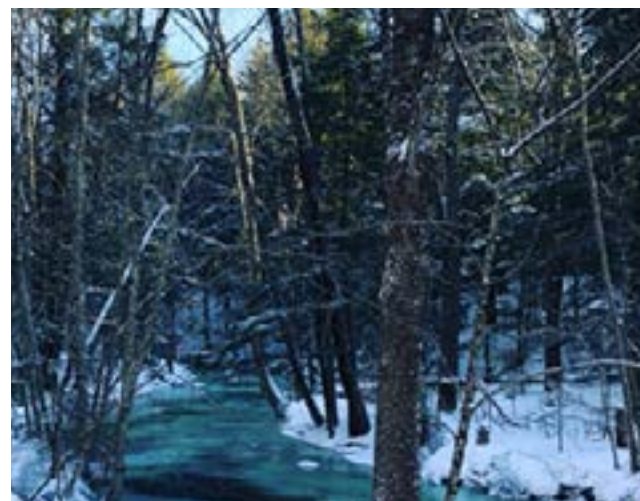
Outputs:

- winterize an in-place sensor network
- sampling campaigns to determine how winter perturbations impact the timing and magnitude of watershed nutrient export and loading to Lake Champlain
- identify critical source areas and flowpaths for these winter events

Outcomes:

- data will also be made available to better constrain watershed nutrient loading models and inform policies aimed at suppressing winter nutrient export.

Organization: University of Vermont
Contact Person: Carol Adair
Mailing Address: 81 Carrigan Drive
 South Burlington, VT 05405
Phone: n802/656-2907
E-mail: Carol.Adair@uvm.edu
Website: <https://adairlab.weebly.com/>



Photos: Erin Seybold



NEIWPCC Code: LS-2021-011
EPA 0356-002-001
Start Date: 8/13/2021
Close Date:
Grant Amount: \$281,904.00
Non-federal Match: \$82,280.00
Total Amount: \$364,183.00

2023 Program Grants

in progress

Cyanotoxin Monitoring in the Lake Champlain Basin 2023-2025

Project Summary

This project will support cyanotoxin monitoring to complement the visual protocols in the Lake Champlain Cyanobacteria Monitoring Program. This project will provide quality control data for that program (validating the visual monitoring protocol), and in addition will provide extra funding for more comprehensive toxin analyses from bloom events which occur throughout the basin. In addition to continuing program activities from previous years, this project will expand the analysis from 2 to 4 cyanotoxins (or families of cyanotoxins): microcystins, anatoxin, cylindrospermopsin, and saxitoxin.

Outputs:

- expanded database of the toxicity of cyanobacteria blooms in the Lake Champlain Basin, with a focus on samples from category 2 and 3 blooms

Outcomes:

- help understanding of the conditions which contribute to bloom toxicity in the Lake Champlain Basin

Organization: VT DEC
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 Montpelier VT 05620
Phone: 802-490-6130
E-mail: peter.isles@vermont.gov
Website: <https://dec.vermont.gov/watershed/lakes-ponds/learn-more/cyanobacteria>



An example of a cyanobacteria bloom on Lake Champlain. While it is known that many common cyanobacteria can produce toxins, many blooms do not have measurable levels of toxins, and it is still not well-understood what factors lead a bloom to becoming toxic. Photos: Lake Champlain Committee



NEIWPCC Code: LS-2023-087
NOAA 0367-002-000
Start Date: 9/26/2023
Close Date:
Grant Amount: \$125,000.00
Non-federal Match:
Total Amount: \$125,000.00

2022 Program Grants

in progress

Developing a Comprehensive Binational Phosphorus Mass Balance Model for the Missisquoi Bay

Project Summary

Stone Environmental, Inc. (Stone) will work with the University of Vermont (UVM), Research and Development Institute for the Agri-Environment (IRDA), and Organisme de Bassin Versant de la Baie Missisquoi (OBVBM) to develop a comprehensive, binational phosphorus (P) mass balance model for the Missisquoi Bay watershed. This project will merge existing basin-wide data and scientific expertise from Quebec and Vermont to quantify the inventory of different P stocks within the Missisquoi Basin's terrestrial and aquatic compartments, apply physically based and empirical models and data to quantify the fate and transport of P across the basin, and produce a stakeholder-facing toolkit for the analysis of the P mass balance over time under various management scenarios.

Outputs:

- creation of a binational P inventory providing a formal assessment of the current conditions inventory and distribution of P within all terrestrial and aquatic compartments of the Missisquoi Basin
- development of a terrestrial P export metamodel for evaluating the terrestrial landscape storage and export of P based upon a broad range of landscape characteristics, climate inputs, and agricultural and non-agricultural management practices
- P mass balance assessment toolkit that will allow stakeholders to explore the future long-term Missisquoi watershed P mass balance under a range of alternative assumption, including adoption of agricultural and non-agricultural best management and conservation practices at various scales throughout the U.S. and Canada.

Outcomes:

- improved understanding and education concerning the impacts of society's actions on the long-term water quality of Missisquoi Bay.

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Website: <https://www.stone-env.com/>



NEIWPCC Code: L-2022-010
EPA: 0357-002-001
Start Date: 2/10/2022
Close Date:
Grant Amount: \$ 299,966.00
Non-federal Match: \$ 35,266.00
Total Amount: \$335,231.00

2023 Program Grants

in progress

Developing Skills of TAPs to Assist Farmers with Soil Health Strangers

Project Summary

This project will create a curriculum and implement a training program for agricultural TAPs to improve soil health strategy adoption and management with their farmer clients across Vermont agricultural lands. This project also supports the collaboration of soil health experts and technical staff across the region to meet regularly and share information, research, program opportunities, and experiences. The anticipated outcome of this project is locally relevant training content and programming specific to Lake Champlain Basin and Vermont agricultural producers, which will support a community of agricultural producers, service providers, and researchers working together towards healthier soils, cleaner water, viable farms, and improved climate resilience.

Outputs:

- one year of training opportunities for at least 20 TAPs on soil health topics
- five (5) infield intensives
- twelve (12) online winter webinars
- material from the training program will also be hosted online for future TAPs to learn from in a self-guided approach.

Outcomes:

- a community of agricultural producers, service providers, and researchers working together towards healthier soils, cleaner water, viable farms, and improved climate resilience.

Organization: Franklin County Natural Resources Conservation District

Contact Person: Lauren Weston

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 St. Albans, VT 05478

Phone: (802) 528-4176

E-mail: Lauren.weston@usda.gov

Website: www.FranklinCountyNRCD.org



NEIWPCC Code: LS-2023-088
EPA: 0364-002-001
Start Date: 11/8/2022
Close Date:
Grant Amount: \$200,000.00
Non-federal Match:
Total Amount: \$200,000.00

2023 Program Grants

in progress

Development of a Soil Health Calculator Tool to Quantify Impacts of Agricultural Management Practices on Soil Health in the Lake Champlain Basin

Project Summary

This project will develop and validate a web-based soil health calculator tool to quantify the impact of agricultural conservation practices at the field/farm scale on key soil health properties and provide farmers and state programs with actionable information that will enable informed decision making to increase regenerative agriculture and support healthy soils in Vermont. The tool will be developed as a module of the existing Farm-P Reduction Planner (Farm-PREP) and tool outputs will be based on the United States Department of Agriculture (USDA) Agricultural Policy Environmental eXtender model (APEX) (Steglich et al., 2016). To the extent possible, this customized modeling-based approach will be designed to align with the goals of the Vermont Agency of Agriculture, Food, and Markets (VAAF), as well as the Vermont Payment for Ecosystem Services (PES) and Soil Health Working Groups. The development of this easily accessible tool will be that stakeholders can identify feasible field-specific practices that will contribute to healthy and sustained soils within a framework that also demonstrates the impacts of those practices on water quality and agricultural outcomes.

Outputs:

- develop and validate a web-based soil health calculator tool

Outcomes:

- informed decision-making to increase regenerative agriculture and support healthy soils in Vermont
- improved water quality

Organization: Stone Environmental, Inc.
Contact Person: Jody Stryker
Mailing Address: 535 Stone Cutters Way
 Montpelier, Vermont 05602
Phone: (858) 444-5790
E-mail: jstryker@stone-env.com
Website: <https://www.stone-env.com/>

Management Practice	Change in Bulk Density (%)	Change in Soil Strength	Change in Organic Matter (%)	Change in Organic Carbon (%)	Impact
• No-till	20	20	20	20	+
• Cover	20	20	20	20	+
• Reduced-tillage	20	20	20	20	+
• Reduced-irrigation	20	20	20	20	+
• No-till + cover	20	20	20	20	+
• No-till + reduced-irrigation	20	20	20	20	+
• No-till + cover + reduced-irrigation	20	20	20	20	+
• No-till + cover + reduced-irrigation + organic matter	20	20	20	20	+
• No-till + cover + reduced-irrigation + organic matter + organic carbon	20	20	20	20	+
• No-till + cover + reduced-irrigation + organic matter + organic carbon + organic nitrogen	20	20	20	20	+



NEIWPCC Code: L-2022-099
EPA: 0364-002-001
Start Date: 11/4/2022
Close Date:
Grant Amount: \$95,000.00
Non-federal Match:
Total Amount: \$95,000.00

2020 Program Grants

in progress

Evaluating Performance of Media Filters to Remove Phosphorus in Stormwater Pond Outflow

Project Summary

Stone Environmental, Inc. (Stone) will work in consultation with the Lake Champlain Basin Program (LCBP) to evaluate four media filters to remove phosphorus (P) from the outflow of a municipal stormwater pond in South Burlington, Vermont. Stone will identify and demonstrate a cost-effective strategy for reducing P loading to Lake Champlain (*Opportunities for Action*, Task 1.A.1.c).

Implementation of media filters to enhance P removal at existing stormwater ponds would reduce P loading to the receiving water. A successful demonstration of this practice would encourage and inform the development of additional media filter retrofits to stormwater ponds in the Lake Champlain Basin. The City of South Burlington will support Stone in identifying a suitable stormwater pond for treatment, securing access, overseeing construction, and assisting with maintenance of the phosphorus filtration systems. In collaboration with the City and Vermont DEC, Stone will ensure that the results provided by this study are suitable for establishing P removal credits for filter retrofit practices. Establishing a transparent P crediting approach will ensure that MS4s and other potential permittees in the Lake Champlain Basin have an incentive to apply this retrofit practice.

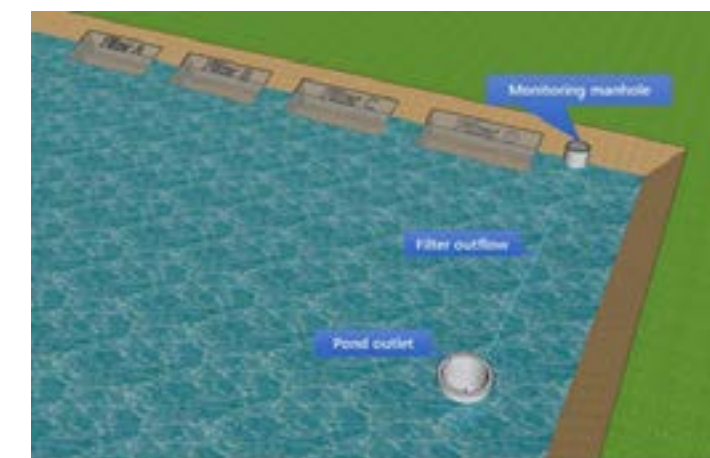
Outputs:

- identification and evaluation of three stormwater ponds. One of the three ponds will be selected for installation of the P filters, based on the dissolved P concentrations measured at the outlet.
- final engineering design plans for the pilot stormwater pond P filters, for use as a basis for designing similar P filter retrofits for existing stormwater ponds throughout the Lake Champlain Basin

Outcomes:

- reduction of phosphorus loading to Lake Champlain

Organization: Stone Environmental
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Website: <http://www.stone-env.com/>



NEIWPCC Code: L-2019-105
GLFC: 0100-328-002
Start Date: 4/10/2020
Close Date:
Grant Amount: \$100,000.00
Non-federal Match: \$ 2,700.00
Total Amount: \$102,700.00

2022 Program Grants

in progress

Expanding Vermont’s Functioning Floodplain Initiative (FFI) to Advance the Science and Conservation of Healthy Stream, Riparian, Wetland, and Floodplain Ecosystems

Project Summary

This project will add instream and floodplain habitat components in the ongoing Functioning Floodplain Initiative (FFI) Project. The primary outcome of this work will be the ultimate improvement of stream and floodplain habitat as more stream channels are reconnected to their historic floodplains. Water quality will also be improved via reconnecting Vermont’s rivers. The main output of this project is a habitat module in the FFI to allow stakeholders and practitioners to use a web application to explore habitat conditions, plan for habitat improvement projects, and track progress.

Outputs:

- a web-based habitat module in the FFI to explore habitat conditions, plan for habitat improvement projects, and track progress.

Outcomes:

- improved of stream and floodplain habitat
- improved water quality

Organization: SLR Consulting
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 Waterbury, Vermont 05676
Phone: 802-882-8335
E-mail: SLRrschiff@slrconsutling.com
Website: slrconsutling.com



Disconnected floodplain along the Lamoille River with low-quality floodplain habitat in Wolcott, VT.



NEIWPCC Code: L-2021-099
EPA: 0357-003-001
Start Date: 2/10/2022
Close Date:
Grant Amount: \$154,035.00
Non-federal Match:
Total Amount: \$154,035.00

2022 Program Grants

in progress

Fairfield Pond Lake Watershed Action Plan

Project Summary

A Lake Watershed Action Plan will be completed for Fairfield Pond to identify and prioritize problem areas associated with stormwater runoff, shoreline encroachment and erosion, and land use within the watershed, using a combination of desktop analysis and field investigation. Once identified, a Watershed Action Plan will be published that catalogs and describes the state of the watershed in the areas of stormwater, stream, general land use, and lakeshore health. The information collected in each focus area will be cataloged within a data library and areas of concern will be prioritized to produce five conceptual design improvement projects aimed at improving or maintaining water quality and shoreline health of the Fairfield Pond watershed. The findings of the plan will be presented in a series of educational outreach events to the stakeholders in the area (landowners, businesses, and municipal leaders) to garner support for implementing the action plan.

Outputs:

- Digital data library and desktop assessment of the Fairfield Pond watershed
- Five preliminary designs of best management practices with cost estimates
- Two public outreach meetings
- Fairfield Pond Lake and Watershed Action Plan

Outcomes:

- Engagement with landowners in the Fairfield Pond watershed that will garner support for water quality practices
- Improvement of water quality and shoreline health of the Fairfield Pond watershed.

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 lakechamplain.org
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 lakechamplain.org



Photo courtesy: Fairfield Pond Recreation Association



NEIWPCC Code: LS-2022-004
EPA: 0357-002-001
Start Date: 2/1/2022
Close Date:
Grant Amount: \$ 24,635.00
Non-federal Match: \$ 2,200.00
Total Amount: \$26,835.00

2022 Program Grants

in progress

Flower Brook Floodplain Function and Flood Resilience Assessment

Project Summary

This project includes geomorphic assessment of the Flower Brook headwater tributaries with a focus on determining floodplain function and identifying and prioritizing restoration opportunities aimed at downstream flood and water quality protection in the South Lake watershed. Focus will include restoring floodplain connectivity where it has been lost due to encroachments and/or due to channel incision. Additional assessment areas include road crossings and hydrologically connected road segments, feeder tributaries that show signs of severe gully erosion, and evaluation of streamside properties in need of improved riparian buffers for participation in local tree planting programs. Assessment results will be provided to local landowners to facilitate enrollment in appropriate cost share or grant programs and/or the Town of Danby and Pawlet, where town roads, culverts, or right of ways are indicated. At least one identified project will be chosen for future implementation with LCBP funds, likely one of the projects receiving a 30% or conceptual design.

Outputs:

- a Stream Geomorphic Assessment to summarize current conditions and identify potential project opportunities
- a prioritized list of at least 25-30 projects for implementation
- three conceptual designs of high priority projects
- a Project Report summarizing information on all potential projects.

Outcomes:

- decreased downstream flood peaks and decreased downstream flux of sediments and nutrients, and ultimately improved safety and water quality in Pawlet Village and Lake Champlain
- improved understanding of the watershed, of stormwater storage, sediment transport, and the value of restoring and conserving functioning floodplains, riparian buffers, and instream structure and function (LWD).

Organization: Poultney Mettowee Natural Resources Conservation District

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Gravel generated in the headwaters



NEIWPCC Code: LS-2021-093
EPA: 0357-002-001
Start Date: 1/21/2022
Close Date:
Grant Amount: \$ 56,550.00
Non-federal Match: \$ 5,500.00
Total Amount: \$62,050.00

2020 Program Grants

in progress

Forage fish community monitoring in Lake Champlain

Project Summary

The overarching goal of this project is to design and initiate a prey fish community survey in Lake Champlain that will allow assessment of changes in coldwater prey fish communities (abundance, condition, length/age structure), monitor year class abundance of wild lake trout recruits, and inform management decisions.

Outputs:

- meetings with biologists from Vermont, New York, and Wisconsin to integrate elements of the VTDFW survey (1982-2015) and prey fish surveys conducted in lakes Ontario and Superior into design of a fish community monitoring survey plan for Lake Champlain
- field sampling to evaluate the abundance and condition of alewife and rainbow smelt in 2020 and 2021 relative to years prior to recruitment of wild lake trout
- a forage fish community monitoring plan with a standard operating procedure.

Outcomes:

- implementation of a long-term prey fish community survey
- annual prey fish community data to inform fisheries management decisions
- presentations to inform the public about the status of harvested fish populations in the lake (rainbow smelt, lake trout).

Organization: UVM

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University of Vermont faculty and graduate student sort catch of forage fishes from a bottom trawl as part of a juvenile lake trout survey. Credit: Hannah Lachance, UVM



NEIWPCC Code: L-2019-104
GLFC: 0100-328-003
Start Date: 3/9/2020
Close Date:
Grant Amount: \$238,822.00
Non-federal Match: \$127,387.00
Total Amount: \$366,209.00

2022 Program Grants

in progress

Going deep: evaluating deep and shallow water drivers of mercury in Lake Champlain fish

Project Summary

This project will identify climate driven factors regulating mercury cycling and bioaccumulation in deep and shallow basins of Lake Champlain, which govern concentrations of mercury in sport fish.

Outputs:

- a meeting with regional governmental stakeholders to inform needs for setting and unifying fish advisories on the lake
- an outreach plan to communicate fish advisories to anglers including underserved groups
- a survey of mercury (Hg) in sport fish in basins throughout the lake
- a record of isotopic signatures in fish from the lake, and an analysis of the differences in Hg source, food source and trophic level across basins
- an analysis of the sources of methylmercury (MeHg) to the base of the food web and the factors controlling bioaccumulation
- a model of climate-related drivers of MeHg in shallow and deep basins.

Outcomes:

- regional government stakeholders will be aware of what is needed to provide unified and accessible fish consumption advisories
- anglers on Lake Champlain, including semi-subsistence, indigenous and immigrant groups, will be informed of current best practices (species, location) for catching fish with low Hg levels
- an understanding of the changes in fish Hg concentrations over time and between basins in the lake will be achieved
- predictions of Hg concentrations in fish under future climate scenarios will be developed.

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NEIWPCC Code: LS-2022-016
EPA: 0357-002-001
Start Date: 4/25/2022
Close Date:
Grant Amount: \$ 297,500.00
Non-federal Match: \$ 93,209.00
Total Amount: \$390,709.00

2022 Program Grants

concluded

Hidden View Farm Cover Crop Seeder Integration and Reduced Tillage Planting Project

Project Summary

This project involved retrofitting a tillage implement with a cover crop sowing unit to allow for one pass manure incorporation and cover crop seeding after corn silage harvest. Silage harvest leaves little residue to protect and hold soil, so cover crops are a valuable tool to prevent erosion and protect water quality. This enhanced method of cover crop seeding will also save fuel, time, and reduce carbon dioxide. Hidden View Farm was identified as a high priority for improved cropland management. Much of their farmland is adjacent to the Great Chazy River and its tributaries.

Outputs:

- purchase of seeder
- retrofit of a tillage implement
- on-farm outreach and education event at WH Mlner Institute showcased the project equipment
- implementation of cover crop on 150 acres of cropland post-harvest

Outcomes:

- awareness of the benefits of cover crops and soil health practices
- reducing nonpoint source phosphorus load that is being generated by agricultural runoff from developed lands in the Basin.

Organization: Clinton County SWCD
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 Plattsburgh, NY 12901
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E-mail: peter.hagar@ccsoil-water.com
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Tegosem seeder and roller assembly on Pottinger Terradisc— August 16th Field Meeting



NEIWPCC Code: LS-2022-025
EPA: 0995-002-003
Start Date: 4/14/2022
Close Date: 9/15/2023
Grant Amount: \$ 50,000.00
Non-federal Match: \$ 960.00
Total Amount: \$50,960.00

2020 Program Grants

in progress

Identifying and Fixing Erosion Issues on Private and Park Roads in the Lake Carmi Watershed

Project Summary

The Northwest Regional Planning Commission (NRPC) completed a road erosion inventory (REI) on all hydrologically-connected segments on private roads, park roads and driveways within the Lake Carmi Watershed. NRPC prioritized roads segments for phosphorus best management practices implementation projects based on the potential for reducing phosphorus loading using Vermont Department of Environmental Conservation's (VTDEC) default methodology. In partnership with the Friends of Northern Lake Champlain (FNLC), NRPC further prioritized road segments for project implementation based on landowner willingness, likelihood of long-term success and cost effectiveness. Two to five projects will be selected for construction. Outreach to property owners and camp owners will include workshops and 1-on-1 coordination.

Outputs:

- road erosion inventory
- 2-5 phosphorus best management practices projects implemented
- workshops outreach

Outcomes:

- phosphorus reduction

Organization: NRPC
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 St. Albans, VT 05478
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Website: www.nrpcvt.com



An example of a Best Management Practice (BMP) installed on a municipal road through the Municipal Roads Grants-In-Aid program. This type of BMP may be installed as part of the work plan for this grant project.



NEIWPCC Code: LS-2020-056
EPA: 0346-002-001
Start Date: 5/7/2020
Close Date:
Grant Amount: \$100,000.00
Non-federal Match:
Total Amount: \$100,000.00

2022 Program Grants

in progress

Improving South Hero's Keeler Bay and Other Shoreline Areas: Project Identification through the Assessment of Adjacent Streams, Lakeshore, and Wetlands

Project Summary

The project's goal is to accelerate reduction of phosphorus and sediment loading in the Northern Lake Champlain Basin by providing stakeholders with comprehensive and cost-effective approaches that address water quality concerns. Following the VTDEC technical guidelines for Vermont Lake and Watershed Action Plans, the project will identify opportunities to reduce point and nonpoint source pollutants into Keeler Bay and other shoreline areas in South Hero. This will be accomplished through an assessment of stream and tributary networks, drainage ditches, wetlands, lakeshores, and working landscapes – incorporating the region's multiple land uses. Stakeholders and the South Hero community will be engaged to ensure collective buy-in. Synthesis of existing data and developed spatial analysis will guide the assessment. Sources will be prioritized based on various environmental, economic, and social criteria, with recommended solutions and design projects aimed to mitigate pollutants.

Outputs:

- Lake and Watershed Action Plan
- Assessments of stream and tributary networks, drainage ditches, wetlands, lakeshores and working landscapes.

Outcomes:

- reduction of phosphorus and sediment loading in the Northern Lake Champlain Basin
- stakeholders provided with comprehensive and cost-effective approaches that address water quality concerns
- build support of and participation in the assessment
- make water quality resources more accessible and understandable
- abet landowner commitment to future water quality opportunities
- produce a more informed community about methods to address water quality stressors.

Organization: Grand Isle County Natural Resources Conservation District
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Keeler Bay from the South Hero shoreline in summer 2021.



NEIWPCC Code: LS-2021-089
EPA: 0357-002-001
Start Date: 12/21/2022
Close Date:
Grant Amount: \$38,618.00
Non-federal Match: \$ 1,312.00
Total Amount: \$39,930.00

2022 Program Grants

in progress

Lake Assessment and Watershed Action Planning for New York Lakes

Project Summary

This project will collect water quality data, through citizen-science and professional staff, on unassessed or under-assessed waterbodies on the N.Y. side of the Lake Champlain Basin and develop watershed action plans for a subset of priority water bodies. The outcome of this work is to reduce the number of unassessed waterbodies in the basin, increase citizen engagement in watershed issues, and improve water quality in priority waterbodies.

Outputs:

- Water quality assessments of 50 unassessed or not recently assessed water bodies on the New York side of the Lake Champlain Basin
- Expanded citizen-science participation in the Adirondack Lake Assessment Program
- Three watershed action plans developed for priority water bodies on the New York side of the Lake Champlain Basin.

Outcomes:

- reduction in unassessed or not recently assessed water bodies on the New York side of the Lake Champlain Basin
- increased citizens' engagement in watershed issues, including monitoring, stewardship, and action through hands-on participation and non-personnel interpretation
- improvement of water quality in priority waterbodies through the development of watershed action plans

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Website: www.adkwatershed.org



NEIWPCC Code: LS-2021-073
EPA: 0357-002-001
Start Date: 10/18/2021
Close Date:
Grant Amount: \$198,995.00
Non-federal Match: \$ 38,925.00
Total Amount: \$237,920.00

2020 Program Grants

concluded

Lake Champlain Basin Dam Removal

Project Summary

This project continues VNRC's work to restore aquatic habitat, river and stream connectivity and riverine processes by removing dams that no longer serve a useful purpose. This project targeted four dams. Johnsons Mill Dam on the Bogue Branch in Bakersfield, Dunklee Pond Dam on the Tenney Brook in Rutland, Pelletier Dam on North Breton Brook in Castleton, Camp Wihakowi Dam on the Bull Run in Northfield, and Cross Brothers Dam on the Dog River in Northfield. Cross Brothers has reached partial design for removal, and is supported by the town. It has not moved forward due to the waiting period for funding through the Federal Emergency Management Agency (FEMA). It is positioned so that once the funding is secured, final design will be underway.

Outputs:

- dam removal and channel restoration
- design and revegetation plans

Outcomes:

- raise awareness of the impact of dams on river connectivity, aquatic organism passage, water quality, public safety, flood resilience and economics

Organization: VT Natural Resource Council
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 Montpelier, VT 05602
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Website: vnrc.org



From top left clockwise: Pelletier Dam, Camp Wihakowi Dam, Johnson's Mill Dam, Cross Brothers Dam



NEIWPCC Code: L-2020-001
GLFC: 0100-328-003
Start Date: 4/10/2020
Close Date: 4/17/2023
Grant Amount: \$275,000.00
Non-federal Match: \$285,900.00
Total Amount: \$560,900.00

2021 Program Grants

concluded

Lake Champlain Basin Dam Prioritization Tool for New York

Project Summary

A collaborative approach was used to identify important infrastructural, social, and ecosystem metrics related to dams in the Lake Champlain Basin of NY. The project team formulated a methodology to prioritize dams for removal based on ecological benefit and expected community acceptance. Metrics and priorities were incorporated into an interactive screening tool, available to all partners and community members, that will facilitate the reconnection of fragmented stream networks in the Lake Champlain Basin.

Outputs:

- interactive screening tool

Outcomes:

- reconnection of fragmented stream networks in the Lake Champlain Basin

Organization: Northeast Coldwater Habitat Program of Trout Unlimited

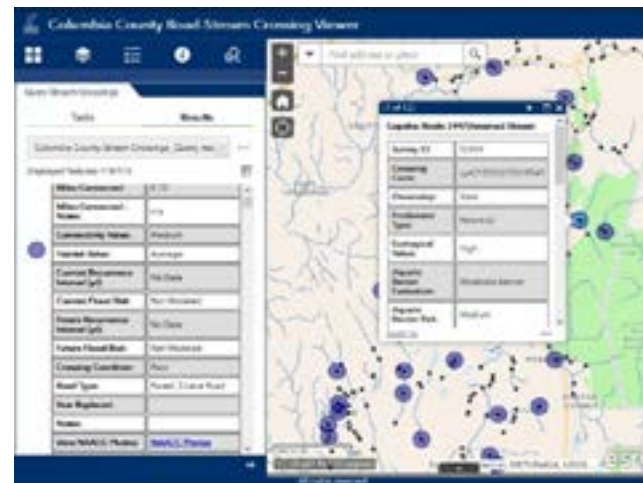
Contact Person: Tracy Brown

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E-mail: Tracy.Brown@tu.org

Website: <https://www.tu.org/>



Example of a previous TU web mapping decision support tool used to prioritize road stream crossings in Columbia County, NY arcg.is/1i4LHu. Other tools such as the TNC Vermont Dam Screening Tool for the Lake Champlain Basin 1, NE Aquatic Connectivity Assessment of Dams on Northeastern River5 and Ausable Watershed Fish Passage and Connectivity Field Assessment Tool6 will be used as a template and model for the work.



NEIWPC Code: L-2020-086
GLFC: 0100-331-003
Start Date: 1/5/2021
Close Date: 2/24/2023
Grant Amount: \$50,684.00
Non-federal Match: \$ 7,400.00
Total Amount: \$58,083.00

2022 Core Program Grants

concluded

Lake Champlain Committee Volunteer Coordination and Training for the 2022 Lake Champlain Cyanobacteria Monitoring Program

Project Summary

This project covered the Lake Champlain Committee's (LCC) portion of the on-going Lake Champlain cyanobacteria monitoring program for the period between January 2022 and December 31, 2022, and focused on program development and revisions, recruitment, training, oversight and support of volunteer monitors and public outreach to raise awareness of cyanobacteria. Program revisions included updating training and outreach materials with additional cyanobacteria identification information, and references to new research on public health impacts and New York State's harmful algal bloom (HAB) initiative as well as increased outreach. LCC expanded its cyanobacteria monitoring tools, coordinated with partners on a 2022 monitoring schedule and program, and recruited, coordinated, trained, oversaw and supported volunteers, as well as provided quality control of monitor data entered to the Vermont Department of Health database. Given the extension of the monitoring season into the fall, we hosted training sessions in the spring, summer and fall. All aspects of LCC's volunteer monitoring program are coordinated with and supplement monitoring conducted by the Vermont Department of Environmental Conservation (VT DEC) and the Vermont Department of Health (VDH). We also coordinated with New York Department of Environmental Conservation (NY DEC) and key personnel involved with the Lake Champlain Harmful Algal Bloom (HAB) effort initiated in 2018. The Lake Champlain Committee Cyanobacteria Monitoring Program follows protocols and guidance of our Quality Assurance Project Plan (QAPP) which is overseen by its cyanobacteria monitoring project partners at the Vermont Department of Environmental Conservation (VT DEC).

Outputs:

- monitor training and educational materials
- data on monitoring results
- weekly monitoring reports
- presence or absence of cyanobacteria to be monitored throughout the field season

Outcomes:

- support of local level implementation and involving the public
- long-term monitoring of water resources

Organization: Lake Champlain Committee

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Late season blooms extend the cyanobacteria monitoring season into fall. Photos above show a high alert bloom at White's Beach, South Hero Vermont on 10/14/21.

- continuous monitoring and tracking the extent of HABs and their alert level
- data from the volunteer cyanobacteria monitoring network informs recreational usage of Lake Champlain, and fills a critical need to better understand cyanobacteria prevalence



NEIWPC Code: LS-2022-003
EPA: 0357-002-001
Start Date: 1/24/2022
Close Date: 6/7/2023
Grant Amount: \$ 100,500.00
Non-federal Match:
Total Amount: \$ 100,500.00

2023 Core Program Grants

in progress

Lake Champlain Committee Volunteer Coordination and Training for the 2023 Lake Champlain Cyanobacteria Monitoring Program

Project Summary

This project covers the Lake Champlain Committee's (LCC) portion of the on-going Lake Champlain cyanobacteria monitoring program for the period between January 2023 and December 31, 2023, and focuses on program development and revisions, recruitment, training, oversight and support of volunteer monitors and public outreach to raise awareness of cyanobacteria. The project objective is to plan and implement the 2023 cyanobacteria monitoring program with comprehensive coverage of Lake Champlain and select inland Vermont lake sites that provides ongoing assessments of conditions and publicizes results that expand the existing database of information and help educate community members about water quality and keep the public safe from blooms.

Outputs:

- preliminary PDF of training materials, monitor toolkit and online and hard copy educational information;
- a schedule and details of training sessions, public forums, and community mailings;
- data on monitoring results;
- compilation of weekly monitoring reports;
- draft preliminary compilation of monitoring data, monitor and partner feedback results;
- draft outline of 2024 monitoring program;
- approved quarterly reports and final report.

Outcomes:

- support of local level implementation and involving the public
- long-term monitoring of water resources

Organization: Lake Champlain Committee
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 Burlington, VT 05401
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Website: <https://www.lakechamplaincommittee.org/>



The 2022 season began with good water condition reports at all Lake Champlain sites but earlyseason blooms as Lake Memphremagog (above right) and other inland waterways.



NEIWPCC Code: LS-2023-008
EPA: 0364-002-001
Start Date: 3/20/2023
Close Date:
Grant Amount: \$105,000.00
Non-federal Match:
Total Amount: \$105,000.00

2022 Program Grants

in progress

Lake Iroquois Watershed Action Plan

Project Summary

A unified Watershed Action Plan for Lake Iroquois, Sunset (Lower) Lake and Patrick Brook (the "Lake Iroquois Watershed Action Plan") will be created that serves as a shared roadmap for all partners to cost-effectively address top priority opportunities that remediate stormwater runoff and phosphorus pollution to improve water quality, wildlife habitat, and climate change resilience.

Outputs:

- Lake Iroquois Watershed Action Plan
- 45-60 projects mapped with summary sheets developed
- 3-5 preliminary designs completed
- meeting minutes from 3 stakeholder meetings
- 1 press release, 1 project website page, and three social media posts

Outcomes:

- watershed residents will have an increased knowledge of their independent impacts on water and habitat quality
- watershed partners and the community will have improved planning awareness and a holistic plan with clearly articulated and prioritized projects to use as a guidepost for improving watershed health.

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Website: <https://winooskinrcd.org/>



Picture from a 2012 rain garden project in the Lake Iroquois-Patrick Brook Watershed completed by the Lake Iroquois Association on private land. This LWAP will engage landowners and residents in similar stormwater improvement projects.



NEIWPCC Code: LS-2022-002
EPA: 0357-002-001
Start Date: 2/10/2022
Close Date:
Grant Amount: \$ 39,836.00
Non-federal Match: \$ 4,659.00
Total Amount: \$44,495.00

2022 Program Grants

in progress

Lake St. Catherine Watershed Action Plan

Project Summary

The Lake St. Catherine Association (LSCA) in partnership with the Poultney Mettowee Natural Resources Conservation District (PMNRCD) and in cooperation with other state and local partners will develop a Lake Watershed Action Plan that leverages current investments, is driven by accepted best management practices, elevates underassessed areas and gaps, and identifies issues, opportunities, and projects to guide locally-led water quality implementation work in the St. Catherine watershed.

Outputs:

- Lake and Watershed Action Plan
- 5 stakeholder meetings
- 20+ project opportunities identified
- Three conceptual designs created

Outcomes:

- Plan to facilitate project work at many scales throughout the watershed
- Increased stakeholder and landowner engagement
- Ready-to-build project opportunities
- Cleaner water in Lake St Catherine and Lake Champlain

Organization: Lake St. Catherine Association
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The Lake St Catherine Watershed



NEIWPCC Code: LS-2022-001
EPA: 0357-002-001
Start Date: 1/27/2022
Close Date:
Grant Amount: \$38,224.00
Non-federal Match: \$ 6,012.00
Total Amount: \$44,236.00

2023 Program Grants

in progress

Mirror Lake monitoring and Lake Champlain Basin de-icing salt study

Project Summary

This research project will use long-term water quality data from Mirror Lake (Lake Placid, NY) as evidence of the effectiveness of recent large-scale stormwater improvement projects in improving water quality on small inland water bodies.

De-icing salt is increasingly recognized as a significant regional pollutant throughout the Champlain Basin and as a contaminant in the narrative of the LCBP *Opportunities for Action*. This project will compile a central database of inland lake water quality data from the Lake Champlain Basin. This database will be used to determine regional drivers of salinization of inland lakes. Additionally, there will be an understanding of the long-term changes in salt concentrations in these lakes, their drivers, and trajectory of these concentrations over time.

Outputs:

- 140 water samples collected and analyzed
- 70 vertical profiles collected
- data produced
- one graduate student research assistant hired
- a literature review on de-icing salt impacts relevant to the Lake Champlain Basin
- a lake water quality database including lake-specific explanatory variables related to in lake salt concentrations
- a submitted manuscript describing the relationship between in lake salt concentrations and explanatory variables, and quarterly, final, and metrics reports.

Outcomes:

- improved understanding by local municipalities of the benefits of investing in green infrastructure projects.
- more informed understanding of where to make strategic investments in salt reduction best management practices both geographically and operationally

Organization: Paul Smith's College
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 Paul Smiths, NY 12970
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Website: www.adkwatershed.org



AWI staff collecting a water sample from the stormwater system draining to Mirror Lake.



NEIWPCC Code: LS-2022-090
EPA: 0364-002-001
Start Date: 11/30/2022
Close Date:
Grant Amount: \$154,532.00
Non-federal Match: \$60,310.00
Total Amount: \$214,842.00

2022 Program Grants

in progress

New York Component of the Lake Champlain Long Term Monitoring Program 2022

Project Summary

This project will cover 2022 field and lab work as part of the Lake Champlain Long-Term Monitoring Program (LTMP) New York component. Field sampling on 15 lake sites for water quality and biota, 2 additional sites for Mysid sampling and NY tributary sites for LTMP will be conducted throughout the field season. Laboratory processing of all phytoplankton, zooplankton, Mysid and Spiny/Fishhook waterflea net samples will be completed. All work will be in accordance with the approved LTMP QAPP.

Outputs:

- LTM field sampling 2022 season
- Install and maintain LTM data buoy in Mallet's Bay
- lab sample analysis for zooplankton, phytoplankton, Mysid and SWF/FWF

Outcomes:

- improve scientific knowledge and understanding of water quality conditions and trends in Lake Champlain and the effectiveness of management approaches

Organization: SUNY Plattsburgh

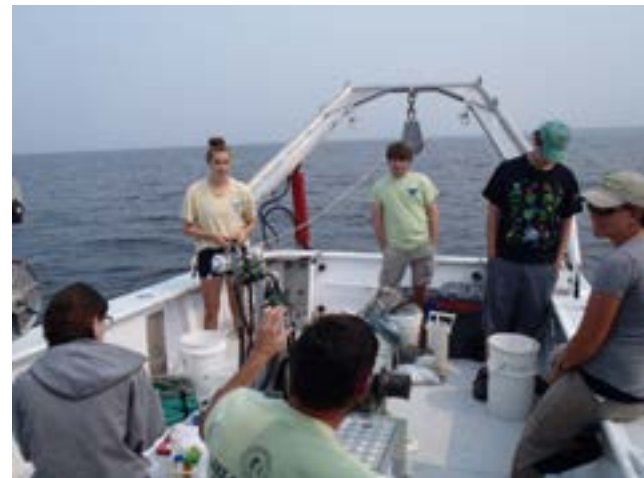
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Lake Champlain Research Institute

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LTMP field crew in 2021 sampling site 19.



NEIWPCC Code: LS-2022-069
EPA: 0357-002-001
Start Date: 8/2/2022
Close Date:
Grant Amount: \$205,250.00
Non-federal Match:
Total Amount: \$205,250.00

2022 Program Grants

in progress

NRCC Trees for Streams Program

Project Summary

The State Natural Resources Conservation Council (NRCC) and Vermont's Natural Resources Conservation Districts will improve riparian habitats and protect water quality by planting a minimum of 30 acres of woody buffers in priority watersheds located throughout the Lake Champlain Basin. A final report will detail before and after planting photos, lists of future planting locations, and will include associated press releases, blog posts, and other outreach efforts.

Outputs:

- minimum of 30 acres (estimated 25,000 linear feet) planted, high quality riparian buffer restoration
- signed landowner agreements, with a 10-year minimum O&M plan

Outcomes:

- reduction of sediment and nutrient (phosphorus) runoff into waterways
- improved water quality (Districts who monitor water quality will try to show the link between the new buffer and water quality improvement)
- improved water temperature (and fish populations)
- improved habitat along streams, restoration of habitat including river corridors and habitat connectivity, increased native species with the potential reduction of invasive plants
- long-term (a minimum of 10 years) river corridor protection along these riparian areas
- community engagement and increased awareness of the environmental benefit of this work leading to behavior change
- increased awareness of efforts to improve water quality in Lake Champlain and information about viable planting locations for ongoing planting work.

Organization: State Natural Resources Conservation Council (NRCC)

Contact Person: Holden Sparacino

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Waitsfield, VT 05673

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Website: vacd.org



1.7 acre riparian buffer being installed along the Rock River/Bullis Pond by Franklin County NRCD in Spring 2021



NEIWPCC Code: LS-2021-077
EPA: 0357-002-001
Start Date: 1/7/2022
Close Date:
Grant Amount: \$245,334.00
Non-federal Match: \$ 20,000.00
Total Amount: \$265,334.00

2020 Program Grants

concluded

Quantifying Phosphorus Reductions for Proposed Projects in NY Reduction Plan

Project Summary

This project calculated potential pollutant reductions for proposed water quality improvement projects throughout the Lake Champlain Basin in order to measure success and help to prioritize local efforts and funding for future project implementation.

The results of the calculations are provided in the [Lake Champlain Pollution Reduction Dashboard](#), an online mapping tool to be used by resource managers throughout the watershed to quantify pollutant load reductions resulting from the implementation of BMPs in the Lake Champlain basin. This information will be used to assist with funding requests and in prioritizing future actions. Following the completion of the pollutant reduction calculations, one project was chosen for implementation based on estimated pollutant reduction results. The ditch stabilization and hydroseeding project was completed by Essex County Soil and Water Conservation District and the Town of Westport Department of Public Works. The estimated pollutant load reductions from this project into Lake Champlain are 64.54 lbs/year of phosphorus, 69.15 lbs/year of nitrogen, and 228,658 lbs/year of sediment.

Outputs:

- identification of Project Drainage Areas and land use acreages for 20% of projects
- utilize GIS to determine land use and area for 25 project subwatersheds for input into calculator
- webpage created on the LCLGRP website that lists all the projects and their reduction calculations
- implementation of one phosphorus reduction project

Outcomes:

- phosphorus and nitrogen reduction

Organization: Lake George Lake Champlain RPB
Contact Person: Allison Gaddy
Mailing Address: PO Box 765
 Lake George, NY 12845
Phone: 518-668-5773
E-mail: allison.gaddy@lclgrp.org
Website: www.lclgrp.org



Decker Road before (top) and after implementation project (bottom).



NEIWPCC Code: L-2019-088
GLFC: 0100-328-002
Start Date: 11/6/2019
Close Date: 9/6/2023
Grant Amount: \$100,000.00
Non-federal Match:
Total Amount: \$100,000.00

2020 Program Grants

concluded

Quantifying the road salt pollution load to Mirror Lake and the Chubb River (Lake Placid, NY)

Project Summary

This project collected data necessary to optimize and reduce road salt loading in the Chubb River sub-watershed and Lake Champlain Basin. Salt application from municipal equipment was quantified using automatic vehicle location loggers, these data will be coupled with stormwater monitoring data, and continuous monitoring stations to quantify the road salt pollutant load to Mirror Lake and the Chubb River. These data will be used to inform and test the effectiveness of best management practices to reduce road salt use while maintaining safe driving and walking surfaces.

Outputs:

- three continuous monitoring stations installed
- map of stormwater pour points and outfalls
- LIDAR based stormwater runoff model
- data loggers installed in 2 outfalls
- collection and analysis of stormwater samples for ~7 runoff events.
- survey developed and distributed to area businesses and residents
- coordinate installation of fleet tracking and data logging equipment on municipal vehicles.
- Coordinate training on calibration; ensure ongoing data collection.
- water quality workshops and youth program
- development of interpretive displays

Outcomes:

- reduction of road salt loading in the Chubb River sub-watershed and Lake Champlain Basin.

Organization: Ausable River Association
Contact Person: Kelley Tucker
Mailing Address: PO Box 8
 Wilmington, NY 12997
Phone: 518-637-6859
E-mail: ktucker@ausableriver.org
Website: www.ausableriver.org



AsRA Water Quality Associate, Leanna Thalmann, collecting a water sample from Mirror Lake.



NEIWPCC Code: L-2019-085
GLFC: 0100-328-002
Start Date: 10/4/2019
Close Date: 4/2/2023
Grant Amount: \$175,000.00
Non-federal Match: \$45,000.00
Total Amount: \$220,000.00

2021 Program Grants

concluded

Rapid detection of Atlantic salmon and trout in the Boquet and Ausable Rivers using environmental DNA

Project Summary

This project used environmental DNA (eDNA) to detect and map native and non-native fish across the New York portion of the Champlain Basin allowing understanding of current distribution of salmonids and to prioritize future connectivity and stream habitat restoration efforts. The primary outputs of the project are range distribution maps for brook trout, brown trout, rainbow trout in the Ausable River and maps of fry emergence of Atlantic salmon in New York tributaries to Lake Champlain. Outcomes include greater spatial and temporal understanding of current native salmonid distribution and an assessment of efficacy of Lake Champlain Atlantic salmon restoration program and restoration projects to increase access for spawning adult salmon in Lake Champlain tributaries.

Data generated by this project will serve as a baseline to track future range expansion and contraction of native salmonids, and results will inform direct conservation efforts including land protections, riparian planting and habitat improvement projects, and can guide private land stewardship. Finally, there will be an archive of eDNA samples for future use to detect invasive or endangered species

Outputs:

- range distribution maps for brook trout, brown trout, rainbow trout in the Ausable River and maps of fry emergence of Atlantic salmon in New York tributaries to Lake Champlain.
- an eDNA archive

Outcomes:

- results will inform direct conservation efforts including land protections, riparian planting and habitat improvement projects, and can guide private land stewardship.

Organization: Ausable River Association
Contact Person: Carrienne Pershyn
Mailing Address: PO Box 8
 Wilmington, NY 12997
Phone: 518-637-6859
E-mail: cpershyn@ausableriver.org
Website: www.ausableriver.org



NEIWPCC Code: LS-2020-087
EPA: 0356-003
Start Date: 11/20/2021
Close Date: 4/10/2023
Grant Amount: \$135,000.00
Non-federal Match: \$ 10,000.00
Total Amount: \$145,000.00

2022 Program Grants

in progress

Reconnecting VT Rivers through Dam Removal in the Lake Champlain Basin

Project Summary

This project continues VNRC's work to restore aquatic habitat, river connectivity and natural riverine transport processes by removing dams that no longer serve a useful purpose. This project targets four (4) dams that have been selected based on ecological benefit for removal, hazard mitigation, landowner and stakeholder support, and distribution throughout the LCB. Grant funds will be applied to contracts for feasibility, preliminary design, and construction removal of these four projects and scoping to prioritize additional projects.

Outputs:

- identify dams that no longer serve a useful purpose
- prioritize dams based on their ecological impact
- collaborate with dam owners, watershed groups and local communities to remove dams and restore river and stream function.

Outcomes:

- raise awareness of the impact of dams on river connectivity, aquatic organism passage water quality, public safety, flood resilience and economics;

Organization: Vermont Natural Resources Council
Contact Person: Karina Dailey
Mailing Address: 9 Bailey Avenue
 Montpelier, Vermont 05602
Phone: 802.881.3423
E-mail: kdailey@vnrc.org
Website: https://vnrc.org/



Pelletier Dam is targeted for removal



NEIWPCC Code: LS-2021-071
EPA: 357-003
Start Date: 10/25/2021
Close Date:
Grant Amount: \$ 270,000.00
Non-federal Match: \$ 48,000.00
Total Amount: \$318,000.00

2019 Program Grant

in progress

Rock River Geomorphic Assessment

Project Summary

The purpose of this project is to complete geomorphic assessments in the Rock River watershed in Vermont and Québec. The Vermont Stream Geomorphic Assessment (SGA) Protocols provide sound and scientifically-defensible methods for identifying stressors on channel stability. Restoration projects identified during these assessments present important opportunities to improve water quality, geomorphic stability, and stream habitat features.

Outputs:

- update and improve existing SGA data for approximately 27 kilometers of stream channel in Vermont
- complete full assessments for approximately 32 kilometers of stream channel in Quebec.
- prioritize stream buffer improvement projects
- best management practice implementation,

Outcomes:

- and other projects aimed at reducing phosphorus loading and improving stream habitat and water quality within the Rock River and Missisquoi Bay.

Organization: Fitzgerald Environmental Associates, LLC
Contact Person: Evan P. Fitzgerald
Mailing Address: 18 Severance Green, Suite 203 Colchester, VT 05446
Phone: 802-876-7778
E-mail: evan@fitzgeraldenvironmental.com
Website: www.fitzgeraldenvironmental.com



Pebble count for Phase 2 assessment on the Green River in Halifax, VT



NEIWPCC Code: L-2019-010
GLFC: 0100-319-002
Start Date: 3/14/2019
Close Date:
Grant Amount: \$69,944.00
Non-federal Match:
Total Amount: \$69,944.00

2022 Program Grants

in progress

Rock River sub-watershed drainage network system

Project Summary

The Friends of Northern Lake Champlain (FNLC) will partner with an environmental consultant and the VT Department of Environmental Conservation (VT DEC) to complete novel ditch and tributary assessments of the Rock River, coupled with water quality (WQ) monitoring to determine the source of stressors and the effectiveness of agricultural best management practices (BMPs) implemented in the watershed. A report will provide site specific information to farmland owners to help them better prioritize their limited resources, to demonstrate where successes occur, and to incentivize additional WQ improvement work.

Outputs:

- two years of WQ monitoring data at up to 10 sites along the Rock River
- a cumulative report documenting the assessments of the drainage networks chosen for this study, including but not limited to, problem areas, upslope BMP implementation, and project opportunities.

Outcomes:

- improvement of WQ in Lake Champlain by identifying key segments of the Rock River which are most responsible for contributing sediment-bound phosphorus into Missisquoi Bay
- better understanding among landowners in the watershed about BMP effectiveness.

Organization: Friends of Northern Lake Champlain
Contact Person: Bridget Butler
Mailing Address: PO Box 1145 Saint Albans, VT 05478
Phone: 802-373-1998
E-mail: bbutler@friendsofnorthernlakechamplain.org
Website: https://www.friendsofnorthernlakechamplain.org/



NEIWPCC Code: LS-2023-001
EPA: 0364-002-001
Start Date: 2/7/2023
Close Date:
Grant Amount: \$129,469.00
Non-federal Match: \$ 4,234.00
Total Amount: \$133,703.00

2020 Program Grants

in progress

Securing and Restoring Aquatic Habitat Connectivity in the North Branch Boquet River Watershed

Project Summary

The Nature Conservancy will restore and connect habitat in the Boquet River watershed for salmonids and other aquatic species by pursuing an integrated strategy that combines riparian habitat protection and restoration with instream barrier removals through culvert replacements. LCBP funding will be used to support habitat protection and restoration work and identification of priority culverts for replacement (additional fundraising needed to put culvert upgrades in place).

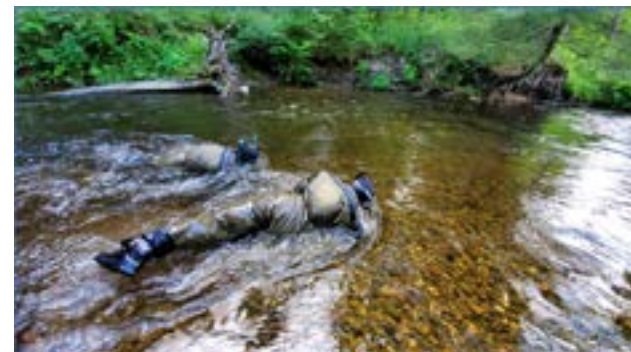
Outputs:

- develop a comprehensive spatial planning tool that integrates riparian protection and restoration priorities with aquatic connectivity priorities
- complete 3-5 riparian protection and/or restoration projects along the Boquet River and its tributaries.
- list of priority culverts for replacement based on spatial planning tool and input from municipalities

Outcomes:

- improved aquatic organism connectivity and flood resilience in the Boquet River watershed

Organization: The Nature Conservancy
Contact Person: Dirk Bryant
Mailing Address: P.O. Box 65, 8 Nature Way
 Keene Valley NY 12943
Phone: 518/576-2082
E-mail: dbryant@tnc.org
Website: nature.org/newyork



Assessing sedimentation impacts on salmon spawning habitat in the Boquet



NEIWPCC Code: L-2019-103
GLFC: 0100-328-003
Start Date: 1/16/2020
Close Date:
Grant Amount: \$130,000.00
Non-federal Match: \$324,547.00
Total Amount: \$454,547.00

2020 Program Grants

in progress

Targeted interventions to reduce agricultural runoff and erosion in affected areas of the Missisquoi Bay Basin

Project Summary

Intervention plans to control runoff and erosion, taking into account farmers needs and available funding for the implementation of recommended actions, will be proposed to each farmer located in subwatersheds of waterways concerned with maintenance works due to high levels of sedimentation, to improve water quality in the Missisquoi Bay and the Pike and Rock River subwatersheds. Expected outcomes include the reduction of phosphorus and sediment loads from the Pike and Rock River watersheds to the Missisquoi Bay, reduction of sedimentation and maintenance frequency in agricultural waterways and improvement riparian and aquatic habitat.

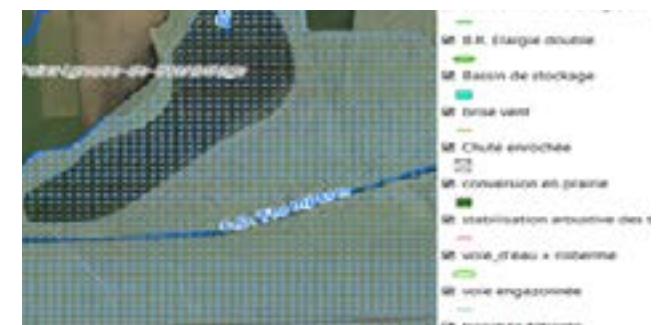
Outputs:

- intervention plans to control runoff and erosion

Outcomes:

- reduction of phosphorus and sediment loads from the Pike and Rock River
- reduction of sedimentation and maintenance frequency in agricultural waterways
- improved riparian and aquatic habitat.

Organization: OBVBM
Contact Person: Alexandra Imbeault
Mailing Address: 2, Adhémar-Cusson
 Bedford (Québec) Canada, J0J 1A0
Phone: (450) 248-0100
E-mail: projetagro@obvbm.org
Website: www.obvbm.org



NEIWPCC Code: L-2019-087
GLFC: 0100-328-002
Start Date: 11/12/2019
Close Date:
Grant Amount: \$180,000.00
Non-federal Match: \$56,850.00
Total Amount: \$236,850.00

2021 Program Grants

concluded

Temporary Manure Stacking in Northern New York

Project Summary

The objective of this project was to provide short term manure storages for grazing farms in the Lake Champlain Basin. These pads will allow farms to avoid spreading manure in high runoff risk conditions such as on frozen ground in the winter months. The ability to store manure allows the farms flexibility to use their nutrients in a more efficient way. The Soil & Water Conservation Districts of Clinton and Essex County in Northern New York, worked with two farms within New York's portion of the Lake Champlain Basin to design and implement the use of temporary manure stacking pads for better nutrient management utilization on livestock grazing farms.

Outputs:

- identification of agricultural operators needing a temporary manure stacking pad. Outreach made to livestock grazing farms who normally need to spread manure in the winter on fields near or adjacent to a surface water flowing into Lake Champlain
- list and map of project sites
- 2 stacking pads designed and installed
- identify and recruit farms
- identify site appropriate temporary manure stacking areas and assist farms to establish these areas with best management practices

Outcomes:

- promote awareness of agricultural nutrient management BMPs
- better nutrient management utilization on livestock grazing farms

Organization: CWICNY
Contact Person: Peter Hagar
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 6064 Route 22, Suite 1
 Plattsburgh NY 12901
Phone: 518-561-4616 ext 3
E-mail: Peter.hagar@ccsoil-water.com
Website: www.clintoncountyswcd.org



Properly sited manure stacking location



NEIWPC Code: LS-2021-039
EPA: 0346-002-003
Start Date: 3/24/2021
Close Date: 7/26/2023
Grant Amount: \$25,000.00
Non-federal Match: \$ 2,640.00
Total Amount: \$27,640.00

2020 Program Grants

in progress

Using a 3-Dimensional Coupled Hydrodynamic-Aquatic Ecosystem Model to Evaluate Alternatives for Controlling Internal Phosphorus Loading in Missisquoi Bay

Project Summary

Stone Environmental, Inc., (Stone) has partnered with Geochemist Dr. Andrew Schroth and Water Resources Engineer Dr. Clelia Luisa Marti of the University of Vermont (UVM) to assess sediment phosphorus (P) dynamics and evaluate management alternatives to reduce internal P loading and cyanobacteria blooms in Missisquoi Bay (MB). A lake management firm specializing in development of management strategies to reduce internal P loading will also be added to the project team.

An existing 3-dimensional, coupled Hydrodynamic-Aquatic Ecosystem Model (AEM3D) of MB developed by Dr. Marti will be used in developing a sediment sampling plan, the results of which will enable further model refinements and development of a comprehensive spatial sediment P inventory for MB and an associated conceptual model of the hydrodynamic and biogeochemical drivers of P distributions. The calibrated and validated model will then be used to run scenarios evaluating the effectiveness of P inactivation strategies under differing conditions of future watershed loading. Predicted transient chlorophyll-a and dissolved oxygen concentration distributions across MB will be interpreted to assess impacts on the occurrence of blooms, while water column P concentrations will be used to assess impacts on P dynamics in MB. The cost, permitting feasibility, public acceptance, and ecological impacts of internal P loading management strategies will also be evaluated, compared, and ranked. Visualization tools will be developed and hosted for lake managers to examine effects of internal P reduction strategies and to communicate the optimized plan to the public.

Outputs:

- provide the management community with a holistic perspective of available options and possible outcomes associated with interventions aimed at suppressing internal P loading and cyanobacteria blooms in MB.

Outcomes:

- phosphorus reduction

Organization: Stone Environmental
Contact Person: Dave Braun
Mailing Address: 535 Stone Cutters Way
 Montpelier, Vermont 05602
Phone: (802) 229-4541
E-mail: dbraun@stone-env.com
Website: http://www.stone-env.com/



Figure 1. MB site and bathymetry map with sample core locations (red dots) where sectioned cores (to 10 cm) have been analyzed for P inventories at 4 time points in 2013 (June–Sept.). At point S087, there are biweekly time series of sediment P inventories in 2013-14 and 2014-2015. All points have coincident water column physical, chemical and biological data (Table 1).



NEIWPC Code: L-2020-063
EPA: 0346-002-001
Start Date: 5/26/2020
Close Date:
Grant Amount: \$249,966.00
Non-federal Match: \$ 3,990.00
Total Amount: \$253,956.00

2021 Program Grants

concluded

Using multi-metric modeling, field surveys, and online spatial tools to support conservation and management for flood resilience, water quality, and native species habitat

Project Summary

This project aimed to develop watershed assessment tools that support wetland and riparian management and stewardship with the goal of improving ecological services such as flood mitigation (Watson et al. 2016), water quality (Bode et al. 2004) and habitat for native species (Faber-Langendoen et al. 2019). These tools can be used to help identify where management and conservation actions should take place, increasing the power and effectiveness of conservation decision making in the Lake Champlain Basin. The spatial data set and supporting field work complements the management themes and priorities set forth in Opportunities for Action (“OFA”; 2022 LCBP). Municipalities and non-governmental organizations (NGOs) will be able to use these tools to prioritize Water Quality Improvement Program (WQIP) activities such as land acquisition for source water protection, abatement of residential/urban nonpoint source pollution, and aquatic connectivity restoration.

Outputs:

- development of a comprehensive wetland and stream assessment dataset
- build and validate a spatial model estimating stream water quality in the NY portion of the Lake Champlain Basin
- produce interactive online tools to increase the power and effectiveness of conservation decision making in the Lake Champlain Basin
- make data available on website for public use [link](#)

Outcomes:

- support wetland and riparian management and stewardship

Organization: New York Natural Heritage Program
SUNY ESF

Contact Person: DJ Evans

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Albany, NY 12233-4757

Phone: (518) 402-8948

E-mail: dxevans@esf.edu

Website: nynhp.org



NEIWPCC Code: LS-2020-084
EPA: 0356-003-001
Start Date: 1/22/2021
Close Date: 9/25/2023
Grant Amount: \$164,440.00
Non-federal Match: \$ 7,257.00
Total Amount: \$171,697.00

2022 Program Grants

concluded

Washington County Brine Maker

Project Summary

Washington County purchased and installed a brine maker at their Whitehall DPW site. This has allowed the county to expand their improved winter road maintenance program from just the Lake George watershed to the entire Lake Champlain watershed within the county. An educational event was held at the site on March 27, 2023. The brine making site will also be used to create a regional brine making operation that includes all the local municipalities within the watershed.

Outputs:

- purchase of a brine maker
- a regional brining operation

Outcomes:

- reduction of contaminants
- improved water quality

Organization: Washington County SWCD

Contact Person: Deb Donohue

Mailing Address: 383 Broadway
Fort Edward, NY 12828

Phone: (518) 746-2440

E-mail: ddonohue@washingtoncountyny.gov

Website: www.washingtoncountyny.gov



NEIWPCC Code: LS-2021-075
EPA: 0357-002-001
Start Date: 10/18/2021
Close Date: 8/28/2023
Grant Amount: \$132,000.00
Non-federal Match: \$ 5,000.00
Total Amount: \$137,000.00

2022 Small Implementation Grant

concluded

Creating a Critical Mass of Lake Stewards on Lake St. Catherine: Year three of non-point pollution source projects: An exciting new collaborative with Castleton University

Project Summary

This project continued efforts to build a critical mass of lake stewards on Lake St. Catherine by recruiting 20 landowners to participate in the third year of Lake Wise programming. Staff from Poultney Mettowee NRCDC and from a new team of students and faculty mentors at Castleton University conducted assessments and helped install a subset of 15 recommended practices in partnership with the Association.

Outputs:

- Publicity and promotion of Lake Wise to Lake residents
- Engagement with PMNRCD and the development of a Castleton Lake Wise Team of students and faculty
- 22 new property evaluations, six updated evaluations, and ten new Lake Wise awards
- 15 Identified Lake Wise best management practices installed
- shift in the mindset of lakeside homeowners as there is a more positive attitude towards the ideals of Lake Wise and the spread of information about the program is increasing.

Outcomes:

- Continued efforts to build a critical mass of lake stewards on Lake St. Catherine
- Enhanced awareness and energy around lake-friendly living, creating a culture of clean water advocates who understand and appreciate the benefits of broad, natural buffers and discrete, thoughtful access to the lakeshore and minimal lawn and patio areas
- Promotion of the unique role of property owners in enhancing water quality at the Lake
- Sharing of lessons learned between the Lake Wise programs 2020-2022.

Organization: Lake St. Catherine Association
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Mailing Address: 618 Ferncliff Rd. Poultney, Vermont 05764
Phone: (802) 345-3965
E-mail: martha.pofit@lakestcatherine.org
Website: <https://lakestcatherine.org/>



Four of the properties eligible for a Lake Wise award in 2022.



NEIWPCC Code: LS-2022-024
EPA 0357-002-001
Start Date: 6/9/2022
Close Date: 3/28/2023
Grant Amount: \$ 24,970.00
Non-federal Match: \$ 5,390.00
Total Amount: \$30,360.00

2023 Small Implementation Grant

in progress

Growing a Community of Stewards on Lake St. Catherine: Continued NPS projects and collaboration with Castleton University

Project Summary

LSCA will continue building a critical mass of lake stewards on Lake St. Catherine by identifying high risk/ impact properties and recruiting 20 property owners to participate in the Lake Wise program for assessments. The Association plans to introduce best management practices, by implementing 10 projects, with the engagement of the PMNRCD team. By increasing the number of lake stewards by 20% there will be growth in the number of informed individuals with the technical assistance to make decisions on their own properties affecting water quality on the lake shore. Continue ongoing training with PMNRCD, LSCA, and collaboration with Castleton University to recruit more students and faculty to the program to serve Lake St Catherine and other Vermont lakes. Publicity and promotion of Lake Wise will showcase the unique role of property owners in enhancing water quality at the lake. Sharing the lessons learned between Lake Wise programs '20-'23 and the Watershed Action plan '22-'24 on Lake St Catherine.

Outputs:

- Recruit 20 Homeowners
- Hire and train a team of 2-3 interns and students.
- 20 Lake Wise Assessments; at least 60 project recommendations
- Implement at least 10 projects.

Outcomes:

- Continued efforts to build a critical mass of lake stewards on Lake St. Catherine
- Enhanced awareness and energy around lake-friendly living, creating a culture of clean water advocates who understand and appreciate the benefits of broad, natural buffers and discrete, thoughtful access to the lakeshore and minimal lawn and patio areas
- Promotion of the unique role of property owners in enhancing water quality of the Lake

Organization: Lake St. Catherine Association
Contact Person: Mary Jo Teetor
Mailing Address: PO Box 631, Wells, VT 05774
Phone: 802-287-5836
E-mail: maryjo.teetor@lakestcatherine.org
Website: <https://lakestcatherine.org/>



Example of a natural shoreline buffer promoted through LSCA's Lake Wise program. PMNRCD



NEIWPCC Code: LS-2023-019
EPA 0364-004-001
Start Date: 4/7/2023
Close Date:
Grant Amount: \$16,275.00
Non-federal Match: \$ 3,500.00
Total Amount: \$19,775.00

2022 Small Implementation Grant

in progress

Integrating Cover Crop in Corn Silage Production Systems to Meet Agronomic and Conservation Goals

Project Summary

The overall goal of this project is to increase the acres of effective cover crops in the Lake Champlain Basin to improve soil health and crop health and reduce nonpoint source nutrient pollution to watersheds. This proposal demonstrates the use of modified corn cropping practices to enhance the establishment and growth of interseeded cover crops. Most research has focused largely on the cover crop itself and has neglected to acknowledge other factors in the system; farmers need strategies that encompass the entire production system to fully realize the benefits of cover cropping. The purpose of this project is to work with five farmers to modify cropping strategies that lead to well-established interseeded cover crops that improve soil health while maximizing crop yield. We will deliver cover crop and corn cropping system information to over 250 farmers and stakeholders in Lake Champlain Basin through workshops, conference, field days, and online resources.

Outputs:

- design corn cropping system with farmers
- develop fact sheet
- data collection at sites where system has been implemented
- deliver cover crop and corn cropping system information to over 250 farmers and stakeholders in Lake Champlain Basin through workshops, conference, field days, and online resources.

Outcomes:

- improve soil and crop health
- reduce nonpoint source nutrient pollution to watersheds

Organization: UVM
Contact Person: Heather Darby
Mailing Address: 278 S. Main Street
 St. Albans, Vermont 05478
Phone: 802-524-6501
E-mail: heather.darby@uvm.edu
Website: www.uvm.edu/extension/nwcrops



Interseeding cover crops in a Vermont corn field.



NEIWPCC Code: LS-2022-021
EPA 0357-002-001
Start Date: 4/28/2022
Close Date:
Grant Amount: \$ 24,992.00
Non-federal Match:
Total Amount: \$ 24,992.00

2022 Small Implementation Grant

concluded

Pollution Reduction in Lake Champlain

Project Summary

The project is to purchase lab nutrient testing equipment and two aeration mixing systems to be installed at the Village Wastewater Treatment Plant respectively to help reduce the pollutants that are discharged in Lake Champlain.

Outputs:

- purchase lab nutrient testing equipment and two aeration mixing systems

Outcomes:

- reduction of the pollutants discharged into Lake Champlain

Organization: Town of Peru
Contact Person: Courtney Tetrault
Mailing Address: 10 Cross Street
 Peru, NY 12972
Phone: 518-643-8125
E-mail: peruwts@perutown.com
Website: http://www.perutown.com/



Town of Peru Village Wastewater treatment facility



NEIWPCC Code: LS-2022-061
EPA 0357-002-001
Start Date: 5/3/2022
Close Date: 8/9/2023
Grant Amount: \$25,000.00
Non-federal Match: \$ 4,064.00
Total Amount: \$29,064.00

2022 Small Implementation Grant

in progress

Swanton Beach Stormwater Design and Implementation

Project Summary

This project will develop a final design and implement the proposed stormwater practice at the Swanton Beach that resulted from an LCBP-supported shoreline assessment that was completed in 2022. The proposed practice includes an under-drained bioretention system to the south of the parking area and a roadside sand filter near the Maquam Shore Rd and Lasnier Rd intersection to treat runoff prior to its discharge via a stream that flows along the northern edge of the property. Because this location is a popular public gathering area, FNLC will also implement an interpretive sign to educate the public on the benefits of stormwater management projects. The outputs will include a, as well as. The outcomes of the project will be a that drains from the Swanton Beach property.

Outputs:

- final design and the implementation of the stormwater treatment practice
- educational signage

Outcomes:

- reduction in the amount of phosphorus and sediment entering Lake Champlain by managing stormwater

Organization: Friends of Northern Lake Champlain

Contact Person: Bridget Butler

Mailing Address: PO Box 1145
St. Albans, VT 05478

Phone: 802-881-7845

E-mail: bbutler@friendsofnorthernlakechamplain.org

Website: <https://www.friendsofnorthernlakechamplain.org/>



Swanton Beach 30% engineering design for the treatment of stormwater. The conceptual project includes an under-drained bioretention system and a roadside sand filter. Original design by Watershed Consulting Associates.



NEIWPCC Code: LS-2023-010
EPA 0364-002-001
Start Date: 3/29/2023
Close Date:
Grant Amount: \$56,108.00
Non-federal Match: \$ 3,011.00
Total Amount: \$59,119.00

HEALTHY ECOSYSTEMS



Scott George, USGS

by the numbers

28 Healthy Ecosystems implementation grants awarded

\$1.4M Healthy Ecosystems implementation grants funds awarded

27 miles of Saranac River made passable with dam removals

894 invasive species intercepted by boat launch stewards

0 known introductions of invasive species to Lake since 2019

290 acres of land conserved on Boquet River after benefit analysis

highlights

- Coordinated and participated in Vermont and New York **dam task forces** in efforts to increase river habitat connectivity.
- Inspected 16,832 watercraft and intercepted invasive species 894 times.
- Served in **leadership positions** with national and regional AIS management organizations and committees.
- Worked with mangement partners to develop phase 2 scope of work for the **Champlain Canal AIS barrier** study.
- Coordinated **round goby** early detection, monitoring, and mitigation measures for the Champlain and Chambly Canals.

2022 AIS Spread Prevention Grant

concluded

Acquisition of a Boat Wash and Decontamination Unit for Selby Lake in the Missisquoi Bay Basin in Québec

Project Summary

The town of Dunham, in collaboration Organisme de bassin versant baie Missisquoi (OBVBM) (Missisquoi Bay Basin Organization), acquired a boat wash and decontamination unit in order to help reduce the risk of introducing new invasive species in Selby Lake and the spread of AIS to other waterbodies. Success will be measured by the number of high-risk contaminated watercraft that are decontaminated. This is the first and only boat decontamination unit in the Missisquoi Bay Québec region. Its acquisition and proper use will help educate users on the issue of AIS as well as help decontaminate watercrafts and prevent their spread. The town is using the hot water unit for road maintenance in the winter to unclog culverts instead of salt.

Outputs:

- boat wash unit acquisition
- unit operation plan
- communication and outreach
- innovative road maintenance

Outcomes:

- reduce the risk of introducing new invasive species in Selby Lake and the spread of AIS to other waterbodies.
- decreased salt use by the Town

Organization: OBVBM
Contact Person: Frédéric Chouinard
Mailing Address: 110 rue de la Rivière, #200
 Bedford (Québec) Canada, J0J 1A0
Phone: (450) 248-0100
E-mail: frederic.chouinard@obvbm.org
Website: www.obvbm.org



Boat wash station in the municipal garage, OBVBM 2022



NEIWPCC Code: L-2022-042
 GLFC: 0100-334-003
 Start Date: 4/26/2022
 Close Date: 3/28/2023
 Grant Amount: \$ 15,000.00
 Non-federal Match: \$ 500.00
 Total Amount: \$15,500.00

2023 Spread Prevention Grant

in progress

Adirondack AIS Spread Prevention: Protecting the Saranac and Ausable Watersheds

Project Description

To reduce the spread of aquatic invasive species through boater education about clean, drain, dry best practices and provide watercraft inspection/ decontamination services at five (5) boat launches in the Lake Champlain Basin. In addition, provide aquatic invasive species spread prevention education and training to members of four (4) lake associations in the Lake Champlain Basin.

Outputs:

- Develop and implement a program to support AIS awareness and action with four lake associations in the Lake Champlain Basin.
- AWI will develop a series of online and in person training modules on boat inspection and public education and deliver to four lake associations in the Basin.
- management of a comprehensive stewardship program designed to reduce the risk of AIS transport

Outcomes:

- reduce the risk of AIS transport through education, watercraft inspections and decontaminations

Organization: Paul Smith's College/AWI
Contact Person: William Brosseau
Mailing Address: P.O. Box 265
 Paul Smiths, NY 12970
Phone: 518-327-6171
E-mail: bbrosseau@paulsmiths.edu
Website: www.adkwatershed.org



Watercraft decontamination in action at the NYS DEC- Peru launch on Lake Champlain, credit PSC AWI



NEIWPCC Code: LS-2023-043
 EPA 0364-003-001
 Start Date: 06/01/2023
 Close Date:
 Grant Amount: \$ 79,583.00
 Non-federal Match: \$ 28,419.00
 Total Amount: \$108,002.00

2022 AIS Spread Prevention Grant concluded

Adirondack Aquatic Invasive Species Spread Prevention Watercraft Inspector Program:
Second Pond and Lake Flower, Buck Pond State Campground, and Lake Placid Village Launch

Project Summary

The Adirondack Aquatic Invasive Species Spread Prevention Watercraft Inspection Program supports watercraft inspection and aquatic invasive species (AIS) monitoring efforts by watercraft inspection stewards located at Lake Flower, Second Pond, Buck Pond, Lake Placid, and Loon Lake in summer 2022. The stewards will work within the larger AIS spread prevention program of Paul Smith's College Adirondack Watershed Institute (PSC AWI) to inform the public about spread prevention measures and the importance of the impacts of AIS to waterways. The project aligns with *Opportunities for Action* Goals to support Healthy Ecosystems, Thriving Communities, and an Informed and Involved Public. A Watercraft Inspection Steward performs a boat decontamination to remove small bodied aquatic invasive animals (SBAIA), minimizing the risk of transportation into Adirondack waterways.

Outputs:

- visitor interactions
- watercraft inspections
- data collection
- AIS removal.

Outcomes:

- increase in the public's willingness to adhere to Clean, Drain, Dry measures, and prevention of further spread of AIS in these waterbodies.

Organization: Paul Smith's College - AWI
Contact Person: Zoë Smith
Mailing Address: P.O. Box 265
Paul Smiths, NY 12970
Phone: 518-327-6276
E-mail: zsmith1@paulsmiths.edu
Website: adkwatershed.org



A Watercraft Inspection Steward performs a boat decontamination to remove small bodied aquatic invasive animals (SBAIA), minimizing the risk of transportation into Adirondack waterways.

NEIWPCC Code: LS-2022-045
EPA 0357-003-001
Start Date: 4/26/2022
Close Date: 3/23/2023
Grant Amount: \$54,001.00
Non-federal Match: \$35,634.00
Total Amount: \$89,635.00



2023 AIS Spread Prevention Grant in progress

AIS River Steward for the Ausable River/Northern Champlain Region, NY

Project Description

AsRA's river steward program protects the Ausable River, its tributaries, lakes, and the riverine corridor from aquatic invasive species to ensure healthy aquatic and riparian ecosystems. Over twelve years, the primary outcome of the river steward program has been an increase in human awareness and action that is integral to spread prevention, early identification, and a reduction in invasive species infestations in the watershed. In 2023, with LCBP funds, the river steward will continue to deliver critical AIS education and prevention on-river, at watershed lakes, and at public events during the angling and river recreational season by distributing the spread prevention message in conversations, serving as an information resource to the public (especially river users), monitoring the watershed's condition for presence or absence of AIS, overseeing the distribution of educational materials, and maintaining wader wash stations across the watershed.

Outputs:

- target spread prevention education and outreach both on the river at popular access points and at tourist points of entry
- partner with local businesses that service river users – gear and guide shops –to ensure the message of “Check-Clean-Dry” is widely shared and understood
- conduct visual surveys of waterways for sightings of AIS infestations and report any to the Adirondack Park Invasive Plant Program (APIPP) and iMapInvasives
- maintain riverside Wader Wash Stations (WWS)
- attend watershed-wide public events to provide information non-users and the public.

Outcomes:

- increase in human awareness and action that is integral to spread prevention, early identification, and a reduction in invasive species infestations in the watershed.

Organization: Ausable River Association (AsRA)
Contact Person: Carrienne Pershyn
Mailing Address: PO Box 8
Wilmington, NY 12997
Phone: 518.637.6859
E-mail: cpershyn@ausableriver.org
Website: www.ausableriver.org



2022 river steward changing the salt solution at a wader wash station.

NEIWPCC Code: LS-2023-047
EPA 0364-003-001
Start Date: 6/1/2023
Close Date:
Grant Amount: \$20,000.00
Non-federal Match: \$ 1,500.00
Total Amount: \$21,500.00



2022 AIS Spread Prevention Grant

concluded

AIS River Steward for the Ausable River/Northern Champlain Region, NY

Project Summary

In 2022, the river steward was active from May 12 through October 14 and served as a conservation ambassador and an on-river resource during peak fishing times. Ten wader wash stations were maintained on the West Branch Ausable River from May 12 through October 14. The primary objective for the river steward during 2022 was to provide spread prevention education to river users and administer a survey to gather data about the user's previous bodies of water visited, type of gear used, and gear cleaning methods. These data are used to determine AIS threats to the Ausable River and its watershed and to refine education and outreach methods.

Outputs:

- target spread prevention education and outreach both on the river at popular access points and at tourist points of entry
- partner with local businesses that service river users – gear and guide shops –to ensure the message of “Check-Clean-Dry” is widely shared and understood
- conduct visual surveys of waterways for sightings of AIS infestations and report any to the Adirondack Park Invasive Plant Program (APIPP) and iMapInvasives
- maintain riverside Wader Wash Stations (WWS)
- attend watershed-wide public events to provide information non-users and the public.

Outcomes:

- increase in human awareness and action that is integral to spread prevention, early identification, and a reduction in invasive species infestations in the watershed.

Organization: Ausable River Association (AsRA)
Contact Person: Carrienne Pershyn
Mailing Address: PO Box 8
 Wilmington, NY 12997
Phone: 518.637.6859
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Website: www.ausableriver.org



A Rotary Club volunteer at a purple loosestrife pull hosted by the 2021 river steward at Ausable Marsh.



NEIWPCC Code: LS-2022-052
EPA: 0357-003-001
Start Date: 5/3/2022
Close Date: 2/21/2023
Grant Amount: \$15,000.00
Non-federal Match: \$ 4,150.00
Total Amount: \$19,150.00

2023 Spread Prevention Grant

in progress

AIS Spread Management & Prevention Summer 2023

Project Description

Lake St Catherine Association will use Diver-Assisted Suction Harvesting (DASH) and hand pulling to manage Eurasian water milfoil (EMW) in an area that reestablishes because of high level of boat traffic, fragmentation, and current downwind of harvesting. A Quality Assurance Project Plan (QAPP) for this portion of the project will be developed as required. Building on the plant survey done in the fall of 2022, another survey using the same transect & data point locations that were established in 2001 and used every year since will be relocated using a differential GPS system. This survey will be performed by contracted professional services provided by Solitude Lake Management consistent with our past practice. The DASH team also reviews the same survey points. They typically will dive to do in-water observations of the sites using GPS data points. These surveys will occur in Mid-May of 2023 to confirm areas of infestation of EWM as well as density/frequency of occurrence and will be the basis of the project using DASH and hand pulling to remove reestablished AIS material in the area noted on the map attached.

Outputs:

- Comprehensive removal of EWM from channel as designated on map. investigation and reporting of any other potential AIS in the work site area.
- two outreach meetings with property owners along areas of work site and community overall
- Greeter Program and recording of AIS on boats at launch/retrieval noting historical difference in density, population, diversity of AIS species will be reported.
- educational materials provided by the VTDEC will be distributed to lake users at launch retrieval site.

Outcomes:

- reduction and continued monitoring/reporting of EWM and potential other AIS introduction into Lake St Catherine and prevent the spread of EWM from Lake St Catherine to other lakes.
- Improved public awareness of AIS spread prevention.

Organization: Lake St Catherine Association
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 Wells, VT 05774
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E-mail: maryjo.teetor@lakestcatherine.org
Website: www.lakestcatherine.org



NEIWPCC Code: LS-2023-044
EPA: 0364-003-001
Start Date: 05/25/2023
Close Date:
Grant Amount: \$18,938.00
Non-federal Match: \$ 6,456.00
Total Amount: \$25,394.00

2022 AIS Spread Prevention Grant

in progress

Bristol Pond and Monkton Pond Boat Launch Steward Initiative and Lewis Creek Knotweed Initiative

Project Description

This project will continue a 12-week boat launch steward program at Bristol Pond and Monkton Pond, in order to reduce the spread of aquatic invasive species in and out of these water bodies and throughout the U.S. In addition LCA will initiate a knotweed outreach and control project in the Lewis Creek watershed, with the objective of educating the public and providing them with knowledge to perform non-chemical knotweed control on riparian properties through a demonstration control project (which will reduce sediment and phosphorus loading via reduced streambank erosion).

Outputs:

- end of season report for the boat launch steward program
- a public meeting
- outreach materials
- press release & social media posts

Outcomes:

- better informed public of aquatic invasive species, and becoming better stewards of shared resources
- reduced aquatic invasive species at Bristol Pond.
- increased understanding of knotweed distribution
- a reduced population of knotweed

Organization: Lewis Creek Association
Contact Person: Katherine Kelly
Mailing Address: PO Box 313
 Charlotte, VT 05445
Phone: (802) 488-5203
E-mail: lewiscreekg@gmail.com
Website: www.lewiscreek.org



A stand of knotweed at the demonstration site, just upstream from Lewis Creek. Photo by Kate Kelly.



NEIWPCC Code: LS-2023-056
EPA 0364-003-001
Start Date: 6/29/2023
Close Date:
Grant Amount: \$20,000.00
Non-federal Match: \$ 1,941.00
Total Amount: \$21,941.00

2022 AIS Spread Prevention Grant

concluded

Bristol Pond and Monkton Pond Boat Launch Steward Initiative

Project Summary

This project continued a boat launch steward program at Bristol Pond, established a program at Monkton Pond, and aided in the development of education and outreach materials. Objectives were to reduce the risk of spreading aquatic invasive species between waterbodies. The boat launch steward program at Bristol Pond and Monkton Pond occurred between June 19 and September 4, 2022. The boat launch stewards checked 312 watercraft at Bristol Pond, and 113 watercraft at Monkton Pond; these could have served as vectors of infestation to 18 different bodies of water. In addition, a removal day was hosted with Vermont Department of Conservation and Lake Champlain Basin Program staff to tackle a newly discovered population of brittle naiad near the boat launch. Finally, a season report of the boat launch steward program was created, two press releases were authored, the Lewis Creek Association website was updated with boat launch stewardship results and educational and outreach materials, a public presentation was given, and quarterly and final reports were submitted.

Outputs:

- end of season report for the boat launch steward program
- outreach materials
- press release

Outcomes:

- better informed public of aquatic invasive species, and becoming better stewards of shared resources
- reduced aquatic invasive species at Bristol and Monkton Ponds.

Organization: Lewis Creek Association
Contact Person: Katherine Kelly
Mailing Address: PO Box 313
 Charlotte, VT 05445
Phone: (802) 488-5203
E-mail: lewiscreekg@gmail.com
Website: www.lewiscreek.org



Bristol Pond, where Lewis Creek Association's boat launch stewards checked boats for aquatic invasive species. Photo credit: Matthew Gorton



NEIWPCC Code: LS-2022-044
EPA 0357-003-001
Start Date: 4/28/2022
Close Date: 3/28/2023
Grant Amount: \$14,385.00
Non-federal Match:
Total Amount: \$14,385.00

2022 AIS Spread Prevention Grant

concluded

Chazy Lake Watershed Initiative EWM Removal

Project Summary

Chazy Lake Watershed Initiative (CLWI) contracted with AE Commercial Diving Services, Inc. to develop a plan and conduct Diver Assisted Suction Harvesting (DASH) for Eurasian watermilfoil (EWM) in Chazy Lake. AE Commercial Diving Services commenced removal on August 29, 2022, and had to stop for a few weeks. They finished the harvest on October 2, 2022. The main objective this year was to target an area of the lake, Seine Bay, to remove the dense, moderate, and sporadic beds of EWM that were spread over a large area. Seine Bay has a variety of bottom compositions, topography, and sediment, making it difficult to remove the plants and their root systems. As a result, the regrowth potential is high in areas and will require ongoing monitoring. In conjunction with CLWI's DASH harvesting with their own boat, "The Eradicator", and contracting with AE Commercial Diving Services, the organization has made great progress in decreasing the amount of EWM.

Outputs:

- 13,794 pounds of EWM removed

Outcomes:

- aquatic invasive species spread prevention
- 95% elimination of two sites of EWM, each over one acre in size

Organization: Chazy Lake Watershed Initiative

Contact Person: Lisa McGinn

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Ellenburg Depot, NY 12935

Phone: 518 492-7537

E-mail: readingchic.lm@gmail.com

Website: <https://www.adk.org/>



Map of Chazy Lake and a close-up picture of Seine Bay and the EWM beds that were harvested by AECDS.



An AECDS DASH diver begins to harvest an EWM plant from the top down in order to reduce fragmentation and capture any parts which are already fragmented by trapped in the foliage of the plant. Photo by Wesley Sheldon, Copyright 2021



NEIWPCC Code: LS-2022-053
EPA 0357-003-001
Start Date: 6/16/2022
Close Date: 5/22/2023
Grant Amount: \$15,000.00
Non-federal Match: \$ 3,000.00
Total Amount: \$18,000.00

2023 AIS Spread Prevention Grant

in progress

Follensby Clear Pond Aquatic Invasive Species Removal

Project Summary

This project will continue with the expansion of successful efforts to control and prevent the spread of invasive Eurasian watermilfoil in the Saranac Lake watershed, protecting downstream waters from infestation, and preventing the export of populations of AIS to non-infested regional waters. AIS plant control methods utilizing hand harvesting, will help prevent the spread of AIS, maintain native species in their natural habitats and provide economic value through recreation, tourism and sportsmanship. This project is consistent with the USF goals of providing clear waterways and ensuring the sustainability of our natural public resources for future generations. The USF is committed to the long-term sustainability of this project and will support ongoing AIS management efforts at this location past the initial intensive harvest period.

Outputs:

- hand-harvesting of EWM

Outcomes:

- control and prevent the spread of invasive Eurasian watermilfoil in the Saranac Lake watershed
- protecting downstream waters from infestation
- preventing the export of populations of AIS to non-infested regional waters

Organization: Upper Saranac Foundation

Contact Person: Guy Middleton

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Saranac Lake, NY 12983

Phone: 518 796-1052

E-mail: lakemanager@usfoundation.net

Website: <https://usfoundation.net/>



AIS – (Eurasian water-milfoil) harvested from Follensby Clear Pond in September of 2022. Harvests have yielded 14,652 pounds of milfoil since the project's inception in 2020. Photo: Guy Middleton



NEIWPCC Code: LS-2023-060
EPA 0364-003-001
Start Date: 6/29/2023
Close Date:
Grant Amount: \$15,276.00
Non-federal Match: \$ 3,167.00
Total Amount: \$18,443.00

2022 AIS Spread Prevention Grant

concluded

Follensby Clear Pond Aquatic Invasive Species Removal

Project Summary

2022 was the third year for the “front loading” intensive AIS harvest management. Reducing AIS infestations to manageable levels with funding from this grant allowed the USF to commence a scaled back management plan in subsequent years. The USF is committed to the long-term sustainability of this project and will support required AIS management efforts past this initial intensive phase of the project, ensuring prolonged control. This project incorporated plant surveys, mapping and project monitoring to provide data on the efficacy and success of AIS management.

Outputs:

- A total of 307 of diver work hours removed 1,014 lbs. of Eurasian watermilfoil from the 148 acres of littoral zone in 2022. Over three-years, a total of 847 diver work hours has netted 14,652 pounds of AIS.
- Comprehensive aquatic plant surveys were completed of the entire littoral zone, prior to, and at the completion of each of the three 2022 AIS harvesting management sessions. These surveys provided updated information and generated maps to guide harvesting efforts.

Outcomes:

- control and prevent the spread of invasive Eurasian watermilfoil in the Saranac Lake watershed
- protecting downstream waters from infestation
- preventing the export of populations of AIS to non-infested regional waters
- restoration of public waterways to their original state before the unwanted introduction of AIS.
- recreational enjoyment - pristine waters, natural beauty and environmental quality returns to Follensby Pond

Organization: Upper Saranac Foundation
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 Saranac Lake, NY 12983
Phone: 518 796-1052
E-mail: lakemanager@usfoundation.net
Website: https://usfoundation.net/



Lobster Buoy marking milfoil plant location – Photo: Guy Middleton, Upper Saranac Foundation



NEIWPCC Code: LS-2022-027
EPA 0357-003-001
Start Date: 5/4/2022
Close Date: 3/23/2023
Grant Amount: \$ 14,673.00
Non-federal Match: \$ 2,485.00
Total Amount: \$17,158.00

2023 AIS Spread Prevention Grant

in progress

Invasive species and water chestnut control at Missisquoi NWR

Project Summary

The Friends of Missisquoi NWR (Friends, FOM) will work with the Missisquoi National Wildlife Refuge (refuge) and other volunteers in a continued effort to control riparian invasive species and water chestnut in 2023. The objective is to continue riparian and wetland invasive species control efforts on the Missisquoi NWR. Outputs include a press release announcing the grant award, photos of the work and a poster used at the refuge Visitor’s Center. Outcomes are improving the biological integrity of refuge wetlands by controlling invasive species and water chestnut on Missisquoi NWR. Additional outcomes are preventing the spread of invasive species and water chestnut into unaffected areas surrounding and in the northern lake.

Outputs:

- conduct invasive species control
- coordinate the control of Phragmites, Japanese Knotweed, poison parsnip and yellow iris with contractor and volunteers. MNWR staff conduct chestnut control.

Outcomes:

- improving and protecting the wetland biological integrity by controlling invasive species on Missisquoi NWR
- preventing the spread of invasive species into unaffected areas within the refuge and in the northern lake.

Organization: Friends of Missisquoi NWR, Inc.
Contact Person: Rich Kelley
Mailing Address: 29 Tabor Road
 Swanton, VT 05488
Phone: 802-868-4781
E-mail: info@friendsofmissisquoi.org
Website: http://friendsofmissisquoi.org



NEIWPCC Code: LS-2023-057
EPA 0357-003-001
Start Date: 7/13/2023
Close Date:
Grant Amount: \$ 10,000.00
Non-federal Match: \$ 1,448.00
Total Amount: \$11,448.00

2022 AIS Spread Prevention Grant

concluded

Invasive species and water chestnut control at Missisquoi NWR

Project Summary

The Friends of Missisquoi National Wildlife Refuge have worked with the refuge to control wetland and riparian invasive species, such as Phragmites, Japanese knotweed, and yellow iris since 2007. This grant supported professional services of a contracted certified herbicide applicator to control stands of these invasive species. As match contribution, Friends of the MNWR conducted surveys to mark the stands of invasive species for treatment which they have done since 2017. The Friends of Missisquoi NWR (Friends, FOM) work on riparian invasive species allows the Missisquoi National Wildlife Refuge USFWS staff to continue survey and control of water chestnut throughout the refuge.

Surveys in the floodplain forest have documented more invasive yellow iris than refuge staff previously realized. Mapping conducted in 2017-2021 documented wide spread yellow iris presence with two apparent "hot spots" located on the Missisquoi River and Dead Creek. In 2022, volunteers mapped 86 acres of riparian forest documenting stands of yellow iris and purple loosestrife to continue monitoring efforts in refuge wetland habitat.

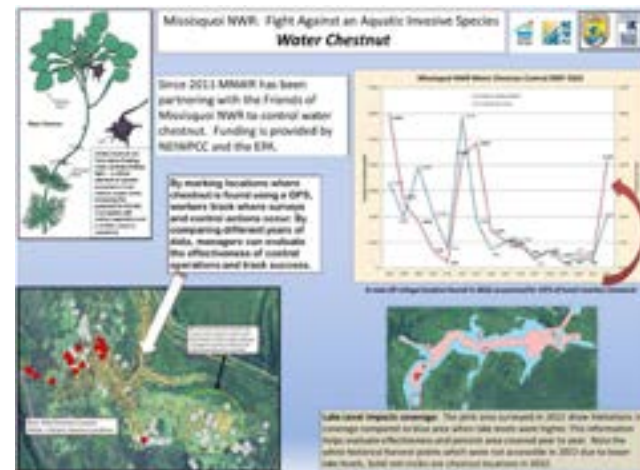
Outputs:

- contracted certified herbicide applicator to control stands of these invasive species
- 81.5 acres of yellow iris and other invasives treated
- 4,166 rosettes removed

Outcomes:

- improving and protecting the wetland biological integrity by controlling invasive species on Missisquoi NWR
- preventing the spread of invasive species into unaffected areas within the refuge and in the northern lake.

Organization: Friends of Missisquoi NWR, Inc.
Contact Person: Rich Kelley
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Phone: 802-868-4781
E-mail: info@friendsofmissisquoi.org
Website: http://friendsofmissisquoi.org



NEIWPCC Code: LS-2022-056
EPA 0357-003-001
Start Date: 5/6/2022
Close Date: 3/28/2023
Grant Amount: \$ 10,000.00
Non-federal Match: \$ 1,820.00
Total Amount: \$11,820.00

2022 AIS Spread Prevention Grant

in progress

Knockout Knotweed: the Knotweed Menace

Project Description

The goal of this project continues to be related to research of a comprehensible and effective non-chemical control strategy, in order for MRBA to provide guidance and recommendations for local landowners and community members to mitigate or eliminate the invasive species Japanese Knotweed.

Outputs:

- non-chemical control strategy
- data collection from treatment plots
- progression pictures
- handout distributed to community members.

Outcomes:

- stronger understanding of the proper removal and remediation techniques, as well as best management strategies for landowners to practice on their properties.
- stronger understanding of the viability of removal and remediation techniques,

Organization: Missisquoi River Basin Association
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Website: www.mrbavt.com



Monthly-cutting plot at Montgomery's Riverwalk Park in July, 2022. Although knotweed is still rampant around the plot, management within it has allowed native species, such as the mullein and raspberry in the front, to flourish.



NEIWPCC Code: LS-2023-034
EPA 0357-003-001
Start Date: 4/11/2023
Close Date:
Grant Amount: \$ 8,102.00
Non-federal Match: \$ 4,466.00
Total Amount: \$12,568.00

2022 AIS Spread Prevention Grant

concluded

Knockout Knotweed: Return of the Jedi

Project Summary

During this project, MRBA refined previous treatment methods, and assessed the continued effectiveness of three mechanical control methods: monthly cutting; smothering with pond liner; and covering with a metal mesh. Throughout the growing season two treatment locations, each with 3 treatment plots and 1 control plot were monitored. These sites, along with interpretive signage and MRBA's presence, served as passive ambassadors for public information about knotweed. Additionally, a second Knockout Knotweed Bonfire was held at end of the season: this fun event serves as a way to help the community better understand knotweed and some of the ways that this invasive species can be addressed.

None of the mechanical methods deployed create a significant difference in biomass production compared to the control plot. There continues to be a measured difference in biomass production when comparing all the treatment plots to one another: smothering with pond liner continues to be effective; it remains to be seen how long an area must be smothered to eradicate knotweed from the plot. Monthly cutting seems to be even more effective during the second year, showing a reduced biomass, but knotweed is still present and can return. With the wire mesh, we observed similar biomass during years one and two – knotweed is growing up through the metal mesh, though the stems seem smaller and less prevalent than in control plots.

Outputs:

- non-chemical control strategy
- data collection from treatment plots
- progression pictures
- handout distributed to community members.

Outcomes:

- stronger understanding of the proper removal and remediation techniques, as well as best management strategies for landowners to practice on their properties.

Organization: Missiquoi River Basin Association
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 East Berkshire, VT 05447
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Website: www.mrbavt.com



2022 knotweed treatment plots at Riverwalk Park in Montgomery.



NEIWPCC Code: LS-2022-043
EPA 0357-003-001
Start Date: 5/4/2022
Close Date: 5/3/2023
Grant Amount: \$ 3,436.00
Non-federal Match: \$ 5,738.00
Total Amount: \$9,174.00

2023 Spread Prevention Grant

in progress

Lake Carmi Boat Launch Steward

Project Description

The purpose of this project is to prevent the spread of aquatic invasive species and to educate community members about the dangers of aquatic invasive species. Boat launch stewards will be stationed at the North Shore and Lake Carmi State Park boat launches to survey water crafts entering and leaving the lake for aquatic invasive species. Educational material will also be circulated to community members via newsletters, blog posts, and social media posts in order to inform folks of the work we are doing and the harm that these organisms can cause.

Outputs:

- hiring and training of boat launch steward
- boat inspections and data collection
- public outreach

Outcomes:

- prevent the spread of aquatic invasive species
- educate boaters about AIS and how to reduce their spread

Organization: Franklin Watershed Committee
Contact Person: Julia Crocker
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 South Burlington, VT 05403
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Website: https://www.franklinwatershed.org/



Lake Carmi State Park Boat Launch



NEIWPCC Code: LS-2023-063
EPA 0364-003-001
Start Date: 7/21/2023
Close Date:
Grant Amount: \$12,906.00
Non-federal Match:
Total Amount: \$12,906.00

2021 Local Implementation Grant

in progress

Lake Champlain Aquatic Invasive Patrollers Project

Project Summary

LCC will expand the VT Invasive Patroller Program (VIP) in partnership with VTDEC to focus on Lake Champlain (LC AIPP) to engage community members to survey for aquatic invasive species (AIS) and to educate the public about spread prevention. The focus area is Lake Champlain shoreline areas through the submersed plant zone, approximately 15 to 20 feet into the water. LCC will recruit and train volunteers from all five main sections of Lake Champlain. Outputs include an LC AIPP toolkit with guidance materials, a survey data sheet and aquatic specimen submission form, three training sessions for volunteers, AIS identification cards, and a host of recruitment and educational materials (forms, emails, press releases, articles, and social media postings). Anticipated outcomes are to help fill an important data gap in AIS surveying as state agencies don't have the staffing or funding resources to cover the territory, and to further educate and engage community members on AIS detection and spread prevention.

Outputs:

- LC AIPP toolkit with guidance materials
- survey data sheet and aquatic specimen submission form
- three training sessions for volunteers
- AIS identification cards, and a host of recruitment and educational materials

Outcomes:

- fill an important data gap in AIS surveying
- educate and engage community members on AIS detection and spread prevention.

Organization: Lake Champlain Committee
Contact Person: Lori Fisher
Mailing Address: 208 Flynn Avenue, Building 3 Studio 3F | Burlington, VT 05401
Phone: 802 658-1421
E-mail: lorif@lakechamplaincommittee.org
Website: lakechamplaincommittee.org



University of Vermont student, Erin Cardoza, sifting the sandy shoreline near the mouth of the LaPlatte River in Shelburne Bay, VT for Asian clam, a non-native aquatic invasive species. Photo by LCC Director of Science & Water Programs, Lauren Sopher, © Lake Champlain Committee.



NEIWPCC Code: LS-2021-025
EPA 0346-003
Start Date: 3/26/2021
Close Date:
Grant Amount: \$15,000.00
Non-federal Match: \$18,425.00
Total Amount: \$33,425.00

2022 AIS Spread Prevention Grant

concluded

Lake Dunmore Greeter Program

Project Summary

This LCBP/NEIWPCC funded project supported two steward positions during the summer 2022 season. Stewards were deployed at the Lake Dunmore public access location from May through October, and inspected over 670 watercrafts (including inboard motorboats, outboard motorboats, kayaks, jet skis, canoes, and sailboats), both launching (71%) and retrieving (29%). The inspections revealed that the various watercraft entered the lake after having last been used in many varied locations, including Lake Champlain, Lake George, Lake Memphremagog, Squam Lake, Lake Hortonia, Lake Bomoseen, the Connecticut River, and the Atlantic Ocean. However, no aquatic invasive species were found on boats launching or retrieving from Lake Dunmore. Stewards worked up to 10 hours a day (at the height of the summer) for 4-7 days a week.

Outputs:

- 670 watercraft inspected
- educational materials distributed

Outcomes:

- prevent the spread of aquatic invasive species in/out of Lake Dunmore
- educate boaters about AIS and how to reduce their spread

Organization: Lake Dunmore Fern Lake Association
Contact Person: Louis Miron
Mailing Address: PO Box 14 Salisbury, VT, 05769
Phone: 239-272-5494
E-mail: mironlaw@aol.com
Website: www.ldfla.com



NEIWPCC Code: LS-2022-050
EPA 0357-003-001
Start Date: 4/28/2022
Close Date: 3/28/2023
Grant Amount: \$ 15,000.00
Non-federal Match: \$ 5,973.00
Total Amount: \$20,973.00

2021 Local Implementation Grant

in progress

Lake Eden Aquatic Invasive Spread Prevention and Management

Project Description

In partnership, the Town of Eden and the Lake Eden Association will develop and implement a Lake Eden Eurasian water milfoil eradication effort. The two groups will act on the early detection and rapid response to eradicate the invasive Eurasian watermilfoil, identified in Lake Eden in June of 2022. The outcome will continue efforts so that this new AIS threat is contained, managed, or eradicated as quickly as possible.

Outputs:

- development and implementation of a Lake Eden Eurasian water milfoil eradication effort
- calendar of trainings & management practices.
- conduct a pre and post aquatic plant survey prior to harvest.
- conduct harvest using volunteers, DASH team.
- purchase and use of equipment such as benthic barriers, wetsuits, snorkels, weight belts, net bags, fishing nets and underwater viewers.

Outcomes:

- aquatic invasive species spread prevention and education and outreach in the Lake Champlain Basin
- new AIS threat is contained, managed, and/or eradicated

Organization: Town of Eden
Contact Person: Teleia Pastore
Mailing Address: 71 Old Schoolhouse Rd.
 Eden Mills, VT 05653
Phone: (802) 635-2528
E-mail: clerk@edenvt.org
Website: edenvt.org

NEIWPCC Code: LS-2023-081
EPA 0364-003-001
Start Date: 6/29/2023
Close Date:
Grant Amount: \$20,000.00
Non-federal Match: \$ 7,211.00
Total Amount: \$27,211.00



2023 AIS Spread Prevention Grant

in progress

Lake Elmore Eurasian Watermilfoil Management Plan and Greeter Program

Project Description

The Lake Elmore Association (LEA) will utilize the funds from this grant for Eurasian watermilfoil control in Lake Elmore by hiring a professional dive team to mark and remove areas of dense infestation in the lake in 2023. The LEA will also help prevent introduction to and spread of aquatic invasive species from Lake Elmore to other bodies of water by implementing a boat launch steward program on the Lake.

Outputs:

- coordinate Public Access Greeter Program. A greeter shed will be put in place at the Fish and Wildlife boat ramp to perform boat inspections on weekends, Friday – Sunday and holidays 8:00am – 8:00pm and operate from Memorial Day until Labor Day.
- daily inspection reports will be furnished to Vermont DEC via Survey 123 from May-September 2023
- acquire dive team; Divers Perform Visual inspections; Milfoil Removal in CY; Reporting

Outcomes:

- ecological integrity of the Lake ecosystem will remain intact
- protection of the downstream watershed will be maintained for both residents and the habitat by protecting the flora and fauna of the Champlain Basin.

Organization: Lake Elmore Association
Contact Person: Glenn Schwartz
Mailing Address: P.O. Box 61
 Lake Elmore Vermont 05657
Phone: 802-888-1158
E-mail: Glenns@nci3.com
Website: <https://www.facebook.com/groups/732462333604380>



Professional Diver heading out to perform hand pulling and suction harvesting operations

NEIWPCC Code: LS-2023-068
EPA 0364-003-001
Start Date: 7/13/2023
Close Date:
Grant Amount: \$20,000.00
Non-federal Match: \$ 8,333.00
Total Amount: \$28,333.00



2020 Local Implementation Grant

concluded

Lake George AIS Outreach Program 2020

Project Summary

The focus of the outreach component was to inform and educate boaters and other recreationalists about invasive species and spread prevention, organize and participate in activities within the Lake George watershed. This project informed visitors of the steps they can take to help prevent the spread of invasive species by cleaning, draining, and drying their boats and equipment and delivered education and outreach behavior change campaigns targeted at the general public and targeted water user groups.

Outputs:

- number of canoe and kayak inspections
- interacted with 384 people about invasive species spread prevention at events in the Lake George watershed.

Outcomes:

- Aquatic invasive species spread prevention
- increased community awareness and education and outreach.

Organization: The Lake George Association
Contact Person: Kristen Wilde
Mailing Address: P. O. Box 408
 Lake George, NY 12845
Phone: 518 668-3558
E-mail: kwilde@lakegeorgeassociation.org
Website: www.lakegeorgeassociation.org



NEIWPCC Code: LS-2020-055
EPA: 346-003-001
Start Date: 6/9/2020
Close Date: 12/6/2022
Grant Amount: \$4,635.00
Non-federal Match: \$ 700.00
Total Amount: \$5,335.00



2022 AIS Spread Prevention Grant

concluded

Lake Hortonia Milfoil Management 2022

Project Summary

Diver-Assisted Suction Harvesting (DASH) on Lake Hortonia. The DASH focused on an approximately 2.3-acre area divided between the public boat launch and adjoining dam near the Lake Hortonia country store and the public State of Vermont fishing access boat launch. Over a five day period, invasive watermilfoil was harvested. The spoils were delivered to a local gardener with the remainder being hauled off site to a composting facility. The visual survey immediately after the treatment showed removal of the floaters and a scarce population of EWM. This survey was conducted in September 2022. 140 points on the lake were surveyed. The survey indicated a 10% decline in EWM from 2021 and a stable population of native species. The treatment area had scattered EWM and a moderate population of native plants including duck celery, white water lilies and waterweed. The 2021 survey indicated scattered to moderate EWM population.

Throughout the Summer public outreach and education was conducted via the Association newsletter, website, Association meetings and “dock” chats. The “dock” chats were conducted by Murray Banks, the Association President.

Outputs:

- Approximately 1,660 gallons of EWM were removed from this region. The 2022 Aquatic Plant Survey indicated only a scattering of EWM post treatment. The richness of the native plants remains stable.
- Map of treatment areas and map of potential “green” disposal areas.# of volunteers and copy of outreach materials;

Outcomes:

- reduce the population of Eurasian water milfoil and prevent spread and further impact.
- minimize the use of herbicide in managing invasive plant species
- LHPOA is maintaining long-term control and containment of Eurasian watermilfoil in Lake Hortonia to prevent spread.

Organization: Lake Hortonia Property Owner Association
Contact Person: Susan Kelley
Mailing Address: 1242 Lake Hortonia Road
 Sudbury, VT 05733
Phone: (802) 273-3917
E-mail: Skkelley98@gmail.com
Website: https://lakehortonia.org/



NEIWPCC Code: LS-2022-073
EPA: 0357-003-001
Start Date: 7/15/2022
Close Date: 3/23/2023
Grant Amount: \$15,000.00
Non-federal Match: \$ 3,073.00
Total Amount: \$18,073.00



2023 AIS Spread Prevention Grant in progress

Preventing Aquatic Invasive Species Prevention Through Public Engagement

Project Description

Lake Champlain Maritime Museum will provide accessible and engaging free interpretation experiences to the public that will increase awareness of and action on the issue of aquatic invasive species, leading to decreased spread and increased management of aquatic invasive species in Lake Champlain. The Museum will create new, multilingual waterfront signage at its public location on North Harbor on Lake Champlain focused on identification and management of aquatic invasives and actions that prevent their spread. The Museum will also train all waterfront and on-water staff to engage with the public on issues related to identification, management, and spread of aquatic invasives. Public engagement on this crucial topic will be incorporated into all on-water programming for the 2023 Museum season, including adult and youth rowing, sailing workshops, and boating opportunities for Museum visitors. Outcomes will include a better informed public with increased awareness about lake health issues, increased stewardship of Lake Champlain, and increased likelihood to take action to prevent the spread of aquatic invasive species in the Lake Champlain watershed.

Outputs:

- free interpretive experiences to visitors

Outcomes:

- increased awareness of and action on the issue of aquatic invasive species
- decreased spread and increased management of aquatic invasive species in Lake Champlain.

Organization: Lake Champlain Maritime Museum
Contact Person: Katharine Noiva
Mailing Address: 4472 Basin Harbor
Vergennes VT 05491
Phone: 802-475-2022 ext. 109
E-mail: katharine@lcmmm.org
Website: www.lcmmm.org



Museum Educator Noah Johnson prepares for a demonstration about aquatic invasive species identification, monitoring, and prevention.



NEIWPCC Code: LS-2023-061
EPA 0364-003-001
Start Date: 6/29/2023
Close Date:
Grant Amount: \$20,000.00
Non-federal Match: \$ 2,640.00
Total Amount: \$22,640.00

2023 AIS Spread Prevention Grant in progress

Preventing Aquatic Invasive Species Prevention Through Targeted Removal

Project Description

The Adirondack Park Invasive Plant Program (APIPP), hosted by The Nature Conservancy, will conduct a pilot program at up to seven boat launches on Lake Champlain that are heavily infested with aquatic invasive species (AIS) to test the effectiveness of reducing the spread of AIS throughout the Lake Champlain Basin by targeted removal of invasive plants at the boat launch sites. APIPP will hire a contractor to remove aquatic invasive plant species, including Eurasian watermilfoil and curly leaf pondweed by diver assisted suction harvesting (DASH) from the areas adjacent to the boat launches.

Outputs:

- APIPP pre- and post-harvesting monitoring of aquatic plants (native and invasive) and the amount of invasive plants removed from each boat launch by the contractor.
- This will be measured in partnership with Adirondack Watershed Institute (AWI) watercraft inspection stewards that collect data on AIS presence on entering and retrieving boats at these boat launches

Outcomes:

- reduced AIS spread from retrieving boats by decreasing invasive propagule pressure on other lakes that retrieving watercraft visit.
- AWI retrieving boat data pre- and post-treatment and APIPP pre- and post-treatment harvest assessment data. will be compared.

Organization: The Nature Conservancy
Contact Person: Brian Greene
Mailing Address: PO Box 65
Keene Valley, NY 12943
Phone: 518-576-2082 x 119
E-mail: brian.greene@tnc.org
Website: www.adkinvasives.com



Example of a trailer at the Westport Boat Launch with invasive curly leaf pondweed attached.



NEIWPCC Code: LS-2023-003
EPA 0364-003-001
Start Date: 3/10/2023
Close Date:
Grant Amount: \$39,500.00
Non-federal Match:
Total Amount: \$39,500.00

2023 AOP Restoration & Implementation in progress

Assessing the Management and Impact of Private Road Crossings in the Lake Champlain Basin

Project Description

In response to a lack of existing data on private road-stream crossings in the Lake Champlain Basin, this study will identify road-stream crossings on private land using high resolution LiDAR topography data, seek landowner permission to assess which identified crossings act as barriers to aquatic connectivity, conduct surveys/interviews to understand landowner perspectives on culvert management, and provide in-person outreach and education programs to landowners within our study areas. This work will result in a prioritized list of parcels with crossings, field assessments of previously unknown crossings, and publications on the attitudes of private landowners toward road crossings and their impacts. We intend for this work to fill the private road crossing data gap in our study watersheds and to provide more information about which strategies are effective at increasing landowner knowledge on how to implement road crossing best management practices.

Outputs:

- Site Identification; GIS Layer of private parcels that co-occur with streams; private road crossings GIS map layer; list of priority parcels (top 25% or no more than 50)
- Outreach to Landowners; up to 800 landowner perception and attitude surveys and response data
- Field Assessments; completed AOP assessments for each prioritized crossing (minimum of 25) and integration of collected AOP data into the VT ANR Atlas and the NAACC database
- 15 completed interviews of priority parcel landowners

Outcomes:

- fill the private road crossing data gap in our study watersheds
- more information about which strategies are effective at increasing landowner knowledge on how to implement road crossing best management practices.

Organization: SUNY Plattsburgh Lake Champlain Research Institute

Contact Person: Tim Mihuc

Mailing Address: 101 Broad Street
Plattsburgh, NY 12901

Phone: 518-564-3039

E-mail: mihuctb@plattsburgh.edu

Website: n/a



Undersized, perched culvert on private maple sugaring land in the Missisquoi River basin (Bakersfield, VT).



NEIWPCC Code: LS-BIL-2022-105
EPA 0365-003-001
Start Date: 2/3/2023
Close Date:
Grant Amount: \$116,950.00
Non-federal Match:
Total Amount: \$116,950.00

2023 AOP Restoration & Implementation in progress

Engineering Dam Removal in the Brewster Watershed

Project Description

The objectives of this project are to restore aquatic organism passage and habitat, while at the same time improving water quality, flood resilience, and public safety along the Brewster River. For Morses Mill Dam, and Grist Mill Dam the outputs of this project will be stakeholder meetings, engineering design plans, topographic surveys, and permitting for the removal of both dams. For the Smugglers Notch Access Road Dam, the outputs will be a partial design for removal.

Outputs:

- engineering designs, surveys and permitting
- stakeholder meetings

Outcomes:

- complete preparation for removal implementation
- restoration of aquatic organism passage and habitat
- improved water quality, flood resilience, and public safety
- awareness of the impact of dams on river connectivity, aquatic organism passage water quality, public safety, flood resilience and economics

Organization: Vermont Natural Resources Council

Contact Person: Karina Dailey

Mailing Address: 11 Baldwin Street
Montpelier, Vermont 05602

Phone: 802.881.3423

E-mail: kdailey@vnrc.org

Website: vnrc.org



Morses Mill Dam prior to removal. Photo credit Karina Dailey, VNRC



NEIWPCC Code: LS-BIL-2023-033
EPA 0365-003-001
Start Date: 6/1/2023
Close Date:
Grant Amount: \$100,000.00
Non-federal Match: \$ 10,000.00
Total Amount: \$110,000.00

2023 AOP Restoration & Implementation in progress

Engineering Four Winooski River Dams for Removal and Developing Corridor Protection

Project Description

Funds will be used to conduct engineering studies, assessments, and permitting requirements to remove four dams on the Winooski River and North Branch, and to begin the process of protecting critical upstream floodplains. As a result of this work, we will produce engineering feasibility studies evaluating the technical aspects to remove four dams on the Winooski River and North Branch of the Winooski. We will also complete mapping and landowner conversations with at least 12 landowners in the upper Winooski, working towards river corridor protections along the upper Winooski River.

Outputs:

- select engineering firm
- conduct geomorphic, habitat, structural, geotechnical, recreational assessments to inform design for and feasibility of removing four dams (Trestle, Bailey, Pioneer Street, Hidden).
- conduct modeling to determine hydrology
- concept (30%) design, semi-final design, final design
- secure permits
- river corridor protections: reach out to 12 landowners

Outcomes:

- prevent catastrophic failure and reduce industrial contaminants released into downstream waterways.
- reconnect fish passage, re-establish riparian habitat and improve recreational access to the river.

Organization: Vermont River Conservancy
Contact Person: Erin De Vries
Mailing Address: 29 Main Street, Unit 11
 Montpelier, VT 05602
Phone: (802) 229-0820
E-mail: erin@vermontriverconservancy.org
Website: www.vermontriverconservancy.org



Bailey Dam



NEIWPCC Code: LS-BIL-2023-031
EPA 0365-003-001
Start Date: 4/12/2023
Close Date:
Grant Amount: \$299,023.00
Non-federal Match: \$ 30,000.00
Total Amount: \$329,023.00

2023 AOP Restoration & Implementation in progress

Joe's Brook Culvert Replacement

Project Description

A culvert that passes Joe's Brook in Johnson on Foote Brook Rd will be replaced by a larger structure (design attached) to allow for Eastern Brook Trout passage and provide for further benefits of Phosphorus loading mitigation, flood mitigation, and overall stability of stream morphology. This culvert replacement was fully designed in 2019 and is now ready for implementation.

Outputs:

- implement the Joe's Brook Culvert Replacement Final Design
- request/review bids, secure engineering and construction contracts
- stakeholder meeting
- reconnection 1.75 miles of habitat upstream (before next barrier) for brook trout.

Outcomes:

- reduce nutrient loading.
- support conservation of habitat for ecosystem function
- reduce species fragmentation by preserving and connecting critical aquatic and riparian habitats.

Organization: Lamoille County Conservation District (LCCD)
Contact Person: Peter Danforth
Mailing Address: 109 Professional Dr., Suite # 2
 Morrisville, VT 05661
Phone: (802) 521-3004
E-mail: lccddirector@gmail.com
Website: http://www.lcnrcd.com/



Joes Brook Culvert Outlet, Downstream



NEIWPCC Code: LS-BIL-2023-089
EPA 0365-003-001
Start Date: 9/19/2023
Close Date:
Grant Amount: \$149,556.00
Non-federal Match: \$201,074.00
Total Amount: \$350,630.00

2023 AOP Restoration & Implementation in progress

Lockwood Brook Culvert Replacement

Project Description

This project will replace an undersized, perched culvert on German Flats Road in Fayston with a new culvert that will reconnect Lockwood Brook. The new structure will be an open-bottom arch that is fifteen feet wide, eight feet tall, and 58 feet long.

Outputs:

- fulfillment of an excavation contract, coordination among local, state, and federal partners, and construction oversight
- reconnection of 2.5 miles of upstream habitat that provides thermal refugia and spawning and foraging habitat for wild trout

Outcomes:

- lower water temperatures
- enhanced ecosystem integrity and stream equilibrium
- improved flood resilience

Organization: Friends of the Winooski River
Contact Person: Michele Braun
Mailing Address: P.O. Box 777, 46 Barre St
 Montpelier, VT 05601-0777
Phone: 802-279-3771
E-mail: michele@winooskiriver.org
Website: winooskiriver.org



Existing outlet. Photo credit: Friends of the Mad River



NEIWPCC Code: LS-BIL-2023-032
 EPA 0365-003-001
 Start Date: 4/26/2023
 Close Date:
 Grant Amount: \$150,000.00
 Non-federal Match:
 Total Amount: \$150,000.00

2023 AOP Restoration & Implementation in progress

Mettowee River Headwaters AOP - Sugar House Lane Barrier Removal

Project Description

The objective of this project is the removal of a dam and associated undersized bridge to reduce erosion, improve sediment transport, and restore aquatic organism passage (AOP) on the Mettowee River. This project is the final in a series of six projects implemented in the Mettowee River headwaters by a multi-partner team.

Outputs:

- removal of a dam
- replacement of an undersized bridge with one that passes the 100-year storm
- restoration of the Mettowee River in the vicinity

Outcomes:

- over 50 cumulative miles of the Mettowee River and its many tributaries opened to fish passage from the falls at Butternut Bend to the Headwaters on National Forest.

Organization: Poultney Mettowee NRCO
Contact Person: Hilary Solomon
Mailing Address: PO Box 209
 Poultney, Vermont 05764
Phone: (802)558-3515
E-mail: hilary@pmnrcd.org
Website: www.pmnrcd.org



Sugar House Lane bridge sits atop a concrete structure that is a barrier to fish and other aquatic organism passage.



NEIWPCC Code: LS-BIL-2023-055
 EPA 0365-003-001
 Start Date: 6/1/2023
 Close Date:
 Grant Amount: \$102,000.00
 Non-federal Match: \$ 5,000.00
 Total Amount: \$107,000.00

2023 AOP Restoration & Implementation in progress

Reconnecting Vermont Rivers through Dam Removal in the Lake Champlain Basin

Project Description

This project continues VNRC’s work to restore aquatic habitat, river connectivity, and natural riverine transport processes by removing dams that no longer serve a useful purpose. This project targets four (4) dams that have been selected based on ecological benefit for removal, hazard mitigation, landowner and stakeholder support, and distribution throughout the Lake Champlain Basin (LCB). Grant funds will be applied to contracts for feasibility, preliminary design, construction removal of these projects, and scoping to develop and prioritize future projects.

Outreach from this project will target a general audience. The more citizens aware of dam removal implementation efforts to reconnect VT rivers for the benefit of public safety, fish and wildlife, water quality, and flood resilience, the more projects we can accomplish and thereby improve the overall health of the Lake Champlain Basin.

Outputs:

- contracts for scoping, design, permitting and construction of four dam removal projects
- scoping task to identify and prioritize others dams for removal

Outcomes:

- improved public access/safety, fish and wildlife, flood resilience, and water quality
- combined total of approximately 4 acres of restored floodplain and wetland and over 3,000 linear feet of restored riparian habitat; restored stream equilibrium at all dam removal locations; removal of impounded sediment including legacy phosphorus laden sediment at all dam sites
- raised awareness of the impacts dams have on rivers and streams in the Basin and builds support resilience, and water quality; restore aquatic organism passage
- open up approximately 20 miles of river habitat

Organization: Vermont Natural Resources Council
Contact Person: Karina Dailey
Mailing Address: 11 Baldwin Street
 Montpelier, Vermont 05602
Phone: 802.881.3423
E-mail: kdailey@vnrc.org
Website: vnrc.org



Habbeep Dam, one of three Barre City dams, Barre



NEIWPCC Code: LS-BIL-2022-107
EPA 0365-003-001
Start Date: 1/25/2023
Close Date:
Grant Amount: \$299,722.00
Non-federal Match: \$ 48,000.00
Total Amount: \$347,722.00

2023 AOP Restoration & Implementation in progress

Restoring Access to Upstream Habitat on a Tributary to Stannard Brook

Project Description

The current structure under Hutchins Farm Road in Stannard, Vermont is perched, blocking access to high-quality climate change resilient habitat for eastern brook trout; mis-aligned, creating hydraulic impacts on the upstream side; and too small, resulting in insufficient vertical and floodplain connection for the channel along this stretch of stream. The output of this project is to remove one fish passage barrier. The outcomes of this project are to restore access to 2.9 miles of high-quality climate change resilient eastern brook trout habitat; and improve water quality and restore river and floodplain function, decreasing community vulnerability to climate change.

Outputs:

- remove one fish passage barrier

Outcomes:

- restore access to 2.9 miles of high-quality climate change resilient eastern brook trout habitat
- improve water quality and restore river and floodplain function, decreasing community vulnerability to climate change.

Organization: Caledonia County Natural Resources Conservation District
Contact Person: Emily Finnegan
Mailing Address: 481 Summer Street Suite 202
 St. Johnsbury VT 05851
Phone: 802-424-3149
E-mail: emily.finnegan@vt.nacdnet.net
Website: www.caledoniadistrict.org



Current structure at Hutchins Farm Road, looking upstream



NEIWPCC Code: LS-BIL-2023-046
EPA 0365-003-001
Start Date: 6/1/2023
Close Date:
Grant Amount: \$150,000.00
Non-federal Match: \$200,000.00
Total Amount: \$419,850.00

2023 AOP Restoration & Implementation in progress

Right-sizing a culvert on Phelps Brook and Roscoe Road, Boquet

Project Description

The Nature Conservancy (TNC) in New York will work with the Town of Lewis and other local partners to replace a failing road stream crossing with an upgraded culvert to restore aquatic organism passage on Phelps Brook. Objectives include removing the temporary culvert currently in place, installing the upgraded culvert, and restoring the natural streambed and riparian habitat at the construction site. Outputs for this project include the installation of 1 right-sized, open-bottom culvert. The outcomes will be approximately 7 miles of trout stream habitat reconnected and improved public safety and lowered road maintenance costs due to reduced flooding impacts for the Town of Lewis.

Outputs:

- installation of 1 right-sized, open-bottom culvert

Outcomes:

- 7 miles of trout stream habitat reconnected
- improved public safety and lowered road maintenance costs due to reduced flooding impacts

Organization: The Nature Conservancy NY
Contact Person: Josh LaFountain
Mailing Address: 8 Nature Way
Keene Valley, NY
Phone: 585-313-3273
E-mail: osh.lafountain@tnc.org
Website: n/a



Inlet at Roscoe Road culvert replacement site – Lewis, NY



NEIWPCC Code: LS-BIL-2023-077
EPA 0365-003-001
Start Date: 7/31/2023
Close Date:
Grant Amount: \$159,253.00
Non-federal Match:
Total Amount: \$159,253.00

2023 AOP Restoration & Implementation in progress

Saranac River Reconnection Project

Project Description

The project team, that includes Trout Unlimited (TU) and United States Fish and Wildlife Service (USFWS), are working with Lower Saranac Hydro Partner LLC and New York State Energy and Gas (NYSEG) to complete the dam removal projects at Fredenburgh Falls and Indian Rapids. The goal of the project is to remove the remains of the dams to improve aquatic organism passage, protect water quality, restore portions of the stream channel, reduce flood and erosion risk, and increase safety for recreationalists. Lower Saranac Hydro Partner LLC is providing funding for the removal of both dams and is the landowner at the Fredenburgh Falls site. NYSEG is the landowner of the Indian Rapids dam site and is also providing funding to support the project. Prior to the LCBP-funded project, the team hired SLR Engineering to complete the design and permitting work and, in the summer of 2023 will hire a contractor to complete construction. The removal of the two dams in the context of the fish ladder construction underway downstream at the Imperial Mills dam (estimated start summer 2023) will reconnect just under 28 miles of the Saranac River and its tributaries to Lake Champlain.

Outputs:

- removal of Indian Rapids Dam remnants and powerhouse, channel work complete and site restoration
- Fredenburgh Falls dam removal

Outcomes:

- improve aquatic organism passage, protect water quality, restore portions of the stream channel, reduce flood and erosion risk, and increase safety for recreationalists
- reconnect just under 28 miles of the Saranac River and its tributaries to Lake Champlain.

Organization: Trout Unlimited
Contact Person: Tracy Brown
Mailing Address: 1777 N. Kent Ave Suite 100
Arlington, VA 22209
Phone: (413) 854-4100
E-mail: tracy.brown@tu.org
Website: www.tu.org



Indian Rapids Dam (44.67447,-73.49025) is an obsolete, breached, deteriorated concrete structure (Photo USFWS). The spillway that spans the river channel is 12 feet tall, 18 feet wide at the base, and 172 feet long (including the 55-foot breach). In addition to the removal of the spillway, a concrete/earthen powerhouse and platform will also be removed as part of the project. The dam is owned by New York State Electric and Gas (NYSEG).



NEIWPCC Code: LS-BIL-2023-079
EPA 0365-003-001
Start Date: 7/7/2023
Close Date:
Grant Amount: \$374,950.00
Non-federal Match: \$569,200.00
Total Amount: \$944,150.00

2022 Habitat & Native Species Conservation in progress

Long-Term Monitoring of a Myco-Phytoremediation Project for Phosphorus Mitigation and Pollinator Habitat at Shelburne Farms

Project Summary

Work proposed adds two more years of phosphorus (P) and vegetation monitoring to a recent restoration installation in which a degraded riparian buffer is enhanced through functionally diverse native vegetation with and without mycorrhizae at Shelburne Farms. This additional data is part of a strategy to establish a long-term assessment of the restored water quality function and pollinator habitat resilience. Long term data is essential to evaluate the efficacy of restoration sites because riparian buffers can become P saturated over time and subsequently sources of P. Succession of the restored vegetation will be monitored and data collected on the removal of phosphorus from the buffer soil by the original vegetation (Buckthorn), and diverse, native vegetation with and without mycorrhizae. These findings will not only inform ecological resilience strategies but also Best Management Practices in support of both water quality and pollinator habitat.

Outputs:

- phosphorus (P) and vegetation monitoring
- workshop fliers, informational handouts
- data graphs, charts, analysis for each parameter

Outcomes:

- inform ecological resilience strategies but also Best Management Practices in support of both water quality and pollinator habitat.

Organization: UVM
Contact Person: Jess Rubin
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Website: www.mycoevolve.net



Restored buffer of native riparian polyculture species in an area previously overgrown with buckthorn.



NEIWPCC Code: LS-2022-039
EPA 0357-003-001
Start Date: 4/21/2022
Close Date:
Grant Amount: \$ 25,000.00
Non-federal Match: \$ 3,500.00
Total Amount: \$28,000.00

2022 Habitat & Native Species Conservation in progress

Multi-Year Habitat Monitoring at Johnsons Mill Dam Removal

Project Summary

This habitat monitoring project aims to better understand the impacts of dam removal and river restoration projects on native species habitat in the Lake Champlain Basin and across Vermont to inform future habitat feature design considerations, sediment removal volumes, long-term stream stabilization processes, and more. The monitoring work will take place across three field seasons on the Bogue Branch in Bakersfield, VT in the area of the removal of the Johnsons Mill Dam (completed August 2021) by a multi-disciplinary team of project partners and stakeholders following the protocols of the Reach Habitat Assessment and supplementary data collection.

Outputs:

- annual monitoring photos, data tables, mapping, and reports
- one public event will be hosted in Year 2

Outcomes:

- improved understanding of aquatic organism habitat following dam removal and river restoration for practitioners, funders, regulators, and dam owners
- increased willingness of other dam owners to consider removal due to demonstrated wildlife and water quality benefits.

Organization: Franklin County NRCD
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 St. Albans, VT 05478
Phone: 802-528-4176
E-mail: lauren.weston@usda.gov
Website: <https://www.franklincountynrcd.org/>



Aerial Photo of the Bogue Branch in the area of the removal of Johnsons Mill Dam. Credit Dana Allen of FluidState Consulting - September 21, 2021.



NEIWPCC Code: LS-2022-031
EPA 0357-003-001
Start Date: 4/26/2022
Close Date:
Grant Amount: \$ 39,000.00
Non-federal Match:
Total Amount: \$39,000.00

2022 Habitat & Native Species Conservation concluded

Native Plantings and Soil Health for Healthy Streams, Ausable River Watershed

Project Summary

Sediment in streams due to bank instability and collapse remains a primary pollutant in the Ausable River system. As this continues to be addressed and prevent this pollutant through stream restoration, it is critical to establish riparian buffers that stabilize banks and create habitat for native species. There are two keys to establishing a riparian buffer: soil and plants. This project expanded restoration capacity, including (i) establishment of a native willow and seed nursery, (ii) incorporating compost, rock dust, sand, and hydroseeding to establish the soil necessary to create new riparian buffers, and (iii) to conduct additional native plant inventories at various riparian habitat types across the watershed and then curate four new seed mixes for these habitats.

Outputs:

- custom soil amendments for use in future restoration projects
- establishment of the native tree and plant nursery
- plant inventories and new custom plant mixes for several different habitat types found in the northern Adirondack region, including the Ausable and Boquet River watersheds
- replant at least 1,500 feet of riverbank in 2022
- create a bank of vegetative material for future projects
- gain the capacity to replant over a mile of stream and riverbank each year over the next several years.

Outcomes:

- prevention/reduction of sediment pollution through stream restoration

Organization: Ausable River Association
Contact Person: Carrienne Pershyn
Mailing Address: PO Box 8
 Wilmington, NY 12997
Phone: 518.637.6859
E-mail: cpershyn@ausableriver.org
Website: www.ausableriver.org



Conducting 2022 vegetation surveys.



NEIWPCC Code: LS-2022-054
EPA 0357-003-001
Start Date: 5/3/2022
Close Date: 3/28/2023
Grant Amount: \$ 25,000.00
Non-federal Match: \$ 6,000.00
Total Amount: \$31,000.00

2022 Habitat & Native Species Conservation concluded

Siboinebi Path Habitat Restoration

Project Summary

This project will restore riparian areas along the Winooski River in two phases. In the first part of the project, the Parks and Trees Department will hire a cohort of five Montpelier Youth Conservation Corps (MYCC) to remove woody invasive species from the banks of the river, participate in educational science fairs that promote the importance of habitat restoration, and build a stone staircase to access the river. The second phase of the project involves planting native trees and shrubs in the fall and spring to permanently displace the invasive species and create a lovely recreational aesthetic.

Outputs:

- Habitat restoration metrics (e.g., number of invasives removed and number of native tree stems planted, area of river corridor stabilized, pounds of trash removed)
- Community engagement metrics (MYCC crew and community volunteers)

Outcomes:

- long-term stabilization of the riverbank along the Siboinebi Bike Path
- a bike path surrounded by a rich and diverse riparian community
- reduced sediment erosion
- reduced trash and chemical leakage
- youth community engagement

Organization: City of Montpelier
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 Montpelier VT 05602
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E-mail: lfaulstich@montpelier-vt.org
Website: https://www.montpelier-vt.org/210/Parks-and-Trees



MYCC members remove buckthorn and honeysuckle along the Siboinebi Bike path.



NEIWPCC Code: LS-2022-023
EPA 0357-003-001
Start Date: 5/5/2022
Close Date: 6/26/2023
Grant Amount: \$24,770.00
Non-federal Match: \$25,753.00
Total Amount: \$50,523.00

2022 Habitat & Native Species Conservation concluded

Stewarding Riparian Forests for Clean Water and Healthy Ecosystems

Project Summary

The Intervale Center continued its work enhancing and stewarding riparian buffer restoration sites across the Lake Champlain Basin to enhance and protect water quality and habitats. Working with partners to prioritize projects, seven sites were selected totaling 29.2 acres in need of stewardship and maintenance to ensure the successful establishment of planted trees and shrubs. Activities were completed between June and September at Ethan Allen Homestead, Drinkwine, North Branch Nature Center, Patnode, VT CBD, Allen Brook and Bruce, as we cleared around newly planted stems and completed enhancement plantings including installing live stakes. The Intervale Center's Nursery continues to lead this work in Vermont, sharing evolving best practices, supporting partners, and advocating for the importance of stewardship to ensure lasting success with restoration projects.

Outputs:

- 7 sites prioritized for riparian restoration planting with maps and stewardship plans developed
- stewardship and enhancement on an additional 30 acres of riparian forest buffers prioritized with our partners across the Lake Champlain Basin

Outcomes:

- reduction of nutrient loading to Lake Champlain
- enhancement of riparian and wetland habitat across the Lake Champlain Basin
- provision of technical assistance to landowners and partners
- increased awareness of the value of riparian and wetland habitats through volunteer engagement and publicity of our work
- continued development of stewardship best practices that can be shared with restoration practitioners across the state

Organization: Intervale Center
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 Burlington, VT 05401
Phone: 802-660-0440 x 108; 802-863-5399
E-mail: mandy@intervale.org
Website: www.intervale.org



Fascine and live stake installation at a site in Cornwall in 2021. These areas had been prepped by clearing competing vegetation ahead of install, creating easier access, more efficient digging, better site conditions for establishment next season.



NEIWPCC Code: LS-2022-035
EPA 0357-003-001
Start Date: 5/4/2022
Close Date: 3/15/2023
Grant Amount: \$ 25,000.00
Non-federal Match:
Total Amount: \$25,000.00

2023 Large Implementation in progress

Protecting 166 acres of woodlands and wetlands at the headwaters of the Pike River watershed

Project Summary

Mount Pinnacle Land Trust (MPLT), Appalachian Corridor's affiliate member and local well-established land trust, will purchase 166 acres (67 ha) of woodland, comprising at least 59 acres (24 ha) of wetland upstream of the Pike River watershed (Missisquoi sub-basin), contributing to maintaining headwater connectivity. The Verger Sud inc. property is part of a greater conservation initiative called South Connection initiated by MPLT in 2016. The transaction will be a bargain sale, also known in Canada as a split-receipt donation, which means that Verger Sud inc. will donate 20% of the fair market value of the land. The outcome of the Verger Sud inc. property's acquisition is the perpetual conservation of pristine native species habitats, including the habitats of several species at risk or of special concern in Quebec and/or Canada, within the forested and wetland ecosystems.

Outputs:

- purchase of 166 acres of woodland with approx. 59 acres of wetland

Outcomes:

- maintaining headwater connectivity
- perpetual conservation of pristine native species habitats, including the habitats of several species at risk or of special concern within the forested and wetland ecosystems.

Organization: Appalachian Corridor
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E-mail: melanie.frenette@corridorappalachien.ca
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A volunteer Land Trust member, adjusting the entrance gate to our main educational site on the mountain © MPLT



NEIWPCC Code: L-2023-083
GLFC 0100-334-002
Start Date: 9/26/2023
Close Date:
Grant Amount: \$132,593.00
Non-federal Match: \$287,890.00
Total Amount: \$420,483.00

2023 Program Grant

concluded

Boat Launch Stewards 2023 (LCBP)

Project Summary

The 2023 season was the 17th year of the Lake Champlain Boat Launch Steward Program - the LCBP's three pronged approach to overland transport of aquatic invasive species (AIS) spread prevention is boat inspection and AIS removal, AIS education, and data collection and analysis.

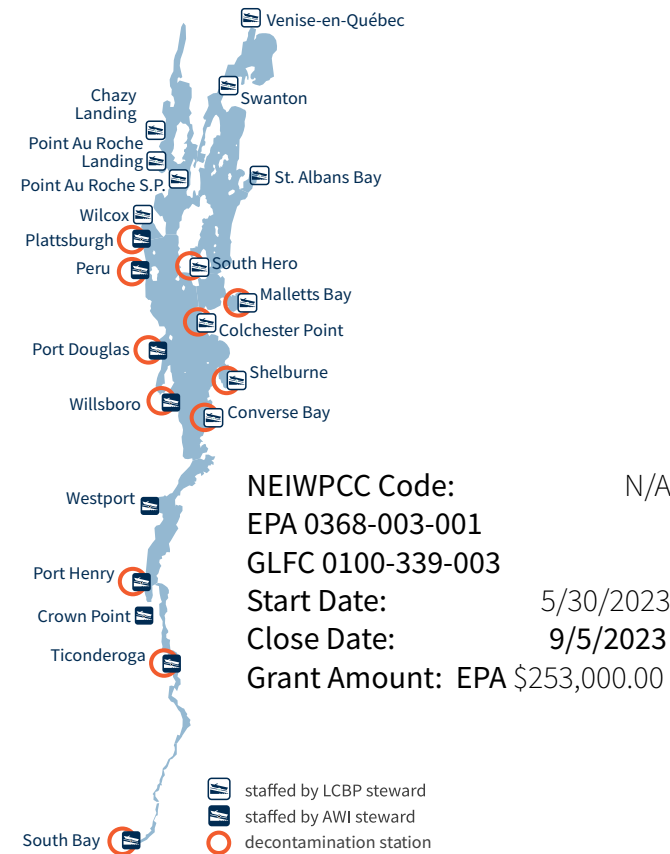
Outputs:

- 35,566 people greeted and educated
- 16,632 watercrafts inspected
- 885 AIS interceptions
- 105 unique previous waterbodies
- 365 boat decontaminations performed
- 22 States and Provinces as origin points
- 21 boat launch stewards
- 15 public launch locations
- 4 boat decontamination stations
- 9.2% of boats surveyed carried an organism
- 5.5% of boats surveyed carried AIS

Outcomes:

- Reduce the spread of AIS within the Lake Champlain Basin.
- Prevent the introduction of aquatic invasive plants, animals, and pathogens via overland transport.
- Increase public understanding of, involvement in, and behavior change related to the spread, prevention, and control of AIS through education and outreach programs.

Organization: LCBP
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 Grand Isle, VT 05458
Phone: 802 372-3213 x 215
E-mail: mmodley@lcbp.org
Website: https://www.lcbp.org



NEIWPCC Code: N/A
EPA 0368-003-001
GLFC 0100-339-003
Start Date: 5/30/2023
Close Date: 9/5/2023
Grant Amount: EPA \$253,000.00



NEIWPCC Code: N/A
EPA 0357-003-001
Start Date: 5/30/2022
Close Date: 9/5/2022
Grant Amount: \$350,000.00
Non-federal Match:
Total Amount: \$350,000.00

2018 Program Project

Champlain Canal Barrier Study - Phase 2

Project Summary

Senator Leahy secured \$200,000.00 in Great Lakes Fishery funds to use as match for the Champlain Canal Barrier Feasibility Study. Funds will be used to leverage a USACE Section 542 grant with the NYSCC to conduct the study. In October 2018 NEIWPCC, USACE, Prince Hydro, LCBP, NYSDEC, USFWS, NYSCC met on site to review canal hydrology and operation.

USACE recently completed an initial Phase 1 Barrier Alternatives study under the Section 542 Lake Champlain Watershed Assistance Program with local match provided by LCBP/NEIWPCC using funds allocated from the Great Lakes Fishery Commission. The Phase 2 engineering and design study requires USACE to conduct additional data collection, secure permits, prepare a full design of the selected alternative, and conduct a NEPA review.

WRDA 2022 provided clarification that the Phase 1 Barrier alternatives study and the proposed Phase 2 study to be conducted under WRDA 542 meets the intent of WRDA 5146. Sources of local non-federal match for the Phase 2 study may include: Great Lakes Fishery Commission, New York State Department of Environmental Conservation, or the Champlain Hudson Power Express Environmental Mitigation funds.

Outputs:

- An executed agreement between the USACE and a local sponsor to initiate the Champlain Canal barrier feasibility study.
- completes alternatives report

Outcomes:

- options to reduce the risk of AIS transport through the Champlain Canal.

Organization: LCBP/NEIWPCC
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 Grand Isle, VT 05458
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Website: https://www.lcbp.org



NEIWPCC Code: N/A
GLFC 0100-339-003
Start Date: 9/10/2018
Close Date:
Grant Amount: \$800,000.00
Non-federal Match:
Total Amount: \$800,000.00



NEIWPCC Code: N/A
GLFC 0100-306
Start Date: 9/10/2018
Close Date: 3/31/2022
Grant Amount: \$200,000.00
Non-federal Match:
Total Amount: \$200,000.00

2022 Program Grant in progress

Distribution and Ecological Impacts of Round Goby in the Lake Champlain Region (Year 1 Only)

Project Summary

The project is planned to be a multi-year intensive monitoring effort but this contract covers only the first year of this effort - it is anticipated that years 2-4 will be part of a subsequent contract. The purpose of this project is to extend ongoing surveillance efforts for Round Goby currently being conducted in the Eastern Erie Canal (see George et al. 2021 <https://doi.org/10.1002/tafs.10290> and <https://www.sciencebase.gov/catalog/item/59f88488e4b063d5d309et30> into the Champlain Canal. Monitoring will use environmental DNA (eDNA), benthic trawling, and nearshore electrofishing in order to provide a full suite of information on the distribution of Round Goby as well as relative abundance of other benthic fish species that may be affected by establishment of Round Goby. All data will be published as a USGS data release and summarized in a final report.

Outputs:

- extend ongoing surveillance of round goby into the Champlain Canal
- recon of proposed sampling sites
- a full suite of information on the distribution of Round Goby as well as relative abundance of other benthic fish species that may be affected by establishment of Round Goby.

Outcomes:

- AIS spread prevention

Organization: USGS New York Water Science Center
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Mailing Address: 425 Jordan Road Troy, NY 12180
Phone: 518-285-5639
E-mail: sgeorge@usgs.gov
Website: <https://www.usgs.gov/centers/ny-water>



Round Goby captured from the Eastern Erie Canal using benthic trawling



NEIWPCC Code: L-2022-011
 GLFC 0100-328-003
 Start Date: 3/8/2022
 Close Date:
 Grant Amount: \$43,701.00
 Non-federal Match:
 Total Amount: \$43,701.00

2022 Program Grant in progress

Lake Champlain Aquatic Nonindigenous Species Information System Creation

Project Summary

The creation of the Lake Champlain Aquatic Nonindigenous Species Information System requires a two-year graduate level student commitment to conduct literature reviews, herbarium and collections research and species first detection verification to populate and map data for the Lake Champlain watershed. The Lake Champlain Basin Program will help to support the graduate student while they are engaged in studies at the University of Vermont.

Outputs:

- informational fact sheets describing the history and timing of arrival of ANS to Lake Champlain and a populated Lake Champlain Aquatic Nonindigenous Species Information System database.

Outcomes:

- increased awareness of LCBP, Lake Champlain Sea Grant (LCSG), partners and members of the public about the aquatic nuisance species present in Lake Champlain and modes and timing of their arrival to Lake Champlain
- increased ability of LCBP, LCSG and partners to develop outreach and messaging related to ANS to help prevent further spread and to build public awareness of the threats and impacts of these species to the lake ecosystem.

Organization: UVM
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Phone: (802) 868-1048
E-mail: kstepenu@uvm.edu
Website: <https://www.uvm.edu/seagrant/home>



NEIWPCC Code: LS-2022-081
 EPA 0357-003-001
 Start Date: 9/29/2022
 Close Date:
 Grant Amount: \$55,405.00
 Non-federal Match:
 Total Amount: \$55,405.00

2022 Program Grant

concluded

Lake Eden Eurasian Watermilfoil Aquatic Plant Survey

Project Summary

In July of 2022, Vermont Department of Environmental Conservation (VTDEC) was made aware of the presence of Eurasian water milfoil (EWM) in Lake Eden, Vermont. Arrowwood Environmental (AE) was retained by the Lake Champlain Basin Program (LCBP) to conduct an inventory of EWM in the Lake to aid in the control efforts being undertaken by VTDEC. This brief report summarizes the methods and findings of that inventory.

Outputs:

- Arrowwood Environmental conducted visual surveys of the littoral zone of Lake Eden for Eurasian watermilfoil and conducted grid point sampling in the lake at 123 points.
- Underwater transects were also conducted using snorkeling, scuba, and ROV. As a result a total of 43 locations of EWM were documented during the inventory ranging from a single to 120 plants.
- 13 native species were also documented during the inventory including *Potamogeton vaseyi* which is a rare (S2) species in the state of VT.

Outcomes:

- The Lake Eden Eurasian watermilfoil plant survey assisted the state and the basin in a rapid response effort to remove and contain this new infestation.

Organization: Arrowwood Environmental
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 Huntington, VT 05462
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Website: arrowwoodvt.com



NEIWPC Code: L-2022-079
GLFC: 0100-323-003
Start Date: 9/13/2022
Close Date: 10/4/2022
Grant Amount: \$4,000.00
Non-federal Match:
Total Amount: \$4,000.00

2022 Program Grant

concluded

Missisquoi Boat Launch Stewards 2022

Project Summary

Organisme de bassin versant de la baie Missisquoi (OBVBM) will support the addition of two boat launch stewards to the Lake Champlain boat launch steward program who will work in the Missisquoi Bay Quebec portion of Lake Champlain and its watershed to provide education and outreach concerning aquatic invasive species (AIS) and to survey and intercept AIS through courtesy boat inspections. OBVBM will hire two stewards to work from late May to early September and the stewards will be trained and outfitted with equipment and uniforms by the Lake Champlain Basin Program. The data collected by the OBVBM stewards will augment the existing Lake Champlain boat launch steward program by expanding coverage to Quebec for a sixth consecutive year.

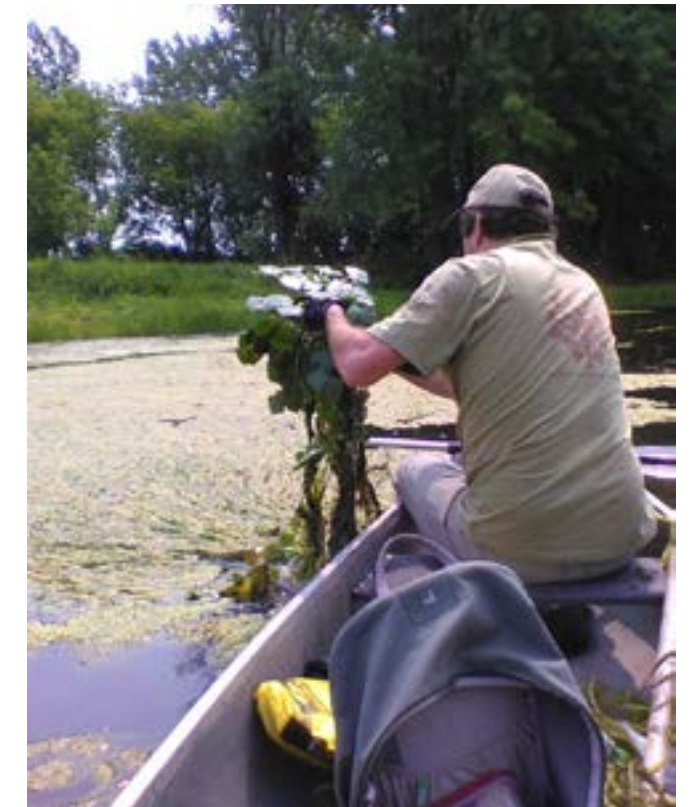
Outputs:

- two stewards stationed at public boat launches around Missisquoi Bay in Quebec
- data collection
- 1123 watercrafts were processed, 51 of which captured AIS including a total number of 47 Eurasian watermilfoil (23 launching, 24 retrieving), 6 Curly Leaf Pondweed (2 launching, 4 retrieving) and 1 Variable-leaf Milfoil (1 retrieving). The total number of people reached at this boat launch was 2899.
- A kiosk was installed for special event at Pointe Jameson Parc in Venise-en-Québec. One of the stewards gave information on AIS and their spread prevention to more than 100 visitors. Also, a leaflet containing info on Missisquoi Bay AIS and their spread prevention was designed, printed and sent by mail and distributed to local campings and visitor centres reaching over 4000 residents and visitors around the Bay.

Outcomes:

- control the introduction, spread, and impact of nonnative nuisance species in order to preserve the biological/ecological integrity of the Lake Champlain ecosystem

Organization: OBVBM
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 Bedford, Quebec, Canada, JOJ 1A0
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E-mail: Frederic.chouinard@obvbm.org
Website: <http://www.obvbm.org/>



NEIWPC Code: L-2022-037
GLFC: 0100-334-003
Start Date: 4/14/2022
Close Date: 2/1/2023
Grant Amount: \$16,350.00
Non-federal Match: \$ 1,200.00
Total Amount: \$17,550.00

2023 Research Grant

in progress

Evaluating Functional Uplift and Microhabitat Effects of Stream Restoration Projects

Project Description

This project will deploy geomorphic assessment, biological indices of stream macroinvertebrates, and observations of fish communities to evaluate functional uplift and microhabitat effects of stream restoration projects in the Ausable River Watershed. Outputs include a before-after analysis of changes to physical and hydrologic habitat after implementation of river restoration projects, evaluation of effectiveness of streambank restoration by documenting functional lift to biological systems and habitats (Opportunities for Action (OFA) II.B.2.a, II.C.1.a), assessment of water quality changes within restored reaches (OFA I.A.2.c), at least one presentation of data at a conference or symposium (OFA IV.B.1.d), and submission of manuscript to a peer-reviewed journal. Projected outcomes of this work include documentation of the effectiveness of streambank restoration and in-stream habitat structures on quality of habitat for macroinvertebrates and fish in the Ausable River watershed (OFA II.B.2.a), increased capacity to conserve critical habitat areas (OFA II.D.1.a), and enhancement of river corridors for nutrient reduction and flood resilience (OFA I.C.1.b).

Outputs:

- two stewards stationed at public boat launches around Missisquoi Bay in Quebec
- data collection

Outcomes:

- control the introduction, spread, and impact of nonnative nuisance species in order to preserve the biological/ecological integrity of the Lake Champlain ecosystem

Organization: Ausable River Association
Contact Person: Carrienne Pershyn
Mailing Address: PO Box 8
 Wilmington, NY 12997
Phone: 518-637-6859
E-mail: cpershyn@ausableriver.org
Website: www.ausableriver.org



Stream Restoration Manager, Gary Henry, measuring a temporary benchmark as part of a geomorphic survey of a tributary to the West Branch Ausable River



NEIWPCC Code: LS-2023-009
EPA 0364-003-001
Start Date: 4/4/2023
Close Date:
Grant Amount: \$223,500.00
Non-federal Match: \$ 25,000.00
Total Amount: \$248,500.00

2023 Research Grant

in progress

Evaluating Habitat Function in Floodplain Natural Communities of the Lake Champlain Basin to Support Conservation and Restoration Prioritization

Project Description

This project will associate terrestrial metrics (floodplain position, soil type, etc.) with floodplain natural communities, providing context to hydrogeospatial datasets, and informing the prioritization of riverbank and floodplain habitat restoration and conservation critical to maintaining biodiversity and the movement of organisms. Outputs include a hydrogeomorphically based floodplain features map with associated reference natural community distribution for the study watershed as well as field validated multi-species occupancy models to inform natural community functional assessment across the gradients of natural community quality, time since restoration, upland connectivity, and lateral connectivity with the river. The outcomes associated with the project include natural community distribution based on floodplain geomorphic features in the study area and occupancy maps and models for the observed species to inform floodplain lateral connectivity metrics.

Outputs:

- hydrogeomorphically based floodplain features map with associated reference natural community distribution for the study watershed
- field validated multi-species occupancy models to inform natural community functional assessment across the gradients of natural community quality, time since restoration, upland connectivity, and lateral connectivity with the river.

Outcomes:

- Prioritization of specific floodplain restoration and conservation projects to enhance habitats at the watershed scale.

Organization: University of Vermont
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E-mail: Elizabeth.doran@uvm.edu
Website: www.uvm.edu/cems/cee



Silver Maple Ostrich Fern Floodplain Forest natural community example located in the Winooski River Watershed of the Lake Champlain Basin.



NEIWPCC Code: LS-2023-005
EPA 0364-003-001
Start Date: 4/4/2023
Close Date:
Grant Amount: \$227,844.00
Non-federal Match: \$ 2,000.00
Total Amount: \$229,844.00

2023 Research Grant

in progress

Lake Champlain Aquatic Nonindigenous Species Information System Creation

Project Description

The creation of the Lake Champlain Aquatic Nonindigenous Species Information System requires a two-year graduate level student commitment to conduct literature reviews, herbarium and collections research and species first detection verification to populate and map data for the Lake Champlain watershed. The Lake Champlain Basin Program will help to support the graduate student while they are engaged in studies at the University of Vermont. Outputs of this project include informational fact sheets describing the history and timing of arrival of ANS to Lake Champlain and a populated Lake Champlain Aquatic Nonindigenous Species Information System database. Outcomes anticipated include increased awareness of LCBP, Lake Champlain Sea Grant (LCSG), partners and members of the public about the aquatic nuisance species present in Lake Champlain and modes and timing of their arrival to Lake Champlain, and increased ability of LCBP, LCSG and partners to develop outreach and messaging related to ANS to help prevent further spread and to build public awareness of the threats and impacts of these species to the lake ecosystem.

Outputs:

- informational fact sheets describing the history and timing of arrival of ANS to Lake Champlain
- populate Lake Champlain Aquatic Nonindigenous Species Information System database.

Outcomes:

- increased awareness of aquatic nuisance species present in Lake Champlain and modes and timing of their arrival to Lake Champlain
- increased ability of LCBP, LCSG and partners to develop outreach and messaging related to ANS to help prevent further spread

Organization: University of Vermont
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 Burlington, VT 05405
Phone: (802) 868-1048
E-mail: kstepenu@uvm.edu
Website: <https://www.uvm.edu/seagrant/home>



NEIWPCC Code: LS-2022-081
 EPA 0357-003-001
Start Date: 10/3/2022
Close Date:
Grant Amount: \$55,405.00
Non-federal Match:
Total Amount: \$55,405.00

2023 Small Implementation Grant

in progress

Franklin County Riparian Buffer Stewardship and Enhancement

Project Description

This project aims to support and enhance the ecosystem health and water quality benefits of 18.1 acres of previously planted riparian woody buffers on 11 FCNRCDC project sites throughout Franklin County. By allowing for stewardship of the sites following initial plantings, the objective of this project is to reduce the mortality rate of trees and shrubs in order to achieve desired improvements to ecosystem health and water quality. The outputs of this project are annual reports detailing stewardship efforts, as well as improved survival of woody buffers across 18.1 acres of waterways in the Missisquoi, North Lake Direct, and Lamoille watersheds.

Outputs:

- stewardship of 18.1 acres of riparian woody buffers on 11 project sites in Franklin County
- planning & implementation of enhancement plantings

Outcomes:

- support and enhancement of riparian woody buffer projects to serve their intended purposes of nutrient load reduction, floodplain restoration, streambank stabilization, and habitat and native species conservation

Organization: Franklin County Natural Resources Conservation District (FCNRCDC)

Contact Person: Lauren Weston

Mailing Address: 50 South Main Street, Suite B-20
 St. Albans, VT 05478

Phone: (802) 528-4176

E-mail: lauren.weston@usda.gov

Website: <https://www.franklincountynrcd.org/>



Photo of a tree planting site on a bright, cloudy day.



NEIWPCC Code: LS-2023-036
 EPA 0364-003-001
Start Date: 7/13/2023
Close Date:
Grant Amount: \$49,974.00
Non-federal Match: \$ 844.20
Total Amount: \$50,818.20

2023 Small Implementation

in progress

Invasive Management of Delta Park

Project Description

The objective and anticipated outcomes of this project is to protect and restore the floodplain and lakeshore natural communities of Delta Park in Colchester, VT, by removing the targeted seed-bearing invasive species of common buckthorn (*Rhamnus cathartica*), glossy buckthorn (*Frangula alnus*), Oriental bittersweet (*Celastrus orbiculatus*), multiflora rose (*Rosa multiflora*), and honeysuckle species (*Lonicera* spp). Removal and management outcomes are expected to result in reduced abundance, regeneration, and spread of targeted species within the park. Volunteers will be solicited and trained in species identification, invasive plant removal methods, and worker safety protocols. Project progress will be reported on the WVPD website, and signage at the park entrance and along the Burlington/Colchester Bike Path to inform the public of the nature of and reasons for this important work.

Outputs:

- site mapping and inventory
- identification of seed-bearing plant species
- development of removal plan and implementation
- development of management plan

Outcomes:

- conservation of habitat for ecosystem function
- protection and restoration of riparian corridors and floodplains.

Organization: Winooski Valley Park District
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 Burlington, VT 05408
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Website: www.wvdp.org



Before photograph of one project work area showing buckthorn and oriental bittersweet infestation.



NEIWPCC Code: LS-2023-030
EPA 0364-003-001
Start Date: 4/10/2023
Close Date:
Grant Amount: \$ 7,591.00
Non-federal Match: \$ 2,718.00
Total Amount: \$10,309.00

2023 Small Implementation Grant

in progress

Native riparian species conservation and monitoring in a Lake Champlain sub-basin

Project Description

The Orianne Society (TOS) and Lewis Creek Association (LCA) will assess the status and distribution of a riparian species of greatest conservation need within the Lewis Creek basin, identify site-specific threats, and prioritize restoration projects for the species. To do this, the Orianne Society will conduct at least 60 wildlife surveys, present written habitat restoration proposals to at least 6 landowners, and assist at least one landowner applying for enrollment in conservation programs. Outputs will be a prioritized list of habitat restoration projects in the Lewis Creek basin, the identification of shovel-ready projects in need of funding, baseline data on species abundance and distribution, and at least one landowner applying for enrollment in a conservation program to restore riparian and wetland habitats.

Outputs:

- prioritized list of habitat restoration projects in the Lewis Creek basin
- identification of shovel-ready projects in need of funding
- baseline data on species abundance and distribution
- one landowner applying for enrollment in a conservation program

Outcomes:

- restoration of riparian and wetland habitats.

Organization: Orianne Society
Contact Person: Kiley Briggs
Mailing Address: PO Box 111
 Woodbury VT, 05681
Phone: (802) 363-2494
E-mail: kbriggs@oriannesociety.org
Website: www.orianne.org



NEIWPCC Code: LS-2023-062
EPA 0364-003-001
Start Date: 7/18/2023
Close Date:
Grant Amount: \$32,860.00
Non-federal Match:
Total Amount: \$32,860.00

2023 Small Implementation Grant

in progress

Restoring Forest for Improved Habitat and Water Quality

Project Description

Vermont forests suffer from fragmentation pressure as new houses and roads are built in once-forested areas, resulting in habitat loss and increasing stormwater runoff to wetlands and streams. The Friends of the Winooski River (FWR) proposes to restore woody vegetation on three residential sites where forested land has previously been cleared for lawn or haying. FWR will work with the landowners to create mutually acceptable planting plans, recruit, train and educate planting volunteers, and plant a total of 1200 native shrubs and trees. Trees and shrubs will be planted by community volunteers to create or improve wetland buffers, improve connection between forest blocks, and reduce overland stormwater flow. Outputs will include the final planting plans, landowner agreements, before and after photos of the planting sites planting summaries, and quarterly and final reports.

Outputs:

- planting plans
- landowner agreements
- recruit, train and educate planting volunteers
- plant a total of 1200 native shrubs and trees.

Outcomes:

- restoration of woody vegetation
- create or improve wetland buffers, improve connection between forest blocks, and reduce overland stormwater flow

Organization: Friends of the Winooski River
Contact Person: Shawn White
Mailing Address: P.O. Box 777
 Montpelier, VT 05601
Phone: 802-371-8988
E-mail: shawn@winooskiriver.org
Website: https://winooskiriver.org



Community volunteers plant native trees and shrubs in 2022 at a similar project to restore forest around a wetland and drainage swale in Marshfield VT



NEIWPCC Code: LS-2023-029
EPA 0364-003-001
Start Date: 4/14/2023
Close Date:
Grant Amount: \$24,338.00
Non-federal Match: \$ 7,745.00
Total Amount: \$32,083.00

2023 Small Implementation Grant

in progress

Stewarding Riparian Forests for Clean Water and Healthy Ecosystems

Project Summary

The Intervale Center will continue our work completing stewardship and enhancement on an additional 30+ acres of riparian forest buffers prioritized with our partners across the Lake Champlain Basin. Funding will result in stewardship plans for each site, completion of work documented by photographs, and ongoing maintenance plans for sites after the 2023 season. This project is a continuation of the impactful work funded by LCBP in past years, which has helped over 150 acres of new riparian forest flourish, protecting water quality and critical wildlife habitat throughout the Basin.

Outputs:

- identify, steward, and enhance an anticipated 30+ acres
- technical assistance to landowners and partners.

Outcomes:

- reduction of nutrient loading to Lake Champlain.
- enhancement of riparian and wetland habitat across the Lake Champlain Basin.
- increased awareness of the value of riparian and wetland habitats through volunteer engagement and publicity
- continued development of stewardship best practices that can be shared with restoration practitioners across the state.

Organization: Intervale Center
Contact Person: Mandy Fischer
Mailing Address: 180 Intervale Road
 Burlington, VT 05401
Phone: 802-660-0440 x 108; 802-863-5399
E-mail: mandy@intervale.org
Website: www.intervale.org



Mary and Madison removing honeysuckles from a nannyberry thicket at Allen Brook, 2022.



NEIWPCC Code: LS-2023-059
EPA 0364-003-001
Start Date: 7/25/2023
Close Date:
Grant Amount: \$36,286.00
Non-federal Match:
Total Amount: \$36,286.00



Community Sailing Center

by the numbers

- 12** Organizational support grants awarded
- \$193,211** Organizational Support grant funds awarded
- 54** partners engaged with CVNHP in protecting cultural heritage
- 18** Citizen Advisory Committee meetings held
- 185** disadvantaged community fishing workshop participants
- 18** wayside exhibits developed

highlights

- ✂ Commemorated the 200th anniversary of the Champlain Canal with new traveling **interpretive exhibits**.
- ✂ Welcomed 85 participants to the 14th annual **CVNHP International Summit**.
- ✂ Developed **DEI Strategic Plan** and Communities with Disadvantages definition to guide funding decisions.
- ✂ Developed three new **artist-in-residence** programs to interpret water science and stewardship.
- ✂ Developed **CABN traveling exhibit** “Lake Champlain, the Biosphere, and the World”.

2023 Artist-in-Residence Grant

in progress

UnderWATER, UnderGROUND: Black/Indigenous Creatives Historize Charlotte, Vermont's Sea Change

Project Description

Grounded on an African-American owned historic farm, this artist-in-residence (AiR) project will engage two AiRs of Black and/or indigenous descent to work collaboratively to research and co-create multi-genre works-in-progress and exhibitions about Lake Champlain Basin's ecological, geological and cultural histories of Charlotte, Vermont and its environs. The residencies will follow a three-phase process inspired by the *UnderWATER, UnderGROUND* creative theme: (1) Submerge; (2) Immerse; (3) Emerge. Field trips will be integrated throughout the three phases.

Outputs:

- Public announcements about the project
- 4 works-in-progress artist talks and presentations;
- 6 "Breach-Outreach" community co-creation art workshops
- 1 installed exhibit at the Clemmons farm
- Content and pre-recorded arts engagements to be used in the development of new K12 curriculum for WTAMW.

Outcomes:

- Increased public awareness of, interest in, and empathy for the diverse and layered stories of historically underrepresented peoples
- the ecological significance of the Lake Champlain Basin, as interpreted by artists of African descent
- two artists gaining knowledge and skills to integrate history and scientific research into their creative works.

Omega Jade is a multidisciplinary artist whose art includes music production, standup comedy, spoken word poetry, hip hop, and candle making. She is reading her book, Layers of the Heart, in front of the historic Big Barn, a dairy and hay barn (c. 1780s) on the Clemmons farm that features a weathervane in the shape of a whale, representational of the 11,500-year-old skeleton of a Beluga whale unearthed near the farm in the 1800s. Jade is one of the more than 200 members of the state-wide network of Vermont's Black artists who collaborate with Clemmons Family Farm, Inc.

Organization: Clemmons Family Farm, Inc.
Contact Person: Lydia Clemmons
Mailing Address: Box 546
 Charlotte, Vermont 05445
Phone: 765-560-5445
E-mail: contact@clemmonsfamilyfarm.org
Website: www.clemmonsfamilyfarm.org



Photo credits: Nani Clemmons, courtesy of Clemmons Family Farm; 2022.



NEIWPCC Code: L-2023-004
 GLFC 0100-337-005
 Start Date: 4/5/2023
 Close Date:
 Grant Amount: \$40,000.00
 Non-federal Match: \$29,904.00
 Total Amount: \$69,904.00



2023 Artist-in-Residence Grant

in progress

Watershed Voices

Project Description

Watershed voices will create musical works (5 choral and instrumental works, 3 concerts, audio recordings of all works, and a website) that celebrate regional biodiversity (through sonification of scientific data) and human diversity (through writings from diverse cultural voices both past and present). These outputs will thereby increase public awareness of how our watershed links diverse communities; increase public understanding of the dynamic relationship between science and music; and increase knowledge and experience of the Lake Champlain Basin on both intellectual and emotional levels.

Outputs:

- 5 choral and instrumental works
- 3 concerts
- audio recordings of all works
- website

Outcomes:

- increase public awareness of how our watershed links diverse communities
- increase public understanding of the dynamic relationship between science and music
- increase knowledge and experience of the Lake Champlain Basin on both intellectual and emotional levels.

Organization: Adirondack North Country Association/ Adirondack Diversity Initiative
Contact Person: Melanie Reding
Mailing Address: 67 Main Street, Suite 201
 Saranac Lake, NY 12983
Phone: 518-354-9279
E-mail: mreding@adirondack.org
Website: Adirondack.org



Curt Stager collecting Champlain Lake core samples.



NEIWPCC Code: L-2023-013
 GLFC 0100-334-004
 Start Date: 4/26/2023
 Close Date:
 Grant Amount: \$40,000.00
 Non-federal Match:
 Total Amount: \$40,000.00



2023 Collections Grant

in progress

Canal Collections Inventory, Rehousing, and Digitization

Project Description

The team will create Scope and Content statements for our canal-related collections to be made accessible on our website and produce standard inventories of these collections with the goal of providing greater access for researchers and the public. Our standard inventory approach will include object descriptions, photographs, and condition records for each object in these collections. The Museum will then digitize these materials by scanning, photographing, and/or creating photogrammetric models of these collections, and rehouse them with archival materials to ensure their long-term preservation. The Scope and Content notes and select related digital files will be made accessible on our website, along with a listing of standard inventories of these collections for research. The project will also help the Museum reach its long-term goal of improving accessibility of collections to the public in physical and digital spaces and support the development of a new exhibit in 2023 about the broader story of how the canals impacted our region.

Outputs:

- confirmation of rehoused canal-related collections using archival materials
- standard inventories of canal-related collections available for researchers
- digitized versions of canal-related collections posted and freely available on the Museum’s website
- blogs and other Social Media posts related to the project.

Outcomes:

- increased visitor understanding and appreciation for our region’s interconnected waterways and canal boat history
- increased researcher access to the expanded canal-related digital resource files
- increased accessibility to Collections for researchers and the public
- improved tracking through website user data and requested access to collections.

Organization: Lake Champlain Maritime Museum
Contact Person: Christopher Sabick
Mailing Address: 4472 Basin Harbor Road
 Vergennes, VT 05491
Phone: (802) 475-2022, x. 110
E-mail: ChrisS@lcmm.org
Website: lcmm.org



NEIWPCC Code: LS-2022-097
NPS 098-017
Start Date: 12/14/2022
Close Date:
Grant Amount: \$8,000.00
Non-federal Match: \$1,812.00
Total Amount: \$9,812.00



2023 Collections Grant

in progress

Cataloging and Preservation of the Sheridan Iron Works Collection

Project Description

The Samuel de Champlain History Center will use a 2022 CVNHP Collections Grant to catalog the Sheridan Iron Works collection, the contents of which were donated by former employees, their wives and their children. Since the Iron Works closed 40 years ago, its imperative that the items be inventoried, and a finding aid developed for future reference. The project will publicize the collection on the History Center’s Facebook page and website, to spur former employees and relatives of former employees to view the materials and help identify its contents. The finding aid and images of the collection will be available online at: <http://www.champlainhistory.org/>.

Outputs:

- Sheridan Iron Works inventory
- catalogue and finding aid developed

Outcomes:

- increased the public awareness of the Sheridan Iron Works Collection at the History Center.

Organization: Samuel de Champlain Museum
Contact Person: Celine Paquette
Mailing Address: PO Box 3333
 Champlain, NY 12919
Phone: (518) 298-1609
E-mail: director@champlainhistory.org
Website: champlainhistory.org



Three foundry workers pose at the Sheridan Iron Works



NEIWPCC Code: LS-2022-100
NPS
Start Date: 1/9/2023
Close Date:
Grant Amount: \$6,000.00
Non-federal Match: \$1,840.00
Total Amount: \$7,840.00



2023 Collections Grant

in progress

James Wilson: America's Globe Maker

Project Description

Inspired by Vermonter James Wilson, the first commercial globe maker in the United States, the Vermont Historical Society will develop a limited podcast series, featuring objects from our collections, to explore how themes of maps, borders, people movement, and ideas of land ownership shape our state and the broader world.

Outputs:

- limited podcast series, comprising up to 8 unique episodes of 30-45 minutes each, exploring themes of maps, borders, people movement, and ideas of land ownership.

Outcomes:

- Expanded on the themes represented within physical exhibit
- diversified the voices involved in the telling of Vermont's story
- increased digital programming opportunities
- collaborated with a different group of Vermont scholars (i.e., geographers)
- increased public awareness of the importance of the stories preserved within VT Historical Society collections.

Organization: Vermont Historical Society
Contact Person: Amanda Kay Gustin
Mailing Address: 60 Washington St., Ste. 1
Barre, VT 05641
Phone: (802) 479-4264
E-mail: amanda.gustin@vermonthistory.org
Website: vermonthistory.org



NEIWPCC Code: PO100334
NPS 988-017
Start Date: 10/6/2022
Close Date:
Grant Amount: \$ 7,916.00
Non-federal Match: \$ 5,786.00
Total Amount: \$4,000.00



2022 Collections Grant

concluded

Historic Saranac Lake Collections Project

Project Summary

Historic Saranac Lake (HSL) utilized a 2022 CVNHP Collections Grant to design the climate control technology and a fire suppression system for the collections storage and research wing of the Trudeau Building. The project ensures the protection of the HSL collection, a vital component to the organization's educational mission. It will make it possible for researchers and the public to continue to access HSL's collection to develop quality educational programs in the Champlain Valley National Heritage Partnership region.

Outputs:

- installation of climate control technology in the archival storage wing of the Trudeau Building

Outcomes:

- Proper long-term care and storage of the museum collection.

Organization: Historic Saranac Lake
Contact Person: Amy Catania
Mailing Address: 89 Church Street, Suite 2
Saranac Lake, NY 12983
Phone: 518-891-4606
E-mail: amy@historicsaranaclake.org
Website: historicsaranaclake.org



NEIWPCC Code: PO 100248
NPS 988-016
Start Date: 12/10/2021
Close Date: 8/28/2023
Grant Amount: \$ 7,500.00
Non-federal Match: \$22,500.00
Total Amount: \$30,000.00



2021 Program Grant

concluded

Renewal of the Heart's Delight Farm Heritage Exhibit Wayside Walk

Project Summary

More than 50,000 people have visited Miner Institute and the Heart's Delight Farm Heritage Exhibit since ten interpretative panels were installed twenty years ago. As with the rest of the exhibit, the self-guided panels are the primary way to share the Miners' story of their innovative farm while transporting visitors back to early twentieth-century life in the Champlain Valley life.

When the original panels were designed twenty years ago only a few hundred photographic negatives were digitized. Today the entire collection is digitized. Therefore, along with revising the text on the panels, Miner Institute selected new images from our expanded digital collection for some of the panels.

With design assistance from the LCBP under a 2021 CVNHP Collections Grant, Miner Institute redesigned the panels' text and imagery for an updated look. The panels were fabricated locally and installation was completed by the Miner Institute maintenance staff.

Outputs:

- 10 redesigned interpretive panels to incorporate new images and technology installed on Miner Institute's wayside walk.

Outcomes:

- enhanced visitor experience by taking advantage of new technology. This may include additional media, language translations, and assistive technology options available through the visitor's smartphone.

Organization: W. H. Miner Agricultural Research Institute
Contact Person: Amy T. Bedard
Mailing Address: 1034 Miner Farm Rd. Chazy, NY 12921
Phone: 518-846-7121 x 149
E-mail: bedard@whminer.com
Website: <https://www.whminer.org/>



NEIWPCC Code: PO 100138
GLFC: 0100-331-005
Start Date: 10/1/2020
Close Date: 7/1/2023
Grant Amount: \$ 3,420.00
Non-federal Match: \$ 4,628.00
Total Amount: \$8,048.00



2022 Collections Grant

concluded

Revolutionary War Collections Inventory

Project Summary

In 2022, Lake Champlain Maritime Museum will create Scope and Content Statements for all Revolutionary War era collections for use on their website, and will produce standard inventories for each to be made available to researchers.

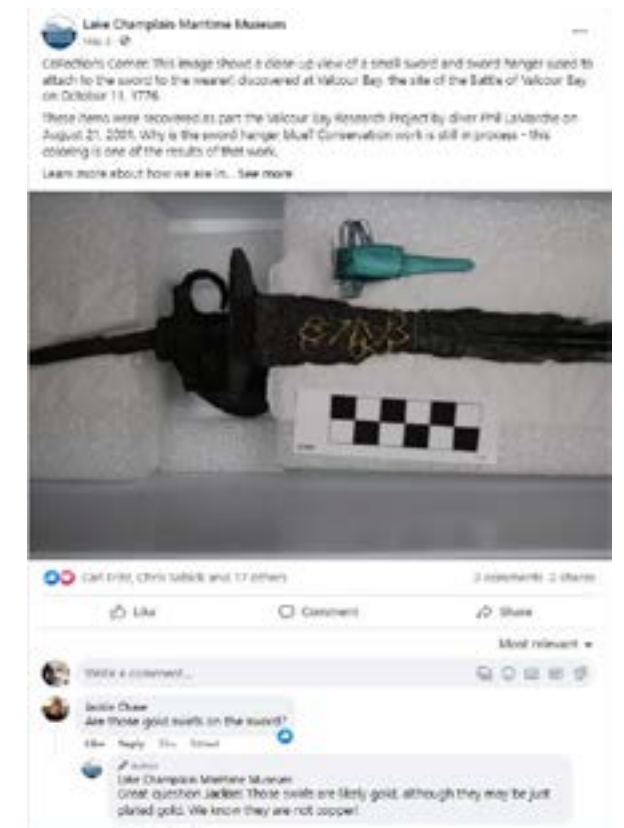
Outputs:

- Scope and Content Notes of Revolutionary War collections posted and searchable on website
- Standard inventories of Revolutionary War related collections available for researchers
- Blogs and other Social Media posts related to the project.

Outcomes:

- Increased understanding and appreciation of Lake Champlain's Revolutionary War history among museum visitors
- increased access to expanded related digital resource files for researchers
- increased accessibility to Collections in advance of 2026 anniversary
- improved tracking of usage of published Scope and Content notes and requested collections access.

Organization: Lake Champlain Maritime Museum
Contact Person: Christopher Sabick
Mailing Address: 4472 Basin Harbor Road Vergennes, VT 05491
Phone: 802 475-2022 ext. 110
E-mail: chriss@lcmmm.org
Website: lcmmm.org



NEIWPCC Code: LS-2021-085
NPS: 988-016
Start Date: 12/15/2021
Close Date: 3/24/2023
Grant Amount: \$ 7,500.00
Non-federal Match: \$ 4,854.30
Total Amount: \$12,354.00



2022 Collections Grant

concluded

Stewardship, Interpretation, and Accessibility of Bixby Library's Objects and Artifacts Collections

Project Summary

Funding supports new interpretation projects at Bixby Library, including learning kits for circulation at schools and cultural organizations, multi-sensory physical and digital exhibits, blogs, and social media posts to tell stories of our community leaders and members to increase awareness, pride, and excitement for our rich and varied local history.

Outputs:

- four artifact history kits named Bixby's Mobile Museums with related exhibit scripts, object lists highlighting stories of local residents
- district-wide teacher workshop presenting the kit project
- four related exhibits at the library
- links to blogs and social media posts
- online user profile data related to the project.

Outcomes:

- increased awareness, appreciation, and pride of our rich local history and its effects on the national and even international stage
- increased stewardship of and accessibility to the cultural heritage of the Champlain Valley and especially the towns of Vergennes, Addison, Panton, Ferrisburgh, and Waltham.

Organization: Bixby Memorial Free Library
Contact Person: Patricia Reid
Mailing Address: 258 Main Street
 Vergennes, VT 05491
Phone: (802) 877-2211
E-mail: patricia.reid@bixbylibrary.org
Website: bixbylibrary.org



NEIWPCC Code: LS-2022-009
NPS: 988-016
Start Date: 2/10/2022
Close Date: 6/12/2023
Grant Amount: \$ 7,500.00
Non-federal Match: \$ 3,181.00
Total Amount: \$10,681.00



2022 Conservation and Community

concluded

LaChute River Walk Interpretive Trail Improvement Project

Project Summary

PRIDE of Ticonderoga, Inc replaced the interpretive panels along the LaChute River Walk Trail with fresh content, graphics, and new themes, including recognition of the 50th Anniversary of the Clean Water Act and its impact on the quality of regional waterways.

Outputs:

- 12 updated, installed sign panels

Outcomes:

- awareness of community's industrial heritage and the impact of the Clean Water Act on local and regional waterways.

Organization: PRIDE of Ticonderoga
Contact Person: Elisha Bartlett
Mailing Address: P.O. Box 348
 Ticonderoga, NY 12883
Phone: 518.585.6366
E-mail: executive.director@prideofticonderoga.org
Website: prideofticonderoga.org



NEIWPCC Code: PO 100239
NPS: 988-016
Start Date: 11/23/2021
Close Date: 9/15/2023
Grant Amount: \$ 7,500.00
Non-federal Match: \$ 9,001.33
Total Amount: \$16,501.33



2021 Interpretive Theme Grant

concluded

Brome-Missisquoi's Prohibition Heritage Circuit

Project Summary

Brome Missisquoi's Prohibition Heritage Circuit will be an audio-guided tour that will have visitors discover the people and places that marked the prohibition period which involved the Eastern Townships and Vermont.

In the historical memory of the Counties of Brome and Missisquoi, the international border between Vermont and Quebec has always been a zone for economic exchange. However, in the past, it was also renowned for the smuggling activities and moral transgressions that occurred here. Indeed, long before the 1919–1933 American prohibition, alcohol trafficking and prostitution were already prevalent between the Quebec towns of Frelighsburg and Abercorn, and Richford, Vermont.

Laurent Busseau—Historian Without Borders, 2016

Outputs:

- 10 audio episodes recorded in French and in English linked to 10 interpretive panels, installed throughout the territory, in specific locations relating to the stories
- 5,000 bilingual brochures promoting the circuit
- dedicated landing page on the Brome-Missisquoi Tourism website.

Outcomes:

- inform local citizens and tourists about this historical period through different stories and anecdotes dealing with prohibition and the American border region
- encourage exploration of the territory and discover the region's historic sites
- have visitors extend their stay.

Organization: Centre Local de Développement (CLD) de Brome-Missisquoi

Contact Person: Guylaine Beaudoin

Mailing Address: 749 rue Principale
Cowansville, Québec, J2K 1J8

Phone: 450-266-4928 x247

E-mail: gbeaudoin@cldbmq.ca

Website: <https://cldbmq.ca/>



NEIWPCC Code: L-2020-085
 GLFC 0100-331-005
 Start Date: 12/9/2020
 Close Date: 11/8/2022
 Grant Amount: \$ 7,500.00
 Non-federal Match: \$15,109.23
 Total Amount: \$22,609.23



2021 Interpretive Theme Grant

in progress

Canal Boat Photogrammetry Modeling and Outreach

Project Summary

In 2023, Lake Champlain Maritime Museum will create two photogrammetry models of canal boat shipwrecks in Lake Champlain and share them with the public as part of our outreach plan to celebrate the 200th anniversary of the opening of the Champlain Canal.

Outputs:

- two photogrammetric models of canal boat shipwrecks posted and searchable on the Museum website
- blogs and other Social Media posts related to the project.

Outcomes:

- increased visitor understanding and appreciation for our region's interconnected waterways and canal boat history
- increased researcher access to information about canal boat construction and use
- increased accessibility of shipwrecks to researchers and the public.

Organization: Lake Champlain Maritime Museum

Contact Person: Chris Sabick

Mailing Address: 4472 Basin Harbor Road
Vergennes, VT 05491

Phone: 802-475-2022 x 110

E-mail: ChrisS@lcmm.org

Website: www.lcmm.org



NEIWPCC Code: PO100389
 NPS 0988-017
 Start Date: 4/28/2023
 Close Date:
 Grant Amount: \$7,500.00
 Non-federal Match: \$1,176.00
 Total Amount: \$8,676.00



2023 Interpretive Theme Grant

in progress

Stewardship and Interpretation of the Interconnected Waterways of Bixby Library’s Five Towns

Project Description

This project supports new interpretative programming at Bixby Library celebrating the interconnected waterways that link our five towns of Vergennes, Panton, Addison, Ferrisburgh, and Waltham, including in-library and on-water history, ecology, recreation and indigenous education programming at Dead Creek and Otter Creek for youth and adults.

Outputs:

- press release announcing the project
- photographs of five educational programs focusing on history, ecology, or indigenous education
- links to newsletter and social media posts
- library webpage devoted to relevant resources and calendars
- user data related to the project.

Outcomes:

- increased awareness of our rich local history and ecology
- a core volunteer team to continue initiatives post-grant
- increased stewardship of and accessibility to the natural and cultural heritage of the Champlain Valley and especially the towns of Vergennes, Addison, Panton, Ferrisburgh, and Waltham.

Organization: Bixby Library
Contact Person: Catharine Hays
Mailing Address: 258 Main Street
 Vergennes VT 05491
Phone: (802) 877-2211
E-mail: catherine.hays@ bixbylibrary.org
Website: bixbylibrary.org



NEIWPCC Code: LS-2022-093
NPS 0988-017
Start Date: 11/18/2020
Close Date:
Grant Amount: \$ 8,000.00
Non-federal Match: \$ 5,392.00
Total Amount: \$13,392.00



2023 Internship Grant

in progress

Adirondack Experience Library Historical Guidebook Processing Internship

Project Description

The ADKX Library will hire an intern for 12 weeks during its 2023 open season (May – October) to process its collection of historical guidebooks dating from the 1870s – 1970s, which track the development of tourism and transportation along the Lake Champlain corridor and into today’s Adirondack Park.

Outputs:

- training an intern on cataloguing historical materials
- processing 35 linear feet of historical guidebooks
- creation of catalog records for 300+ items
- creation of digital scans of a selection of these guidebooks
- sharing of these digital records online.

Outcomes:

- enhanced accessibility of the museum’s historical research materials to users
- a better understanding of the topics covered by our museum’s collections, informing our education and exhibitions staff as they develop programs for our public
- long-term preservation of these materials through rehousing and inventorying

Organization: Adirondack Experience:
 the Museum on Blue Mountain Lake
Contact Person: Sarah Lewin
Mailing Address: PO Box 99
 Blue Mountain Lake, NY 12812
Phone: 518-352-7311
E-mail: slewin@theadkx.org
Website: theadkx.org



NEIWPCC Code: PO100372
NPS 0988-017
Start Date: 2/28/2023
Close Date:
Grant Amount: \$ 8,000.00
Non-federal Match: \$ 2,892.00
Total Amount: \$10,892.00



2022 Internship Grant

concluded

Collections Management training for a student of museum studies, anthropology or history

Project Summary

The Clinton County Historical Association will hire a student of museum studies, anthropology or history for collections management and processing training internship from May/June through August 2022. The experience will include all processes necessary to enter an item into a museum's permanent collection, including use of accepted museum software systems.

Outputs:

- Approximately 200 items currently undocumented in the museum's collection will be processed under this training experience.

Outcomes:

- a fully trained intern to identify the artifact, understand the importance of provenance, facilitate the paper trail from entry to final storage, understand and use museum software to prevent duplication, apply proper scanning methods, log items completely, and apply the best preservation methods.
- an intern trained on all aspects of collections management and all processed items from this internship will now be accessible for exhibits and researchers.

Organization: Clinton County Historical Association

Contact Person: Helen Nerska

Mailing Address: 98 Ohio Avenue
Plattsburgh, NY 12903

Phone: 518-561-0340

E-mail: Director@ClintonCountyHistorical.org

Website: www.clintoncountyhistorical.org



NEIWPCC Code: PO 100245
NPS 988-016
Start Date: 12/10/2021
Close Date: 11/3/2022
Grant Amount: \$ 5,000.00
Non-federal Match: \$ 5,600.27
Total Amount: 10,600.27



2022 Internship Grant

concluded

Graduate Internship Program – Ticonderoga Historical Society

Project Summary

This grant would fund a graduate internship that would provide a comprehensive opportunity for hands-on experience in all areas of the museum – visitor services, volunteers, exhibits, programs, conservation and the business end of the museum (budgeting, non-profit compliance and board relations).

Outputs:

- The intern will gain an understanding of the mission of the nonprofit historical museum and its value to the community
- hands-on opportunities to work in all facets of museum operations.
- develop at least one program, including exhibit content. This will provide instruction, encouragement and support for the intern, including possible housing, if needed.

Outcomes:

- Accurate, searchable databases for the use of museum staff and researchers
- up to date archives and collections management
- enhanced capability to meet research requests
- more comprehensive exhibit and interpretation capabilities
- ability to better tell the story of the social, military and environmental histories of the Lake Champlain Basin.

Organization: Ticonderoga Historical Society

Contact Person: Diane O'Connor

Mailing Address: 6 Moses Circle
Ticonderoga, NY 12883

Phone: 518-585-7868

E-mail: tihistory@bridgepoint1.com

Website: https://www.tihistory.org/



NEIWPCC Code: PO 100234
NPS 988-016
Start Date: 10/19/2021
Close Date: 9/22/2023
Grant Amount: \$ 5,000.00
Non-federal Match: \$ 5,040.00
Total Amount: \$10,040.00



2023 Internship Grant

in progress

Internship in Museum Interpretation for the Public

Project Description

Lake Champlain Maritime Museum's 2023 intern in museum interpretation will learn the skills to foster meaningful and engaging connections with the Museum's collections and the history of our region's interconnected waterways with the public during the 2023 season

Outputs:

- Intern training in public interpretation of exhibitions and historic and replica objects from the Museum's collections
- Intern summer interpretation onsite in exhibition buildings and support of onsite needs
- Expanded public and self-guided programs for onsite visitors related to the 200th anniversary of the Champlain Canal

Outcomes:

- Museum visitors will gain understanding and appreciation of Lake Champlain history and the impact of the canal systems.
- The Museum will offer a wider range of visitor programs, including self-guided and in-person opportunities. A
- n emerging museum professional will gain experience and knowledge of interpretation skills.

Organization: Lake Champlain Maritime Museum

Contact Person: Katharine Noiva

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Vergennes VT 05491

Phone: 802-475-2022 ext. 109

E-mail: Katharine@lcmm.org

Website: lcmm.org



NEIWPCC Code: PO100371
NPS 988-017
Start Date: 2/23/2023
Close Date:
Grant Amount: \$ 8,000.00
Non-federal Match: \$ 2,160.00
Total Amount: \$10,160.00



2023 Internship Grant

in progress

Internship in Object and Artifact Research and Outreach

Project Summary

Funding will support a year-long internship at Bixby Library during which the intern would learn and employ historical research skills to create or enhance descriptive information associated with high priority objects and artifacts and make this information accessible to the public through newsletter and social media posts.

Outputs:

- press release and photographs
- 15-20 historical and contextual write-ups for high priority objects and artifacts highlighting the local significance of these items
- Newsletter articles and social media posts about selected objects

Outcomes:

- provide support for needed historical and archeological research, and accelerate the identification, evaluation, protection, and interpretation of heritage resources, including ethnographies of the cultures within the CVNHP
- support initiatives that promote sustainable recreational activities that feature the natural, cultural, and historical resources in the CVNHP
- support a public information program that emphasizes recreational ethics, public safety, sustainable use, and stewardship of cultural and natural resources
- connect, promote, and improve cultural and natural heritage sites through interpretation.

Organization: Bixby Library

Contact Person: Catharine Hays

Mailing Address: 258 Main Street
Vergennes, VT 05491

Phone: 802-877-2211

E-mail: catharine.hays@bixbylibrary.org

Website: bixbylibrary.org/



NEIWPCC Code: PO100380
NPS 988-017
Start Date: 3/20/2023
Close Date:
Grant Amount: \$ 8,000.00
Non-federal Match: \$ 2,145.00
Total Amount: \$10,145.00



2022 Internship Grant

concluded

Public History and Education Internship at Rokeby Museum

Project Summary

Rokeby Museum’s Public History and Education Internship will allow a student from a regional College/University to spend a summer living and working at Rokeby to gain experience in public history and museum studies. The intern will work at Rokeby Museum during the summer season and focus on the curation and interpretation of the Museum’s agricultural outbuildings for the public.

Outputs:

- The intern produced a document with recommendations for new interpretive signage at the museum. This report included new research undertaken to better present the museum’s historic farm buildings to the public.
- Learning the day-to-day operations of a small museum and historic site
- Develop an appreciation for Vermont history
- Public speaking, providing public tours of the site and welcoming visitors
- Research and writing for a broad audience
- Developing interpretive signage
- Developing interactive activities for the public
- Developing language/a script for public tours
- Developing audio for the QR codes/augmented reality for future museum interpretation

Outcomes:

- Career experience, including site interpretation, research, and writing for a public audience
- Experience working with the public and volunteers
- Greater appreciation/historical knowledge of the Champlain Valley and Vermont agricultural history
- A re-interpretation of the farm within the context of Vermont history that will inform and educate visitors
- Mentored by our Museum Director and the possibility of reference for graduate school/future employment

Organization: Rokeby Museum
Contact Person: Lindsay Houpt-Varner
Mailing Address: 4334 US Rte. 7 Ferrisburgh, VT 05456
Phone: (802)877-3289
E-mail: director@rokeby.org
Website: <https://rokeby.org/>

NEIWPCC Code: PO 100250
 NPS 988-016
 Start Date: 1/7/2022
 Close Date: 11/28/2022
 Grant Amount: \$ 5,000.00
 Non-federal Match: \$ 5,112.00
 Total Amount: \$10,112.00



2022 Local Heritage Grant

concluded

Connecting Cultures in the Missisquoi River Basin

Project Summary

During the fall 2022 term connected with area schools to assist them with strengthening the understanding that students have about the natural and cultural history of the Lake Champlain Watershed, as well as the roles and responsibilities of people of all identities in modern times. The MRBA continues to grow the relationships it has with local schools, assisting them with connecting to resources and organizations that can expand their students’ understanding of the ways we are responsible for caretaking our streams and rivers.

Outputs:

- Teaching unit with lesson plans
- summary of evaluations of teaching unit
- student research summary
- student artistic signage
- field trips.

Outcomes:

- Students who better understand and appreciate Abenaki history and culture
- students who practice responsible recreation
- students who participate in stewardship activities.

Organization: Missisquoi River Basin Association
Contact Person: Lindsey Wight
Mailing Address: 2839 VT Route 105 East Berkshire, VT 05447
Phone: (802) 393-0076
E-mail: lindsey@mrbavt.com
Website: mrbavt.com



In addition to learning Native American lore, students engaged in environmental improvement projects, such as combatting Japanese knotweed.

NEIWPCC Code: LS-2022-071
 NPS 988-016
 Start Date: 7/11/2022
 Close Date: 3/24/2023
 Grant Amount: \$4,000.00
 Non-federal Match: \$1,563.00
 Total Amount: \$5,563.00



2023 Local Heritage Grant

in progress

Fostering Historical Thinking in Students from the North Country and Beyond

Project Summary

Fort Ticonderoga proposes to continue partnering with the Clinton County Historical Association and the Warren County Historical Society, while adding the St. Lawrence County Historical Society as a partner. Each would host a History Day Workshop for teachers run by Fort Ticonderoga staff. Fort Ticonderoga would then conduct school visits to work with faculty and students new to the program.

Outputs:

- Fort Ticonderoga will collaborate with three regional historic societies to present three teacher workshops.
- School visits (either in-person or via Zoom) will also be conducted to further work with teachers and students.
- Each partner organization will host a History Day Workshop for teachers new to the program run by Fort Ticonderoga staff.
- Two virtual, online History Day workshops open to teachers throughout New York and Vermont.

Outcomes:

- expanded student participation in North Country History Day while instilling historical research, critical thinking, and communication skills in students.

Organization: The Fort Ticonderoga Association

Contact Person: Martha Strum

Mailing Address: PO Box 390
Ticonderoga, NY 12883

Phone: 518-585-2821

E-mail: mstrum@fort-ticonderoga.org

Website: <https://www.fortticonderoga.org/>



NEIWPCC Code: PO100402
NPS: 988-017
Start Date: 5/15/2023
Close Date:
Grant Amount: \$8,000.00
Non-federal Match: \$1,160.00
Total Amount: \$8,660.00



2022 Local Heritage Grant

concluded

Fostering Historical Thinking in Students from the North Country and Beyond

Project Summary

Fort Ticonderoga expanded participation by teachers and students in North Country History Day for the 2022/2023 School Year and connected students from across New York and Vermont participating in National History Day with regional resources. Three in-person and two virtual History Day workshops were held for teachers throughout New York and Vermont to introduce them to the program. Teaching historical literacy and critical thinking skills is vital not only for participation in the History Day program, but also in academic pursuits in general.

Outputs:

- three in-person History Day Workshops were held for teachers new to the program run by Fort Ticonderoga
- Two virtual, online History Day workshops were held for teachers throughout New York and Vermont.

Outcomes:

- expanded student participation in North Country History Day while instilling historical research, critical thinking, and communication skills in students.

Organization: The Fort Ticonderoga Association

Contact Person: Martha Strum

Mailing Address: PO Box 390
Ticonderoga, NY 12883

Phone: 518-585-2821

E-mail: mstrum@fort-ticonderoga.org

Website: <https://www.fortticonderoga.org/>



NEIWPCC Code: LS-2021-074
NPS: 988-016
Start Date: 10/1/2021
Close Date: 6/29/2023
Grant Amount: \$7,500.00
Non-federal Match: \$1,160.00
Total Amount: \$8,660.00



2023 Local Heritage Grant

in progress

Pathway to America 250

Project Description

The Project Coordinator with a Steering Committee consisting of representatives of the Clinton County Historical Association, the Saranac Chapter of the NSDAR, the Valcour Battle Chapter of the Sons of the American Revolution, and the Battlefield Memorial Gateway Park Project team (Town of Plattsburgh and the American Legion Post 1619) will develop relationships with public and private partners to gather a team, and work with this team to identify a team leader. The team leader will then both create and identify all area programs and events that are planned to honor our first 250 years and to inspire participants to imagine our next 250 years. A “how to” manual and tool kit will be developed to use in planning for the Semiquincentennial and to share with other regions for their planning. An area guide will identify all partners and their commitments and all initiatives personifying America250 themes with an emphasis on encouraging students, visitors, Clinton County residents and our Canadian and Vermont counterparts to learn more about the Revolutionary War and the events that took place on the land and the lake. The manual, tool kit and the guide will cover through to 2027 and beyond as necessary to cover the entire story of our revolutionary war milestones. Grants and other funding will be pursued to cover the cost of the publications, advertising, marketing, programs and events as they are identified and implemented.

Outputs:

- A local America250 project team will be established, a team leader will be chosen
- America250 guide with a plan for the area and a “how to” manual and tool kit will be published.

Outcomes:

- foster communication, teaching, learning and engagement with our past and future to better understand the historical significance of our region.

Organization: Clinton County Historical Association
Contact Person: Helen Nerska
Mailing Address: 98 Ohio Avenue
Plattsburgh, NY 12903
Phone: 518-561-0340
E-mail: director@clintoncountyhistorical.org
Website: clintoncountyhistorical.org



NEIWPCC Code: LS-2022-094
NPS 988-017
Start Date: 12/14/2022
Close Date:
Grant Amount: \$ 8,000.00
Non-federal Match: \$84,000.00
Total Amount: \$92,000.00



2022 Local Heritage Grant

concluded

STEM at the Seeds of Renewal Gardens

Project Summary

The Vermont Indigenous Heritage Center (VIHC) located in the Burlington Intervale, Vermont completed the first phase of a project to encourage indigenous people to become in STEM, from 5th graders to adult students. Beginning in the Summer of 2022 and going through late winter, 2023, the grant brought Abenakis of all ages to the new Laboratory for Traditional Technology (LTTE) and the established VIHC Demonstration and Botanical Gardens to study the more technical aspects of gardening and doing research on the horticulture and the resulting crop output. This included seasonal activities such as watering, weeding and otherwise managing the plots, as well as working with the harvest. In addition, the VIHC offered public programming on Indigenous horticulture in venues ranging from garden tours at the VIHC Botanical Gardens, Harvest School at the LTTE to Wabanaki Horticulture and “Food as Medicine” professional development training for the Vermont Department of Health.

Outputs:

- three syllabi and PowerPoint slide lectures for ongoing and future STEM training in Vermont
- a publication on outfitting an Indigenous STEM facility
- original primary research
- a set of crops raised in a traditional ancestral manner, on traditional raised fish fertilized mounds, harvested, prepared and served in ways that reflect aboriginal Vermont practice.
- new, well equipped on-campus Heritage Center STEM lab facility.

Outcomes:

- a living, place-based experimental/experiential record of Indigenous food systems, and also the experience and knowledge gained by the students and those with whom they have shared, as well as permanent laboratory and demonstration gardens for future agritourism and education.

Organization: The Vermont Indigenous Heritage Center
Contact Person: Lauren Chicote
Mailing Address: Winooski Valley Park District
1 Ethan Allen Museum, Burlington, VT 05408
Phone: (802) 379-0280
E-mail: info@wvpd.org
Website: wvpd.org



NEIWPCC Code: LS-2022-076
NPS 988-016
Start Date: 8/3/2022
Close Date: 6/5/2023
Grant Amount: \$4,000.00
Non-federal Match: \$5,710.00
Total Amount: \$9,710.00



2021 Local Heritage Grant

in progress

Storytelling to Build “Sense of Place” and Natural Heritage Stewardship

Project Summary

Human behaviors are responsible for a host of undesirable environmental consequences. Human behaviors, however, are difficult to change. Inspiring behavior change requires altering attitudes, norms, incentives, ethics, and politics across all levels of society. Programs that foster “sense of place” (i.e., participants’ bond with a place) tap into emotions, attitudes, and behavioral intentions. For this reason, practitioners of community and environmental planning frequently seek new avenues for developing sense of place and understanding of complex social-ecological systems among stakeholder groups and the broader community. Live storytelling events hold promise as a way to engender “sense of place” and, subsequently, natural heritage stewardship. SUNY will work with the Adirondack Center for Writing and the New York State Master Teacher Program to host live storytelling events in New York’s Lake Champlain Basin to train community members and teachers in storytelling skills.

Outputs:

- four live storytelling events for different audiences throughout the Basin -at least one event to a K-12 audience
- recruit and train SUNY Plattsburgh undergraduate students and to help plan the storytelling events and assist with conducting pre/post-test surveys

Outcomes:

- examine the efficacy of storytelling for motivating behavior change
- results of the pre/post-test will have practical and scholarly applications.

Organization: SUNY Plattsburgh
Contact Person: Curt Gervich
Mailing Address: 101 Broad Street
 Plattsburgh, NY 12901
Phone: 518-564-4030
E-mail: cgerv001@plattsburgh.edu
Website: <https://www.plattsburgh.edu/academics/schools/arts-sciences/cees/>



NEIWPCC Code: L-2020-082
GLFC 0100-331-005
Start Date: 8/27/2021
Close Date:
Grant Amount: \$7,500.00
Non-federal Match: \$2,000.00
Total Amount: \$9,500.00

2023 Local Heritage Grant

in progress

The History of the Catholic Summer School of America – Cliff Haven, New York

Project Description

The project will produce the first book of its kind on The History of the Catholic Summer School of America. This religious institution attracted thousands of people to the north country and left in its wake hundreds of photos and fascinating stories about the school’s contributions to education and the local community. The book will tell these stories using over 130 historic photos of the people and scenes associated with the School and will be distributed at no cost to area school and local libraries and the New York State Archives. The book draft has been written but the editing, final matching of the narrative and photos, and photo touch-ups, identification and captioning will be part of this project.

Outputs:

- a softcover book gifted to school and county libraries, and the New York State Public Library

Outcomes:

- only book in print which tells the history of the Catholic Summer School of America

Organization: Clinton County Historical Association
Contact Person: Helen Nerska
Mailing Address: 98 Ohio Avenue
 Plattsburgh, NY 12903
Phone: 518-561-0340
E-mail: director@clintoncountyhistorical.org
Website: clintoncountyhistorical.org



NEIWPCC Code: PO100374
NPS 988-017
Start Date: 3/8/2023
Close Date:
Grant Amount: \$ 4,000.00
Non-federal Match: \$ 9,499.00
Total Amount: \$13,499.00

2022 Special Program Grant

concluded

Celebrating the legacy of the Clean Water Act in the multinational geography of the Lake Champlain Basin

Project Summary

Paul Smith's College Adirondack Watershed Institute implemented Celebrating the Clean Water Act across the Lake Champlain Basin project in February to December 2022. Funded by a 2022 CVNHP Special Program grant, the project commemorated the 50th anniversary of the Clean Water Act by showcasing the legacy of protecting clean water in the Lake Champlain Basin and by engaging the public in actions that commemorate the Act and honor the natural and cultural heritage of the region. The main elements of the project were the 3rd annual Adirondack Water Week, and Wool and Water, a community participatory fiber arts and science program. Activities included dozens of public events and exhibits with 18 partner organizations that celebrated the Clean Water Act and the translation of public education materials into French language. More than 300 people were directly reached through AWI's events and more than 1000 people interacted with content related the 50th anniversary of the Clean Water Act.

Outputs:

- Host 3rd annual Water Week, recognizing the multinational geography of the Lake Champlain Basin and the legacy of the Clean Water Act
- Conduct in-person and virtual hands-on watershed learning and outreach activities
- Facilitate fiber arts project with students and the public in NY, VT and QC
- Develop AIS spread prevention materials in French

Outcomes:

- Increased public awareness of the Clean Water Act and the Act's important legacy in protecting Lake Champlain Basin resources
- Greater awareness of the importance of water quality monitoring and the opportunity to make science more accessible through artistic expression
- Stronger partnerships and cross-border collaboration created with Canadian partners

Organization: Paul Smith's College Adirondack Watershed Institute

Contact Person: Tom Collins

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Paul Smith's NY 12970

Phone: (518) 327-6155

E-mail: tcollins1@paulsmiths.edu

Website: paulsmiths.edu



NEIWPCC Code: LS-2022-005
NPS: 988-016
Start Date: 2/1/2022
Close Date: 3/14/23
Grant Amount: \$38,700.00
Non-federal Match: \$15,358.00
Total Amount: \$54,058.00

2023 Special Program Grant

in progress

Champlain Canal Stories

Project Description

Champlain Canal Stories, an original video documentary series, will share stories based on 200 years of activity along the Champlain Canal. These will be given free to the public via iPad kiosks at sites along the canal, a mobile phone app driving tour, and YouTube.

Outputs:

- development of approx 30 individual stories to create the entire video series.
- creation of a driving tour of the series through TravelStories free mobile phone app

Outcomes:

- awareness of the Champlain Canal's 200 year impact on the history, local arts, sites, and activities along its length.

Organization: Folklife Center at Crandall Public Library

Contact Person: Todd DeGarmo

Mailing Address: 251 Glen Street
Glens Falls, NY 12801

Phone: 518-792-6508 x 237

E-mail: tdegarmo@sals.edu

Website: <https://www.crandalllibrary.org/folklife-center/>



NEIWPCC Code: LS-2022-101
NPS: 988-017
Start Date: 12/7/2022
Close Date:
Grant Amount: \$ 29,550.00
Non-federal Match: \$ 74,594.00
Total Amount: \$104,144.00

2023 Special Program Grant

in progress

Exploring Our Cultural Waters

Project Description

The MRBA and partners will create a series of short films that will highlight Abenaki culture and history within the Missisquoi Basin, emphasizing particular location histories along the river ranging from Lake Champlain all the way up to the headwaters.

Outputs:

- series of short videos which will be uploaded to Youtube and Vimeo channels and shared wide
- footage from these videos will be edited into a longer film that may be shared on Vermont PBS and additional venues.

Outcomes:

- stronger foundational understanding of the interconnectedness of our waters and history in relation to Abenaki culture
- deeper understanding of the importance of the river to our history and increase appreciation of Abenaki culture.

Organization: Missisquoi River Basin Association

Contact Person: Lindsey Wright

Mailing Address: 2839 VT Route 105
East Berkshire, VT 05447

Phone: (802) 393-0076

E-mail: lindsey@mrbavt.com

Website: mrbavt.com

NEIWPCC Code: LS-2022-095

NPS 988-017

Start Date: 11/16/2022

Close Date:

Grant Amount: \$16,000.00

Non-federal Match: \$ 6,277.00

Total Amount: \$22,277.00



2023 Special Program Grant

in progress

Signs of Agriculture in the Intervale: 13,000 Years Ago to Today

Project Description

The Burlington Wildways partnership will complete a series of eight interpretive signs that document the rich indigenous heritage discovered in the archaeological record of the Intervale, as well as current and continuing practice and culture of the Abenaki still in the Intervale today.

Outputs:

- eight interpretive signs using the wayside exhibit format

Outcomes:

- Signage elucidates ancient use of interconnected waterways and trade, highlighting tools (spear tips, boats) that allowed travel in postglacial landscapes
- Signs enrich sense of place in knowing ancient cultures lie preserved below. Archaeological remnants elucidate past farming connecting past nations to current practices
- Signs also highlight the underserved Abenaki.

Organization: WVPD/Burlington Wildways

Contact Person: Zoe Richards

Mailing Address: 15 Catherine St
Burlington, VT 05401

Phone: 802.310.1980

E-mail: info@burlingtonwildways.org

Website: burlingtonwildways.org

NEIWPCC Code: LS-2022-098

NPS 988-017

Start Date: 12/8/2022

Close Date:

Grant Amount: \$15,568.00

Non-federal Match: \$ 8,376.00

Total Amount: \$23,935.00



2022 Special Program

concluded

Spitfire Preservation and Access

Project Summary

Lake Champlain Maritime Museum (LCMM) advanced the multi-year project to document, preserve, and share the shipwreck of the Revolutionary War gunboat *Spitfire* in Lake Champlain. The team, working with internationally renowned photogrammetry expert Kotaro Yamafune, began photogrammetric documentation and 3D modelling of *Spitfire* using ROVs to document the shipwreck. The LCMM also worked with project partners to develop a plan for mitigating the potential entanglement hazard of *Spitfire*'s mast, which is still intact and upright. The team continued to engage the public in the project, launching a new web portal and digital resource for *Spitfire* on the Museum's website and hosting a series of public engagement talks and discussions around the region.

Outputs:

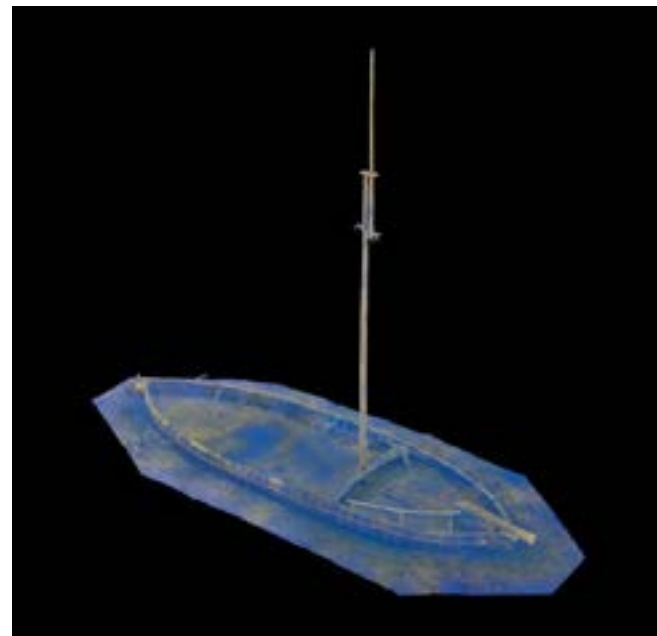
- Photographic documentation of *Spitfire*
- Plan for photogrammetric documentation and 3D models
- *Spitfire* resource web portal on lcm.org
- Engineering plan to mitigate mast entanglement during in-water documentation/excavation
- 4-6 public presentations and social media engagement
- Full permit proposal submitted to U.S. Navy for 2023-2025 research project

Outcomes:

- Researchers and archaeologists will create new knowledge about the last known unexamined submerged ship from the Revolutionary War on Lake Champlain
- The public will make connections between the individuals who fought in the Revolutionary War on Lake Champlain and their own experiences today.



Organization: Lake Champlain Maritime Museum
Contact Person: Susan McClure
Mailing Address: 4472 Basin Harbor Road
 Vergennes, VT 05491
Phone: 802.475.2022 x104
E-mail: susanm@lcm.org
Website: <https://www.lcm.org/>



NEIWPCC Code: L-2021-081
GLFC: 0100-334-005
Start Date: 10/20/2021
Close Date: 3/23/2023
Grant Amount: \$35,000.00
Non-federal Match: \$ 8,160.00
Total Amount: \$43,160.00

2022 Special Program

concluded

Supporting the Lake Champlain Basin Program's DEI Programming & Planning Process

Project Summary

LCBP worked with Dr. Carmen Phelps of Project 986 Consulting to develop a 3-year diversity, equity, and inclusion (DEI) strategic plan.

Outputs:

- organizational assessment and grant evaluation.
- assessment surveys and report
- Facilitation of three trainings for LCBP staff based on the findings of internal assessment.
- DEI strategic plan

Outcomes:

- Building a culture of DEI in LCBP

Organization: Project 986 Consulting
Contact Person: Carmen Phelps
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 Silver Spring MD 20918
Phone: 301 973-3040
E-mail: cphelps@project986consulting.com
Website: project986consulting.com



NEIWPCC Code: LS-2022-008
EPA: 0357-001
Start Date: 1/27/2022
Close Date: 3/3/2023
Grant Amount: \$15,000.00
Non-federal Match: \$15,000.00
Total Amount: \$15,000.00

2023 Special Program Grant

in progress

The Champlain Canal at 200 Book Project

Project Description

Lake Champlain Maritime Museum will bring together leading scholars, researchers, archaeologists, and scientists to publish a new book to mark the 200th anniversary of the opening of the Champlain Canal.

Outputs:

- published anthology of articles by leading scholars, researchers, and scientists
- promotion of the new publication (social media and traditional media outreach)
- 4 book talks at local historical societies, libraries, and bookstores

Outcomes:

- create knowledge that helps researchers and the public make connections to the impact of the Champlain Canal on their community, their environment, and their own lives
- public will be inspired to make choices that supports the future health of Lake Champlain's environment and community.

Organization: Lake Champlain Maritime Museum

Contact Person: Chris Sabick

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Vergennes, VT 05491

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E-mail: ChrisS@lcmm.org

Website: lcmm.org

NEIWPCC Code: L-2022-102

GLFC: 0100-337-005

Start Date: 12/14/2022

Close Date:

Grant Amount: \$30,000.00

Non-federal Match: \$ 5,000.00

Total Amount: \$35,000.00



2022 Special Program

in progress

The Clean Water Act (CWA) and the Lake Champlain Basin: Origins, Implementation, and Impacts

Project Summary

This proposal – focusing on the origins, implementation, and impacts of the CWA, federal, state, and provincial regulatory and institutional policy developments, and case studies of conservation and community engagement – involves the organization of a multi-jurisdictional and binational interdisciplinary authors workshop and publication of a book with a leading university press.

Outputs:

- multi-jurisdictional and binational interdisciplinary authors workshop
- publication of a book with a leading university press

Outcomes:

- examining the origins and evolution of the CWA and considering the broader implications on conservation and communities in the Lake Champlain Basin
- emergence, evolution, and current status of regulatory policy developments and institutional mechanisms – designed to champion and oversee active conservation and community practices – at a federal (U.S. and Canada), state (NY & VT), and provincial (QC) level
- the examination of applied case studies where organizations and communities have pursued conservation and community activities aimed to regulate pollutant discharges and maintain water quality standards as outlined in the CWA.

Organization: Center for the Study of Canada and Institute on Quebec Studies, SUNY Plattsburgh

Contact Person: Dr. Christopher Kirkey

Mailing Address: 133 Court Street
Plattsburgh NY 12901

Phone: 518.564.2394

E-mail: kirkeycj@plattsburgh.edu

Website: plattsburgh.edu

NEIWPCC Code: L-2021-095

GLFC: 0100-334-005

Start Date: 5/11/2022

Close Date:

Grant Amount: \$40,000.00

Non-federal Match: \$17,763.00

Total Amount: \$57,763.00



2022 Special Program

in progress

The Clean Water Act at 50

Project Summary

Lake Champlain Maritime Museum marked the 50th anniversary of the Clean Water Act by exploring its wide-ranging impacts through events, exhibits, and interpretive programming. The LCMM worked with scholars and practitioners to examine the Act's history and impact on the Basin's environment and people over the past 50 years through four interconnected programmatic components.

Outputs:

- Eight in-person and virtual events bringing expert voices into conversation with local communities throughout the Basin.
- A new LCMM exhibition, The Clean Water Act at 50, examining the history of the Clean Water Act with a focus on the impact on the Basin's maritime industry, community, and environment, with accompanying digital exhibit.
- Training and resources for seasonal staff and interpreters to engage LCMM visitors in Clean Water Act content and issues critical to lake health.
- Blogs and social media posts to engage diverse audiences in the Basin and around the country.

Outcomes:

- connections between history of the Clean Water Act and its impact on community, environment, and people's lives.
- Be inspired to make choices supporting the health of Lake Champlain's environment and community.
- Increased understanding of the health of Lake Champlain and its connecting waterways.

Organization: Lake Champlain Maritime Museum
Contact Person: Susan McClure
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 Vergennes, VT 05491
Phone: 802.475.2022 x104
E-mail: susanm@lcmm.org
Website: <https://www.lcmm.org/>



NEIWPCC Code: LS-2022-007
NPS 988-016
Start Date: 1/25/2022
Close Date:
Grant Amount: \$ 27,000.00
Non-federal Match: \$ 7,200.00
Total Amount: \$54,200.00



2022 Organizational Support

in progress

Adirondack Lakes Alliance: supporting lake and river associations in the Lake Champlain Basin and beyond.

Project Summary

The project "Adirondack Lakes Alliance: supporting lake and river associations in the Lake Champlain Basin and beyond" will expand and strengthen board capacity and membership participation of the Adirondack Lakes Alliance. Outputs include updated ALA website to reflect current activities including news and events and planning and holding the ALA annual symposium. Outcomes are the public will become more knowledgeable about watershed threats and solutions and more committed stewards of their lakes. This may result in more effective lake management practices being implemented in the Basin, greater investment in private funding to support watershed protection, and greater collaboration among and across lake and river associations in the Lake Champlain Basin and beyond.

Outputs:

- updated ALA website to reflect current activities including news and events
- planning and holding the ALA annual symposium

Outcomes:

- public will become more knowledgeable about watershed threats and solutions and more committed stewards of their lakes.
- more effective lake management practices being implemented in the Basin
- greater investment in private funding to support watershed protection
- greater collaboration among and across lake and river associations in the Lake Champlain Basin and beyond.

Organization: Paul Smith's College of Arts and Science, Adirondack Watershed Institute
Contact Person: Zoë Smith
Mailing Address: P.O. Box 265
 Paul Smith's NY 12970
Phone: (518) 327-6276
E-mail: zsmith1@paulsmiths.edu
Website: www.adkwatershed.org



Local elected officials speak to lake association members at the 2019 ALA annual symposium about local ordinances and other tools to help them protect their watershed.



NEIWPCC Code: PO 100281
GLFC 0100-334-001
Start Date: 3/14/2022
Close Date:
Grant Amount: \$4,000.00
Non-federal Match: \$2,431.00
Total Amount: \$6,431.00

2023 Organizational Support

in progress

Amplifying the MRBA's Future

Project Description

Since 1996, the MRBA has been protecting and preserving the Missisquoi river, its tributaries, and downstream into the Missisquoi Bay of Lake Champlain. As the MRBA has expanded, particularly with the addition of full and part-time staff, it is beginning to enter a new territory of unexplored waters. MRBA is in need to improve staff ability, increase efficiency, protect assets, increase access and grow connections. With the expansion of these resources, the MRBA will be able to continue to increase outreach, and ensure that its local communities are more informed about how the Missisquoi river and its tributaries are essential to all parts of the region, including residents, visitors, and the next generation.

Outputs:

- Purchase a new laptop and required software for Project Manager
- One-year lease for a high-capability printer; purchase of second monitors for the office
- Purchase of storage items to protect equipment during storage; staff time to write policies and create systems
- Purchase hardware to improve ability to connect digitally; staff time to create communications systems and send regular notifications of work
- Staff capacity to connect with our towns and communities on a regular basis

Outcomes:

- communities are more informed about how the Missisquoi river and its tributaries are essential to all parts of the region
- deeper and more meaningful connections within watershed community.

Organization: Missisquoi River Basin Association
Contact Person: Lindsey Wright
Mailing Address: 2839 VT Route 105
 East Berkshire, VT 05447
Phone: (802) 393-0076
E-mail: lindsey@mrbavt.com
Website: mrbavt.com



NEIWPCC Code: LS-2023-042
EPA 0364-005-001
Start Date: 5/8/2023
Close Date:
Grant Amount: \$16,514.00
Non-federal Match: \$ 3,990.00
Total Amount: \$20,504.00

2023 Organizational Support

in progress

Building Capacity to Expand Waterway Stewardship in the Lake in the Lake Champlain Basin

Project Description

This project will improve our organization's capacity to implement projects in the Lake Champlain Basin that improve public access, protect water quality, reduce environmental impacts, and provide hands-on experiences for students and community members. Project objectives include working with basin partners to complete a strategic planning process identifying waterway stewardship needs and opportunities in the northern Lake Champlain Basin, enhancing our stewardship crew-training program to meet these needs, procuring resources for managing a larger stewardship program, and enhancing resources and trainings for our staff and volunteers.

Outputs:

- a strategic stewardship plan
- supplementary training opportunities for staff and volunteers
- training manuals for our crew and volunteers
- a more robust tool cache.

Outcomes:

- implement actions that will result in sound stewardship
- implement lake-friendly and culturally responsible practices that contribute to a stronger economy and a healthier Lake."

Organization: Northern Forest Canoe Trail
Contact Person: Noah Pollock
Mailing Address: PO Box 565
 Waitsfield VT 05673
Phone: (802) 496-2285
E-mail: noah@northernforestcanoetrail.org
Website: www.northernforestcanoetrail.org



NEIWPCC Code: LS-2023-073
EPA 0364-005-001
Start Date: 08.25.2023
Close Date:
Grant Amount: \$15,020.00
Non-federal Match: \$ 4,032.00
Total Amount: \$19,052.00

2022 Organizational Support

concluded

Capacity and Outreach Expansion

Project Summary

MRBA hired a Community Relations Coordinator in 2022 that increased ability to connect with project and regional partners. Increased outreach included more frequent newsletters, emails, social media posts, and events; outputs will include our annual newsletter, but also more frequent updates through smaller “briefs”; increased web and social media presence; more regular communications with partners; and more appearances in local news sources. The goal continues to be one to grow connections both within and beyond the watershed, and to expand recognition of the role MRBA plays for and with all watershed constituents.

Outputs:

- Regular communications with partners via newsletters and “briefs”, emails, and events
- increased web and social media presence, more appearances in local news sources
- hosted second River Community Soirée

Outcomes:

- growth of connections both within and beyond the watershed
- expanded recognition of the role MRBA plays for and with all watershed constituents.

Organization: Missisquoi River Basin Association

Contact Person: Lindsey Wight

Mailing Address: 2839 VT Route 105
East Berkshire, VT 05447

Phone: (802) 393-0076

E-mail: lindsey@mrbavt.com

Website: mrbavt.com



The Headwaters Soiree was held at the lovely Windy River Barn in Westfield last July. Representatives from the headwaters towns of Lowell, Westfield, Troy, Jay, Richford, and Montgomery were invited to share a meal and enjoy brief presentations from local people who are working to improve their relationship with the river. Photo credit: Lindsey Wight



NEIWPCC Code: PO 100271
 GLFC 0100-334-001
 Start Date: 2/23/2022
 Close Date: 6/7/2023
 Grant Amount: \$4,000.00
 Non-federal Match: \$3,000.00
 Total Amount: \$7,000.00

2022 Organizational Support

concluded

Chazy Lake Watershed Initiative Organization Support

Project Summary

Chazy Lake Watershed Initiative makes it a top priority to be transparent and share all information regarding water quality and the presence of all aquatic invasive species. Monthly summer meetings are held as well as the Annual Meeting in which funding is needed for copying of information. The grant money was used in the following areas; provided all interested homeowners with information packets, a subscription to Biobased Services, produce maps of AIS in the lake, renew Weebly hosting costs for website, and postage costs for mailings.

Outputs:

- develop and distribute homeowner informational packets
- subscription to Biobased Services
- produce maps of AIS in the lake
- renew Weebly hosting contract for website
- postage costs for mailings.

Outcomes:

- reach 75% of the homeowners of Chazy Lake
- public within the Chazy Lake watershed is better informed on aquatic invasive species, water quality testing and all issues that affect Chazy Lake.

Organization: Chazy Lake Watershed Initiative

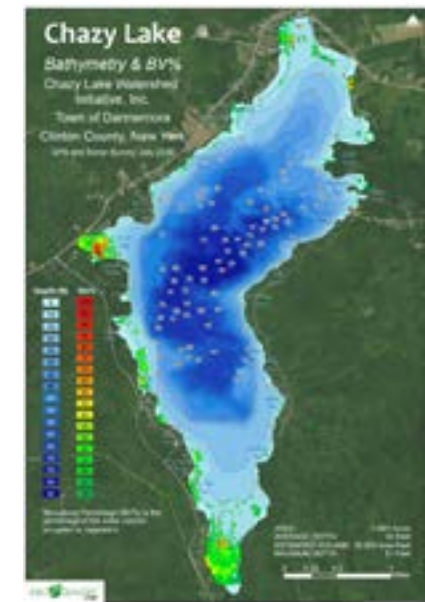
Contact Person: Lisa McGinn

Mailing Address: 40 Indian Point Way
Ellenburg Depot, NY 12935

Phone: Home: (518) 492-7537 Cell: (585) 278-7294

E-mail: Readingchic.lm@gmail.com

Website: www.chazylake.org



Biobased map posted in new kiosk and distributed to donors



NEIWPCC Code: PO 100272
 GLFC 0100-334-001
 Start Date: 2/24/2022
 Close Date: 7/25/2023
 Grant Amount: \$4,000.00
 Non-federal Match: \$ 250.00
 Total Amount: \$4,250.00

2023 Organizational Support

in progress

Community Outreach Equipment

Project Description

The Franklin Watershed Committee is often in the position of needing to share important documents with the Town of Franklin and other clean water partners, and hosting meetings with those partners to move clean water projects forward. A large part of the work involves community outreach and sharing information with the people on and around Lake Carmi. The project goals are to select and purchase a new printer that has scanning and copying capabilities, and that can print brochures and flyers, and to purchase a professional Zoom subscription.

Outputs:

- purchase of printer and Zoom subscription

Outcomes:

- more efficiently engage and educate members of the community to work towards clean water goals

Organization: Franklin Watershed Committee
Contact Person: Julia Crocker
Mailing Address: 28 Baycrest Dr.
 South Burlington, VT 05403
Phone: (802) 825-1243
E-mail: juliamariacrocker@gmail.com
Website: <https://www.franklinwatershed.org/>



NEIWPCC Code: PO 100395
EPA 0364-005-001
Start Date: 5/11/2023
Close Date:
Grant Amount: \$1,010.00
Non-federal Match:
Total Amount: \$1,010.00

2022 Organizational Support

in progress

Coordinating for a Successful Financial and Organizational Transition

Project Description

This project will support Winooski NRCD through a financial transition by hiring and training a new bookkeeper, upgrading accounting hardware, improving accounting practices, and shredding outdated organizational files. This support will ensure the Winooski NRCD's financial transition is not only smooth but serves as an opportunity to improve upon operating practices, pick up efficiencies, and grow the financial tracking capacity to take on larger and more complex funding opportunities.

Outputs:

- purchase of new laptop and Office software, recruitment and training of a new bookkeeper, integration of recommended financial improvements to our accounting systems, and file-clean up.

Outcomes:

- improved accounting systems will help the District:
- more appropriately budget staff time and resources over the fiscal year
- plan for program development
- grow ability to accept and track larger federal grant funds.

Organization: Winooski Natural Resources Conservation District
Contact Person: Remy Crettol
Mailing Address: 617 Comstock Road, Suite 1
 Berlin, VT 05602
Phone: 802-828-4493
E-mail: Remy@winooskinrcd.org
Website: winooskinrcd.org



NEIWPCC Code: PO 100299
GLFC 0100-334-001
Start Date: 5/20/2022
Close Date:
Grant Amount: \$4,000.00
Non-federal Match: \$2,014.00
Total Amount: \$6,014.00

2022 Organizational Support

concluded

CWICNY Strategic Planning and Development

Project Description

In order to better prepare and advance the Champlain Watershed Improvement Coalition of New York (CWICNY) in the near future, the organization sought to collaborate with a consultant to review the organization's assets and abilities, mission, goals and objectives, and consolidate that information into an effective strategic plan. This plan will be used and reviewed in 5-year intervals to better provided assistance to communities, landowners and other interested parties within the New York State portion of the Lake Champlain Basin. This plan development began in March of 2022 and concluded in November of 2022. CWICNY members and partners, which provided support and information, feel this is a well-developed document which expands specific aspects of CWICNY and unifies the group in its core mission. The document is available digitally at each participating Soil and Water Conservation District, the Water Quality Strategy committees, Lake Champlain, Lake Champlain-Lake George Regional Planning Board and at the CWICNY website.


Outputs:

- development of a guidance document/strategic plan

Outcomes:

- continued growth and continuity of CWICNY

Organization: Champlain Watershed Improvement Coalition of New York
Contact Person: Jim Lieberum
Mailing Address: 394 Schroon River Road
Warrensburg NY 12885
Phone: 518.623.3119
E-mail: jim1@warrenswcd.org
Website: https://www.cwicny.org/

 NEIWPCC Code: PO 100278
 GLFC 0100-334-001
 Start Date: 3/11/2022
 Close Date: 2/17/2023
 Grant Amount: \$4,000.00
 Non-federal Match: \$1,500.00
 Total Amount: \$5,500.00

2021 Local Implementation Grant

in progress

Diversity, Equity and Inclusion Training

Project Summary

The Lake Champlain Committee (LCC) will use the organizational support grant to expand Diversity, Equity, and Inclusion training to strengthen abilities as a nonprofit organization dedicated to a healthy, accessible lake. Project outputs will include staff and Board participation in trainings and meetings with representatives of under-served communities to assist in shaping our programs to better support and involve them. This is part of ongoing work that LCC is conducting to build greater capacity to meet its mission. Funds will offset costs for trainings and pay for the time of representatives from under-served communities to provide guidance on our work.

Outputs:

- staff and Board participation in trainings and meetings with representatives of under-served communities to assist in shaping our programs to better support and involve them


Outcomes:

- build greater capacity

Organization: Lake Champlain Committee
Contact Person: Lori Fisher
Mailing Address: 208 Flynn Avenue, Building 3
Studio 3F | Burlington, VT 05401
Phone: 802 658-1421
E-mail: lorif@lakechamplaincommittee.org
Website: www.lakechamplaincommittee.org



Screen shot of LCC website page showing our statement regarding the 1/6/21 attack on the U.S. Capitol. The full statement is accessible through this link: <https://www.lakechamplaincommittee.org/lcc-statement-on-1/6/21-attack-on-the-us-capitol>. Additional DEI training supported through the grant will help expand our outreach and advocacy on issues of racial justice related to our mission of a clean, accessible lake.

 NEIWPCC Code: L-2021-065
 GLFC 0100-331-004
 Start Date: 5/20/2021
 Close Date:
 Grant Amount: \$4,000.00
 Non-federal Match: \$3,800.00
 Total Amount: \$7,800.00

2023 Organizational Support

in progress

FNLC Project and Organizational Outreach

Project Description

For the past two decades, Friends of Northern Lake Champlain (FNLC) has advocated for and completed projects that reduce land-use pollution and improve water quality in Lake Champlain. However, there has not been adequate funding or staff capacity to effectively share the results of those projects, gather community input, and promote educational events. Funding from this grant will purchase ArcGIS and Constant Contact subscriptions, create Story Maps for at least three recently completed projects, and partner with a communications consultant to assist our organization with outreach efforts. The outputs of this project will be at least three Story Maps, a greater frequency of communication with our supporters, and an updated projects map and tabling materials.

Outputs:

- purchase of a 3-year license to use Esri's ArcGIS Pro and online tools
- purchase of a Constant Contact subscription
- development of Story maps for at least 3 completed projects

Outcomes:

- greater understanding among community members, towns, government, and other organizations about the work FNLC does, and inspire others to take action.

Organization: Friends of Northern Lake Champlain
Contact Person: Alison Spasyk
Mailing Address: PO Box 1145
 Saint Albans, VT 05478
Phone: 802-881-7845
E-mail: aspasyk@friendsofnorthernlakechamplain.org
Website: <https://www.friendsofnorthernlakechamplain.org/>



Board Chair, Kent Henderson, and Project Coordinator, Alison Spasyk, table at a composting event at a farm in Franklin, VT.



NEIWPCC Code: LS-2023-038
EPA 0364-005-001
Start Date: 6/1/2023
Close Date:
Grant Amount: \$14,218.00
Non-federal Match: \$ 887.00
Total Amount: \$15,105.00

2021 Local Implementation Grant

concluded

Fostering Partnerships to Achieve a Shared Goal: Water Quality Improvements in the South Lake Watershed

Project Summary

With limited capacity and funding in the south lake area, partnerships and other complimentary water quality programs to be a critical part of the Trusts work. VLT has conserved 787 privately owned farm parcels (156,500 acres) in the Lake Champlain Basin through the use of conservation easements. Approximately 80% of these conserved easements predate the current practice of including stringent wetland and riparian buffer protections in easement documents. As a result, VLT seeks to revisit high priority conserved properties (i.e. those with significant water features) in the South Lake watershed to add water quality protections. VLT will work in collaboration with partners to complete the tasks of scoping for assessment, project development and restoration designs on conserved lands. This work will help to build the outcome of strong partnerships that will enhance our response to water quality concerns on active farms in the South Lake watershed in the future.

Outputs:

- 23 conserved properties were assessed for conservation enhancement work.
- restoration designs Restoration designs were collaboratively discussed on 20 properties and 10 that are moving forward in the near future.
- Shared conservation design took place on 11 properties with 6 that are moving forward in the near future.
- Six progress reports were completed with supporting documents

Outcomes:

- strong partnerships that will enhance response to water quality concerns on active farms in the South Lake watershed in the future.

Organization: Vermont Land Trust
Contact Person: Adam Piper
Mailing Address: 8 Bailey Avenue
 Montpelier, VT 05602
Phone: 802-861-6405
E-mail: adam@vlt.org
Website: www.vlt.org



Portion of the South Lake with properties where VLT holds an interest in dark green.



NEIWPCC Code: L-2021-045
GLFC 0100-331-004
Start Date: 3/22/2021
Close Date: 4/19/2023
Grant Amount: \$ 4,000.00
Non-federal Match: \$ 6,730.00
Total Amount: \$10,730.00

2023 Organizational Support

in progress

Franklin County Natural Resources Conservation District Organizational Support

Project Description

This project supports two key needs for Franklin County Natural Resources Conservation District: strategic planning and better supporting current and future employees by creating systems to meet the needs identified in our Strategic Plan. Identified growth areas for staff support and system creation include exploring cloud-based information management systems and purchasing technology to support needed staffing increases, developing an employee onboarding system, providing additional training to both new and current staff in identified areas of need, and developing an employee offboarding system to preserve institutional knowledge and learn from staff turnover.

Outputs:

- Strategic Plan, updated website and pamphlet,
- purchase of audiovisual equipment
- Summary of informational systems evaluated, purchase of computer equipment,
- summary of onboarding and offboarding plans, list of training dates and descriptions

Outcomes:

- increased organizational capacity
- long-term sustainability and impact of the organization.

Organization: Franklin County Natural Resources Conservation District

Contact Person: Lauren Weston

Mailing Address: 50 S. Main St. Ste B-20
St. Albans, VT 05478

Phone: 802-528-4176

E-mail: lauren.weston@usda.gov

Website: franklincountynrcd.org



Staff from the Franklin County Natural Resources Conservation District (FCNRCD) and neighboring NRCDS met with FCNRCD Supervisors in Enosburg, Vermont in 2022 to learn about dairy farming in Franklin County and strengthen relationships.



NEIWPCC Code: LS-2023-037
EPA 0364-005-001
Start Date: 6/1/2023
Close Date:
Grant Amount: \$20,000.00
Non-federal Match: \$ 3,893.00
Total Amount: \$23,893.00

2022 Organizational Support

concluded

Friends of Northern Lake Champlain Presentation and Office Equipment Upgrade 2021

Project Description

FNLC organizes and co-hosts numerous educational events and programs annually to promote and inspire the adoption of lake-friendly practices among community members within Franklin and Grand Isle counties. The direct output of this grant was the purchase of a computer, projector, screen, sound system, which significantly improved the experience of attendees at these events (in-person and remote). The outcome of these events, made possible by the additional equipment, was increased citizen knowledge about the issues affecting water quality in Lake Champlain and greater understanding of practices and activities that improve water quality and watershed health. Another outcome was expanded capacity of our ECO AmeriCorps service member to participate in projects.

Outputs:

- purchase of new equipment such a computer, projector, screen, sound system
- public presentations

Outcomes:

- increased citizen knowledge about the issues affecting water quality in Lake Champlain
- greater understanding of practices and activities that improve water quality and watershed health
- expanded capacity of ECO AmeriCorps service member to participate in projects

Organization: Friends of Northern Lake Champlain

Contact Person: Kent Henderson

Mailing Address: PO Box 58
Swanton, VT 05488

Phone: 802-238-6973

E-mail: khenderson@friendsofnorthernlakechamplain.org

Website: <https://www.friendsofnorthernlakechamplain.org/>



Oliver Pearson, Lakes and Ponds Manager for the VT DEC, speaking at the 2021 Summer Farm Meeting at Bridgeman View Farm, in Franklin, VT. The annual summer and winter farm meetings are a collaboration between FNLC, the UVM Extension Northwest Crops and Soils Program (NWCS), and Farmer's Watershed Alliance (FWA).



NEIWPCC Code: PO 100279
GLFC 0100-334-001
Start Date: 3/11/2022
Close Date: 5/2/2023
Grant Amount: \$2,814.99
Non-federal Match: \$ 483.00
Total Amount: \$3,297.00

2022 Organizational Support

in progress

Improving Inventory Tracking and Sales at the Intervale Conservation Nursery

Project Description

The Intervale Conservation Nursery (ICN) specializes in growing native trees and shrubs primarily for sale to riparian restoration and land conservation projects throughout Vermont. We are poised to expand operations to meet the increasing demand for our products, with a goal of supplying 70,000 trees per year to the marketplace by 2024. This growth will be achieved through a few key investments that will increase operational capacity, realize production efficiencies, and improve gross margins. With support from LCBP, the Nursery will develop and improve our sales and inventory tracking systems so that we can handle larger volumes while continuing to provide high quality trees and services to our customers. This project will result in improved inventory and sales tracking systems, which will support increased propagation, inventory, and sales as the Intervale Conservation Nursery grows.

Outputs:

- develop and improve our sales and inventory tracking systems
- supply 70,000 trees per year to the marketplace by 2024.

Outcomes:

- increased propagation, inventory, and sales

Organization: Intervale Center
Contact Person: Mandy Fischer
Mailing Address: 128 Intervale Road
 Burlington, VT 05401
Phone: 802-660-0440 x 108; 802-863-5399
E-mail: mandy@intervale.org
Website: www.intervale.org



NEIWPCC Code: PO 100277
GLFC 0100-334-001
Start Date: 3/11/2022
Close Date:
Grant Amount: \$2,500.00
Non-federal Match:
Total Amount: \$2,500.00

2022 Organizational Support

in progress

Increased Organizational Capacity for Scientific River Diving and River Research

Project Description

The primary outcome of this grant award is to build Ausable River Association organizational capacity to plan and execute scientific river diving projects safely and effectively for future research on aquatic life, habitats, and understanding areas of thermal refuge in our NY rivers. The Ausable River Association's (AsRA) biodiverse habitats program provides research and monitoring for all near and in-river habitats, focusing on species vulnerable to pollution, land use change, and global climate change. This research often requires intensive fieldwork with a small field crew and is benefitting from alternative methods for individual or small-crew investigation, such as snorkeling and river diving to complete scientific and observational studies. Over the 2022 season, AsRA's biodiversity research manager, Carrienne Pershyn, will complete a suite of coursework to boost our capacity for underwater research of fish, fish habitat, and thermal refuge in rivers, the primary outcome. Training could include two online/in-person diving courses, a 3-day intensive wilderness first responder re-certification course, and an in-person, field intensive scientific river diving methods and safety certification offered by the National Conservation Training Center through the US Fish and Wildlife Service (FWS).

Outputs:

- training for AsRA's biodiversity research manager to include diving courses, intensive wilderness first responder re-certification course, field intensive scientific river diving methods and safety certification

Outcomes:

- build Ausable River Association organizational capacity to plan and execute scientific river diving projects safely and effectively for future research on aquatic life, habitats, and understanding areas of thermal refuge in NY rivers.

Organization: Ausable River Association
Contact Person: PO Box 8
 Wilmington, NY 12997
Mailing Address:
Phone: 518-637-6859
E-mail: ktucker@ausableriver.org
Website: ausableriver.org



A snorkeler from US Fish and Wildlife Service performs an underwater survey of imperiled freshwater mussels. Photo credit: USFWS



NEIWPCC Code: PO 100289
GLFC 0100-334-001
Start Date: 4/25/2022
Close Date:
Grant Amount: \$ 4,000.00
Non-federal Match: \$10,503.00
Total Amount: \$14,503.00

2021 Local Implementation Grant

in progress

Justice, Equity, Diversity, and Inclusion (JEDI) as a Foundation for Clean Water Work in the Mad River Valley

Project Description

Friends of the Mad River (FMR) works to make complex, systemic ideas (like those that underlay clean water, flood and climate resilience, and ecological health) meaningful for the people of the Mad River Valley community to make positive change together. However, we recognize that we do not have the needed expertise to address the intersection of our clean water and healthy land mission with a focus on justice, equity, diversity, and inclusion (JEDI). The purpose of this project is to build capacity in our organization to meaningfully engage in JEDI work. With the support of a consultant, we plan to develop outputs that will include an organizational statement to articulate our commitment to integrating JEDI into our programs, a Land Acknowledgement statement, a JEDI focused staff and board retreat, and a draft of next steps and focus areas for continued JEDI work.

Outputs:

- hire JEDI consultant
- Board training retreat
- develop organizational statements
- create action plan

Outcomes:

- enhanced capacity to pursue mission for a healthy watershed in a way that acknowledges and takes into account the intersection of systemic and structural issues beyond the traditional scope of environmental organizations.

Organization: Friends of the Mad River (FMR)
Contact Person: Corrie Miller
Mailing Address: PO Box 255
 Waitsfield, VT 05673
Phone: (802) 496-9127
E-mail: corrie@friendsofthemadriver.org
Website: www.friendsofthemadriver.org



NEIWPCC Code: L-2021-036
GLFC: 0100-331-004
Start Date: 3/29/2021
Close Date:
Grant Amount: \$3,989.00
Non-federal Match: \$2,325.00
Total Amount: \$6,314.00

2022 Organizational Support

in progress

Lake Champlain Committee Technology Upgrade

Project Description

LCC will contract with an outside firm with Information & Technology and cybersecurity expertise to review our current systems and practices to identify areas of vulnerability and help us update procedures and programs. We will also replace our current database server with a higher capacity model that can readily accommodate our nearly 60 years of policy, monitoring, membership, volunteer, and financial files. The outputs described will result in outcomes of improved efficiency, greater security for our records, and strengthened organizational capacity to meet our mission.

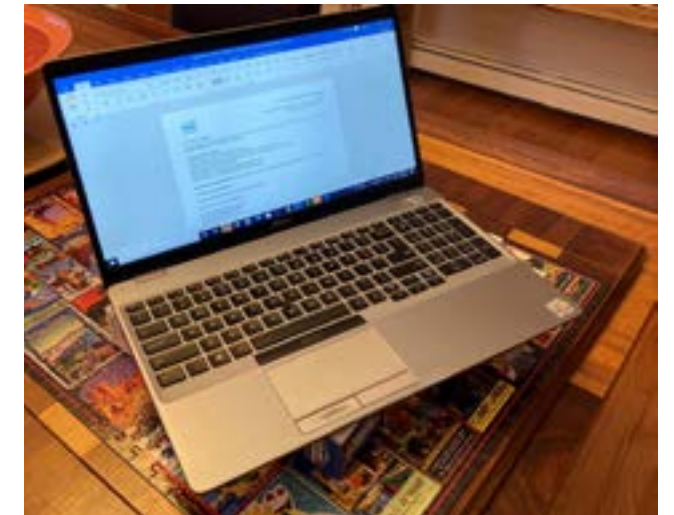
Outputs:

- review current systems and practices to identify areas of vulnerability and help us update procedures and programs by contractor
- replace current database server with a higher capacity model

Outcomes:

- improved efficiency, greater security for records, and strengthened organizational capacity

Organization: Lake Champlain Committee
Contact Person: Lori Fisher
Mailing Address: 208 Flynn Avenue, Building 3
 Studio 3F | Burlington, VT 05401
Phone: 802 658-1421
E-mail: lorif@lakechamplaincommittee.org
Website: www.lakechamplaincommittee.org



NEIWPCC Code: PO 100284
GLFC: 0100-334-001
Start Date: 3/16/2022
Close Date:
Grant Amount: \$4,000.00
Non-federal Match: \$5,720.00
Total Amount: \$9,720.00

2023 Organizational Support

in progress

Lewis Creek Association Strategic Plan

Project Description

Lewis Creek Association (LCA) proposes hiring a Strategic Planning consultant to work with the seven-member board, treasurer, and part-time staff to assure long term organizational sustainability. The output will be a strategic plan that identifies, develops, and prioritizes a budget that allows the organization to achieve its mission.


Outputs:

- Hire Strategic Plan consultant
- Compile existing financial and programmatic information for analysis by consultant
- Community Outreach: consultant conducts outreach to homeowners and community groups.

Outcomes:

- identification, development, and prioritization of a budget that allows the organization to achieve its mission.

Organization: Lewis Creek Association
Contact Person: Katherine Kelly
Mailing Address: PO Box 313
Charlotte, VT 05445
Phone: (802) 488-5203
E-mail: lewiscreekorg@gmail.com
Website: www.lewiscreek.org



NEIWPCC Code: LS-2023-058
EPA 0364-005-001
Start Date: 8/22/2023
Close Date:
Grant Amount: \$19,422.00
Non-federal Match: \$ 1,287.00
Total Amount: \$20,709.00

2023 Organizational Support

in progress

Organizational Capacity: Technology, Financial, and Systems

Project Description

Funds will be used to intentionally address the following objectives: Adopt Technology to Increase Efficiencies and Collaboration; Overhaul Financial Management Systems; Document Organizational Systems and Processes. As a result, staff will spend less time troubleshooting technology and navigating complex financial systems, and more time connecting with communities, engaging volunteers, and implementing conservation projects – all part of our work to support clean water, healthy ecosystems, and thriving communities across the Lake Champlain Basin.

Outputs:


- adopt Technology to Increase Efficiencies and Collaboration
- overhaul Financial Management Systems
- document Organizational Systems and Processes

Outcomes:

- more time to connecting with communities, engaging volunteers, and implementing conservation projects – all part of our work to support clean water, healthy ecosystems, and thriving communities

Organization: Vermont River Conservancy
Contact Person: Kassia Randzio
Mailing Address: 29 Main Street, Unit 11
Montpelier, VT 05602
Phone: 802-229-0820
E-mail: kassia@vermontriverconservancy.org
Website: vermontriverconservancy.org

MISSING IN FOLDER



NEIWPCC Code: LS-2023-075
EPA 0364-005-001
Start Date: 9/19/2023
Close Date:
Grant Amount: \$19,827.00
Non-federal Match: \$ 3,357.00
Total Amount: \$23,184.00

2023 Organizational Support

in progress

Sparking efficient and effective growth at Poultney Mettowee NRCD

Project Description

PMNRCD is seeking funding to upgrade financial, point of sale (POS) and laptop/printer technology, while maintaining existing cloud-based file systems through systematic organization and website upgrades. We will also be creating new resources for billing, employee management and constituent contact lists. These efforts will create everyday efficiencies to meet needs within our watershed. Outputs include, but are not limited to, new, glitch-free laptops and printer, POS orders, financial management that can be accessed by multiple staff, standardized pay rates and onboarding/exit interview processes.

Outputs:

- Two new laptops, laptop cases, and Microsoft Office and financial software packages.
- New office printer.
- Create orientation and onboarding files. Formalize exit interview
- Create master list of contacts.
- Update website information and graphics. Seek ADA accessibility

Outcomes:

- Work with partners in priority watersheds (South Lake A and B) to provide technical support and capacity building.

Organization: Poultney Mettowee Natural Resources Conservation District


Contact Person: Hilary Solomon

Mailing Address: PO Box 209
Poultney Vermont 05764

Phone: (802)558-3515

E-mail: hilary@pmnrcd.org

Website: www.pmnrcd.org

 **NEIWPCC Code:** LS-2023-040
EPA 0354-005-001
Start Date: 6/1/2023
Close Date:
Grant Amount: \$19,140.00
Non-federal Match: \$ 1,000.00
Total Amount: \$20,140.00

2023 Organizational Support

in progress

Strategic Planning to Build Capacity within Friends of the Mad River

Project Description

Friends of the Mad River is developing a new strategic plan that incorporates recent board member additions and input from the new executive director (pending hire in May, 2023). The objective of this effort is to create a guiding document to identify future organizational priorities. Outputs will include the strategic plan as well as a collection of information regarding changing priorities and project development methods in both local and broader watershed, conservation, and environmental communities.

Outputs:

- Develop Consultant Scope of Work
- hire consultant
- Summary of key historical programs, projects, & data
- Draft strategic plan

Outcomes:

- support of local watershed group

Organization: Friends of the Mad River

Contact Person: Ira Shadis

Mailing Address: 4061 Main Street
Waitsfield, Vermont 05660


Phone: 802-496-0127

E-mail: ira@friendsofthemadriver.org

Website: www.friendsofthemadriver.org



Friends of the Mad River board members and their family gather in Warren, VT

 **NEIWPCC Code:** LS-2023-050
EPA 0364-005-001
Start Date: 8/2/2023
Close Date:
Grant Amount: \$ 19,510.00
Non-federal Match: \$ 2,887.00
Total Amount: \$22,397.00

2023 Organizational Support

in progress

Support for Friends of the Winooski River to Increase Capacity

Project Description

Friends of the Winooski River plans to hire a new staff person in 2023 to increase our capacity to complete work, which will cause an increase in our administrative costs. Our objectives are to adequately equip our staff by replacing an existing staff laptop and purchasing a new laptop and an additional tablet for the new staff person, as well as software for these devices. We also request funds to help us meet the unfunded staff time needed to bring a new person on board. Our Executive Director needs training in organizational management in order to be able to manage and sustain a larger staff and workload. Outputs of this effort will include expanded capacity to meet the increased opportunities available to watershed groups.

Outputs:

- Purchase two laptops, one tablet, and software
- hire new staff person
- ED to complete Management Certificate Program

Outcomes:

- Increased staff capacity

Organization: Friends of the Winooski River
Contact Person: Michele Braun
Mailing Address: P.O. Box 777
 Montpelier, VT 05601-0777
Phone: 802-279-3771
E-mail: michele@winooskiriver.org
Website: <https://winooskiriver.org/>



NEIWPCC Code: LS-2023-039
EPA 0364-005-001
Start Date: 4/7/2023
Close Date:
Grant Amount: \$20,000.00
Non-federal Match: \$ 2,773.00
Total Amount: \$22,773.00

2022 Organizational Support

in progress

The best Strategic Planning “NOTION” to implement “Opportunities for Action” at Lake St. Catherine

Project Summary

The Lake St. Catherine Association will use its relationship with Tech Soup to obtain a non-profit discounted rate to acquire the software NOTION. NOTION will permit the Association to concurrently manage both internal and external projects. These will include LCBP grants awarded to LSCA: Watershed Action Plan for three years; Storm Water Master Plan project prioritization; Lake Wise year 3; Education and Outreach grant, “Libraries Love Lake”. These projects will engage external consultants and contractors who will be able to report updates and intelligence on a real time basis. The Association will also have a section for internal processes and protocols that will enhance Trustee Education.

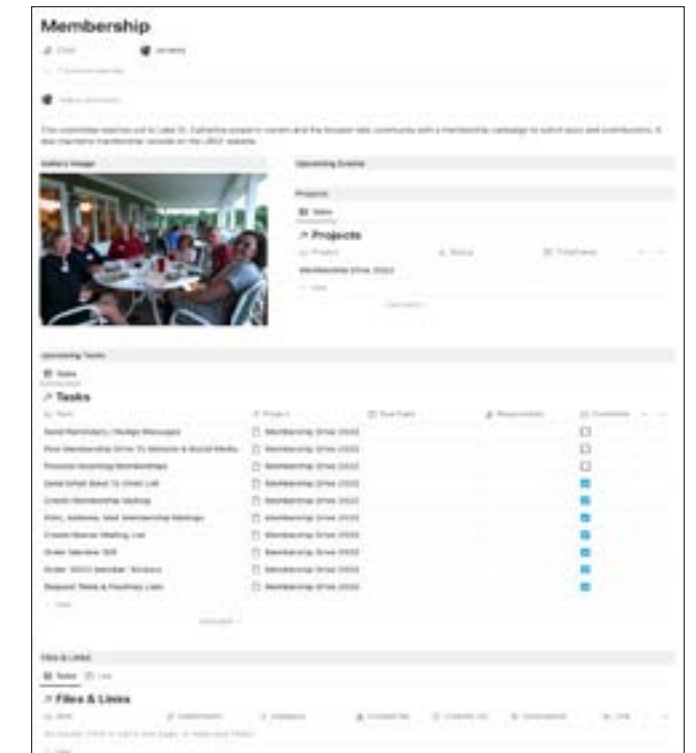
Outputs:

- purchase of NOTION software

Outcomes:

- internal and external parties can collaborate via a single Project Management System to serve the many projects to enhance the overall watershed.

Organization: Lake St. Catherine Association
Contact Person: Martha H. Pofit
Mailing Address: P.O. Box 631
 Wells, Vt. 05774
Phone: (802) 345-3965
E-mail: martha.pofit@lakestcatherine.org
Website: www.lakestcatherine.org



NEIWPCC Code: PO 100283
GLFC 0100-334-001
Start Date: 3/16/2022
Close Date:
Grant Amount: \$1,970.00
Non-federal Match: \$1,400.00
Total Amount: \$3,370.00

2022 Organizational Support

concluded

Tree Planting Monitoring and Stewardship Training

Project Summary

This project was a field-based project to conduct follow up field visits to established tree plantings for maintenance. It also included creation of training materials and providing training. It further allowed us to purchase much needed equipment, which included an electric weed whacker and spare batteries, to make the maintenance visits successful. On maintenance visits, we partnered with AmeriCorps and Staff members from Missisquoi River Basin Association, Addison County Regional Planning Commission, VT Department of Environmental Conservation, Vermont Land Trust, and USFWS Partners for Fish and Wildlife. In addition, we consulted USFWS Partners for Fish and Wildlife, Intervale Conservation Nursery, other Natural Resources Conservation Districts, and Missisquoi River Basin Association while developing training materials.

While initial planting projects have an array of funding options for planting plans, planting materials, and labor, the follow-up visits to check on survival, continuing relationships at these sites, and proper stewardship training are more difficult to fund and therefore this work is often left under-resourced and incomplete. This funding allowed us to complete those stewardship visits, and address herbaceous competition, invasive species concerns, and other challenges the trees and shrubs face during establishment and help to alleviate those pressures.

Outputs:

- 18 follow-up field visits, 9 maintenance plans submitted
- proper maintenance (BMP) training of 4 staff
- maintenance plan development in collaboration with the landowner(s)/land steward(s) and training of staff
- purchase of equipment

Outcomes:

- public better informed how to steward these areas in a way that continues to support long term improved water quality impacts.

Organization: Franklin County Natural Resources Conservation District

Contact Person: Lauren Weston

Mailing Address: 50 S. Main Street, Suite B-20
St. Albans, VT 05478

Phone: 802-528-4176

E-mail: Lauren.Weston@usda.gov

Website: <https://www.franklincountynrcd.org/>



AmeriCorps Member Maintaining FCNRCD Tree Planting Site Summer of 2021 in Missisquoi Bay Watershed.



NEIWPCC Code: PO 100285
GLFC 0100-334-001
Start Date: 3/16/2022
Close Date: 7/25/2023
Grant Amount: \$4,000.00
Non-federal Match:
Total Amount: \$4,000.00

2020 Local Implementation Grant

concluded

Website Update

Project Description

VRC planned for, designed, built, and launched a completely new website at www.vermontriverconservancy.org. A vast improvement from a woefully outdated and nearly non-functional website that had been created more than a decade ago, the new site features engaging images, intuitive navigation, and in addition to educational conservation information, gives visitors the opportunity to engage with sites via an interactive map of riverside conservation lands. The site will be a platform for engaging more people with our work, recruiting volunteers, highlighting threats to Vermont's waterways, and highlighting the work VRC and partners are doing to improve the health of our waters.

Outputs:

- redesigned website with improved outreach features

Outcomes:

- increased accessibility of data on Lake Champlain
- support local watershed groups
- build awareness through informal learning of Lake Champlain Basin issues across all age groups

Organization: VT River Conservancy

Contact Person: Richarda Ericson

Mailing Address: 29 Main Street, Ste 11
Montpelier, VT 05602

Phone: (802) 229-0820

E-mail: richarda@vermontriverconservancy.org

Website: www.vermontriverconservancy.org



Screen shot of the new updated website



NEIWPCC Code: PO 100073
GLFC 0100-328-004
Start Date: 3/25/2020
Close Date: 11/28/2023
Grant Amount: \$ 4,000.00
Non-federal Match: \$15,969.00
Total Amount: \$19,969.00








Fluid State Consulting

by the numbers

- 34** Education & Outreach implementation grants awarded
- \$886,753** Education & Outreach implementation grant funds awarded
- 33,106** visitors to the LCBP Resource Room at ECHO
- 1,500** students reached in education programs
- 47** Stream Wise awards to local property owners
- 35,566** Individuals greeted by boat launch stewards

highlights

-  Welcomed 200 students at **Youth Clean Water Summit** to learn about lake science in Burlington, VT.
-  Hosted **World Water Day** with 20 partners and hundreds of visitors to Champlain Centre Mall in New York.
-  Helped 70 high school students explore the Basin and career opportunities as part of **Upward Bound** programs.
-  Trained members on lake protection topics at **Vermont Boat and Marine Association** workshop.
-  Launched **Meet the Scientist** videos to highlight Lake Champlain researchers.

2022 Large Implementation Grant

in progress

Ahead of the Storm Guidance Manual and Community Outreach

Project Summary

This project will produce a widely distributed guidance document for inquiring property owners interested in pursuing enhanced stormwater treatments on their properties using Lewis Creek Association's Ahead of the Storm (AOTS) program principles, and will provide three personalized neighborhood outreach workshops to encourage action in select catchment areas with documented poor water quality. Outputs will include the guidance manual. Outcomes will include a more informed public in the Champlain Basin who will better understand water quality issues, and the steps needed to improve water quality on their own properties. The guidance manual will help the public take the next steps to improve water quality, and those community members who participate in the outreach events will have a head start on recommendations to take in their neighborhood.

Outputs:

- guidance document
- 3 neighborhood outreach workshops

Outcomes:

- more informed public in the Champlain Basin who will better understand water quality issues, and the steps needed to improve water quality on their own properties

Organization: Lewis Creek Association
Contact Person: Katherine Kelly
Mailing Address: PO Box 313
 Charlotte, VT 05445
Phone: (802) 488-5203
E-mail: lewiscreekg@gmail.com
Website: www.lewiscreek.org



Neighborhood outreach to areas like this (where undersized culverts cause road washouts during flood events) will help citizens understand the importance of making fixes to improve downstream water quality. Photo credit Kate Kelly



NEIWPCC Code: LS-2021-083
EPA: 0357-004-001
Start Date: 11/3/2021
Close Date:
Grant Amount: \$38,224.00
Non-federal Match: \$ 4,257.00
Total Amount: \$42,481.00

2019 Large Implementation Grant

concluded

Ahead of the Storm: School Stormwater Implementation Pilot Project

Project Summary

The original project work began at Plattsburgh High School in Plattsburgh, New York in 2019 but the school had to pull out of the program due to county-wide funding to upgrade sports fields which would have interfered with the stormwater reduction work and delayed the project beyond the grant deadline for use of funds. LCC secured approval to work with another school in the Lake Champlain Basin, where we had done preliminary stormwater reduction assessment work.

In 2019, BFA St. Albans built a new hallway connecting the North and South buildings of campus—the Connector—which was identified early on as an area of concern for stormwater runoff. The Connector was built on a slope and has no gutters so stormwater flows directly from the roof to grass. The grassed area surrounding the Connector was on highly compacted and eroded soil, so it did little to retain stormwater. During precipitation events, runoff would collect sediments from the soil and flow over sidewalks and parking lots on both sides of the Connector. The slope of the land around the Connector shed water away from the building at high velocity. On the west side of the Connector, the closest storm drain was at the end of the Connector, so all stormwater that flowed to the west side had a large area to collect pollutants before reaching a nearby stream.

Outputs:

- pilot an on-site stormwater and assess ways to most efficiently replicate the process at other schools in the Lake Champlain Basin

Outcomes:

- Mitigate runoff at BFA St Albans
- Educate and engage students and the school neighborhood in hands-on field projects to protect water quality

Organization: Lake Champlain Committee
Contact Person: Lori Fisher
Mailing Address: 208 Flynn Avenue, Building 3
 Studio F3, Burlington, VT 05401
Phone: 802-658-1421
E-mail: lorif@lakechamplaincommittee.org
Website: <https://www.lakechamplaincommittee.org/>



The northeast side of the Connector before and after building the infiltration trench and adding native shrubs to hold soil and reduce stormwater flows. The lawn did little to retain water during rain events and most of the stormwater would runoff into the adjacent sidewalk and parking lot. With the infiltration trench and planting, stormwater will have the chance to soak into the ground.



NEIWPCC Code: LS-2019-063
EPA: 0995-004-001
Start Date: 3/11/2019
Close Date: 8/29/2023
Grant Amount: \$45,000.00
Non-federal Match: \$13,650.00
Total Amount: \$58,650.00

2020 Large Implementation Grant

concluded

Augmented Reality Sandbox Model

Project Summary

Through the purchase of this ARS educational model, the Champlain Watershed Coalition of New York (CWICNY), in conjunction with Up Yonda Farm and its partners were able to update and expand their water quality curriculum to the 12,000 visitors from local school groups, home owners and vacationers that rent houses on Lake George. Through the installation of this model visitors have an opportunity to realize their role in a watershed. Naturalists at the facility can deliver a fun and age appropriate water quality curriculum reinforcing the mission and goals of the LCBP.

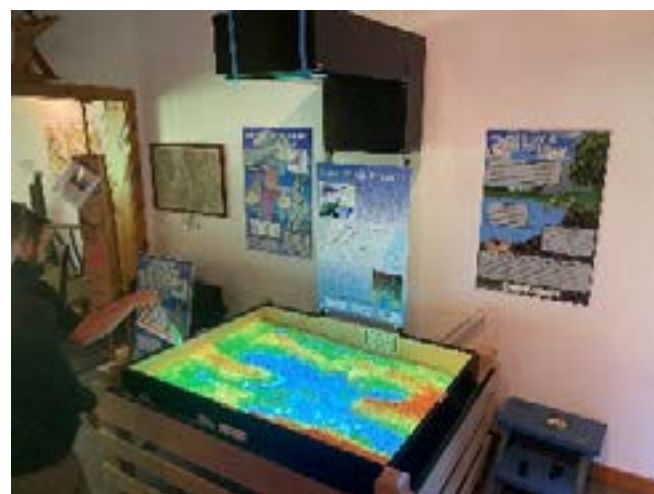
Outputs:

- purchase and installation of ARS educational model
- development of curriculum and educational materials

Outcomes:

- invaluable resource in helping people conceptualize and understand watershed boundaries, topography and how different areas are more susceptible to run-off
- increase in the public's knowledge of watershed issues and a greater opportunity for behavioral change.

Organization: CWICNY
Contact Person: Corrina Aldrich
Mailing Address: 394 Schroon River Rd
 Warrensburg, NY 12885
Phone: 518-623-3119
E-mail: Corrina.aldrich@ny.nacdn.net
Website: <https://www.cwicny.org/>



NEIWPC Code: LS-2020-052
EPA: 0346-004-001
Start Date: 6/12/2020
Close Date: 10/4/2023
Grant Amount: \$26,000.00
Non-federal Match: \$ 5,000.00
Total Amount: \$31,000.00

2023 Large Implementation Grant

in progress

Continuing the New York Watershed Alliance- Year 5 education activities

Project Description

This project will provide partial support for year 3 and 4 of the University of Vermont/SUNY Plattsburgh Watershed Alliance program in New York schools. Watershed Alliance programming will be implemented with 6 additional Kindergarten through 12th grade schools in the Lake Champlain Basin of New York. In addition, the program will promote Watershed Alliance K-12 programming across the Basin, develop new hands-on STEM education programming to engage students and work closely with the Champlain Basin Education Initiative efforts. The proposed project is critical to continue this effort in years 3 and 4, by allowing the retainment of qualified staff to continue the NY expansion of a highly successful education program.

Outputs:

- list of invested teachers and partners
- identify and develop programming with at least 3 K-12 schools, train student interns for in class programming
- identify teachers and implement STEM programming
- survey student outcomes
- outreach to schools for following year

Outcomes:

- enhance the current efforts of the UVM/SUNY Plattsburgh Watershed Alliance program
- better understanding of local watersheds and their issues in NY K-12 classrooms

Organization: SUNY Plattsburgh
Contact Person: Tim Mihuc
Mailing Address: 101 Broad Street
 Plattsburgh, NY 12901
Phone: 518-564-3039
E-mail: mihuctb@plattsburgh.edu
Website: plattsburgh.edu



NEIWPC Code: LS-2022-104
EPA: 0364-004-001
Start Date: 3/8/2022
Close Date:
Grant Amount: \$66,378.00
Non-federal Match:
Total Amount: \$66,378.00

2022 Large Implementation Grant

in progress

Continuing the New York Watershed Alliance- Year 3/4 education activities

Project Summary

This project will provide partial support for year 3 and 4 of the University of Vermont/SUNY Plattsburgh Watershed Alliance program in New York schools. Watershed Alliance programming will be implemented with 6 additional Kindergarten through 12th grade schools in the Lake Champlain Basin of New York. In addition, the program will promote Watershed Alliance K-12 programming across the Basin, develop new hands-on STEM education programming to engage students and work closely with the Champlain Basin Education Initiative efforts. The proposed project is critical to continue this effort in years 3 and 4, by allowing the retainment of qualified staff to continue the NY expansion of a highly successful education program.

Outputs:

- list of invested teachers and partners
- identify and develop programming with at least 3 K-12 schools, train student interns for in class programming
- identify teachers and implement STEM programming
- survey student outcomes
- outreach to schools for following year

Outcomes:

- enhance the current efforts of the UVM/SUNY Plattsburgh Watershed Alliance program
- better understanding of local watersheds and their issues in NY K-12 classrooms

Organization: SUNY Plattsburgh
Contact Person: Tim Mihuc
Mailing Address: 101 Broad Street
 Plattsburgh, NY 12901
Phone: 518-564-3039
E-mail: mihuctb@plattsburgh.edu
Website:



NEIWPCC Code: LS-2021-094
EPA 0356-004-001
Start Date: 3/8/2022
Close Date:
Grant Amount: \$66,378.00
Non-federal Match:
Total Amount: \$66,378.00

2022 Large Implementation Grant

in progress

Developing Consistent and High-Quality Skills Training in Clean Water BMP Implementation on Sub-jurisdictional Small Sites

Project Summary

This project will facilitate the creation of 3 skills-based classroom workshops and 1 hands-on in-field workshop for watershed professionals and private contractors wishing to increase their knowledge about clean water BMP design and implementation on a small scale. The classes will be hosted by Yestermorrow Design/Build School in Waitsfield.

Outputs:

- 3 skills-based classroom workshops and 1 hands-on in-field workshop
- at least 2 clean water BMPs installed at small sub-jurisdictional sites identified as low-income-owned or located within vulnerable communities.
- 30 clean water professionals and/or contractors will have increased their confidence and technical knowledge about clean water BMP design and implementation on a small scale

Outcomes:

- Acceleration of voluntary adoption of clean water BMPs and to support cost-effective delivery of pollutant reduction goals under Act 76 for the Lake Champlain Basin.

Organization: Winooski NRCD
Contact Person: Kristen Balschunat
Mailing Address: 94 Harvest Lane Suite 203
 Williston VT 05495
Phone: (802) 288-8155 x104
E-mail: kristen@winooskinrcd.org
Website: www.winooskinrcd.org



Kristen Balschunat (WNRCD) and Shawn White (Friends of the Winooski River) learn how to complete a comprehensive site analysis for stormwater runoff using digital tools created by Friends of the Mad River



NEIWPCC Code: LS-2021-076
EPA 0357-004-001
Start Date: 10/29/2021
Close Date:
Grant Amount: \$36,062.00
Non-federal Match: \$ 7,667.00
Total Amount: \$43,729.00

2020 Large Implementation Grant

concluded

Developing the New York Watershed Alliance 2020

Project Summary

This project focused on expanding Watershed Alliance programs in the New York portion of the Lake Champlain Watershed to provide ongoing education efforts with K-12 schools and youth groups. In total we offered programs to seven different schools and youth groups in our second year. In addition, we promoted Watershed Alliance K-12 programming across the Basin and developed new hands-on STEM education programming to engage students through newly established partnerships with like-minded organizations and worked closely with Champlain Basin Education Initiative efforts. We are maintaining a network of teachers and schools across the basin engaged in watershed education leading to an informed and engaged citizenry adapting to environmental challenges and committed to the conservation of natural resources. The COVID-19 pandemic created significant challenges and forced us to have a flexible approach that incorporated remote learning opportunities described herein.

Outputs:

- list of invested teachers and partners
- identify and develop programming with at least 3 K-12 schools, train student interns for in class programming
- identify teachers and implement STEM programming
- survey student outcomes
- outreach to schools for following year

Outcomes:

- enhance the current efforts of the UVM/SUNY Plattsburgh Watershed Alliance program
- better understanding of local watersheds and their issues in NY K-12 classrooms

Organization: SUNY Plattsburgh
Contact Person: Tim Mihuc
Mailing Address: 101 Broad Street
 Plattsburgh, NY 10901
Phone: 518-564-3039
E-mail: mihuctb@plattsburgh.edu
Website: plattsburgh.edu



NEIWPCC Code: LS-2020-073
EPA 0346-004-001
Start Date: 7/15/2020
Close Date: 8/28/2023
Grant Amount: \$33,000.00
Non-federal Match:
Total Amount: \$33,000.00

2021 Large Implementation Grant

in progress

ECHO Watershed Science Education and Outreach Program

Project Summary

ECHO will conduct a series of watershed-themed virtual programs and in-person museum experiences with 40 classrooms in elementary schools from the Lake Champlain Basin, supporting K-5 teachers and students with creative learning opportunities. Students from 10 ten schools will augment their experience with a field trip to ECHO for visits to the LCBP Program Resource Room, Heritage Species Tank, and an interactive STEM and lake science experience with ECHO's newest exhibit - Awesome Forces and Engineer It! ECHO will conduct outreach to all Vermont and New York schools in the Lake Champlain Basin by leveraging partnerships and relationships in the basin. Schools will be chosen based on their interest and geographic distribution throughout the basin. While we do not anticipate it will be required, some schools may benefit from supplementary financial assistance for staffing or additional expenses related to participating in online programs or museum visits.

Outputs:

- lesson plans and activities, reports, photos, and video.

Outcomes:

- students will use scientific inquiry, tools, and other technology to explore and communicate watershed science
- teachers will have increased self-efficacy and skills regarding their ability to plan and deliver watershed science learning activities.

Organization: ECHO, Leahy Center for Lake Champlain
Contact Person: Elizabeth Nuckols
Mailing Address: 1 College St.
 Burlington, VT 05401
Phone: 802-864-1848
E-mail: enuckols@echovermont.org
Website: www.echovermont.org



NEIWPCC Code: LS-2021-063
EPA 0356-004-001
Start Date: 5/21/2021
Close Date:
Grant Amount \$ 25,000.00
Non-federal Match: \$226,714.00
Total Amount: \$251,714.00

2023 Large Implementation Grant

in progress

Education Campaign to Bring Nutrient Recycling Practices to Lake Champlain

Project Summary

This project includes the output of 40 webinar presentations co-hosted with organizations located in the Lake Champlain Basin. These webinars will be presented through two different cohorts of partnering organizations. Participants will be connected with educational resources and follow up events. An initial group of partnering organizations has been established prior to requesting funding through the Lake Champlain Basin Program. Both cohorts for this project will be established through continued outreach and communication with organizations in the Lake Champlain Basin. Webinar participants will learn nutrient recycling practices and receive collection systems. With this knowledge and technology, participants will be able to implement nutrient recycling to fertilize their own gardens throughout the Lake Champlain Basin. As a result, project participants will produce the outcome of mitigating nitrogen and phosphorus emissions into the watershed through wastewater streams.

Outputs:

- 40 webinars delivered in 2 rounds to diverse audiences in the Lake Champlain Basin
- 50 collection devices distributed

Outcomes:

- mitigating nitrogen and phosphorus emissions into the watershed through wastewater streams.

Organization: Rich Earth Institute
Contact Person: Jed Blume
Mailing Address: 355 Old Ferry Road
 Brattleboro, VT 05301
Phone: (802) 631-0196
E-mail: Jed@ricearthinstitute.org
Website: <http://ricearthinstitute.org>



Reclaiming urine as a fertilizer is a safe and simple practice that gardeners can learn to access an abundance of free fertilizer – and protect the Lake Champlain watershed.

NEIWPCC Code: LS-2022-087
 EPA 0364-004-001
Start Date: 11/18/2022
Close Date:
Grant Amount: \$32,868.00
Non-federal Match: \$ 9,300.00
Total Amount: \$42,168.00



2022 Large Implementation Grant

concluded

Education on Agroforestry

Project Summary

The Warren County Soil & Water Conservation District (District) partnered with SUNY Adirondack's Agricultural School to host a program on agroforestry while developing an agroforestry plan with a section of implementation. The project was an educational program with three workshops designed to work directly with college students, farmers, agricultural professionals and public to develop an agroforestry plan for the 30 acres of farm fields in a conventional corn/hay rotation on the SUNY Adirondack (SUNY ADK) campus with the goals of reduced nutrient leaching and erosion to a tributary of Halfway Brook. The implementation phase included three construction and planting days with District staff, students, professors, and Cornell Master Gardeners.

The District hired a agroforestry professional in Spring 2022 to work with the District staff to write the agroforestry plan, host three workshops, install a section of the productive riparian buffer and build a nursery. The three workshops were held at the college from April to June 2022. The agroforestry nursery was built with the Sustainable Agriculture students in November 2022. During the nursery build, the students also built two air prune raised beds and planted them with Chestnuts and Hazelnuts. In April 2023, the productive riparian buffer was planted with the Agroecology Students, District staff, Cornell Master Gardeners, and SUNY ADK professors. The agroforestry plan was written throughout 2022 and finalized with the grant details in Spring 2023.

Outputs:

- agroforestry plan
- development of workshop flyer and brochure
- hosting of 3 workshops

Outcomes:

- reduced nutrient leaching and erosion to a tributary of Halfway Brook.

Organization: Warren County SWCD
Contact Person: Nick Rowell
Mailing Address: 394 Schroon River Road
 Warrensburg, NY 12885
Phone: (518)623-3119
E-mail: nrowell123@nycap.rr.com
Website: warrenswcd.org



Soil Health Workshop with students at the SUNY Adk Farm (Photo by WC SWCD)

NEIWPCC Code: LS-2021-082
 EPA 0357-004-001
Start Date: 11/5/2021
Close Date: 7/28/2023
Grant Amount: \$25,860.00
Non-federal Match: \$ 3,150.00
Total Amount: \$29,030.00



2023 Large Implementation Grant

in progress

Essex County Educational Events

Project Description

This project will include 4 septic workshops, up to 16 farm meetings, and 4 in-class events with the EM2 River Model. The outcomes will be a better informed public on septic installation, regulations, and maintenance; a more informed farm community that will be able to better address water quality resource concerns; and K-12 youth and educators becoming more knowledgeable on the water cycle and water quality. The long-term outcome will be improved water quality as the public becomes more educated on water quality issues and best management practices.

Outputs:

- 4 septic workshops
- up to 16 farm meetings
- 4 K-12 in-class events with the EM2 River Model

Outcomes:

- improved water quality as the public becomes more educated on water quality issues and best management practices
- informed public on septic installation, regulations, and maintenance
- informed farm community that will be able to better address water quality resource concerns
- K-12 youth and educators becoming more knowledgeable on the water cycle and water quality

Organization: Essex County Soil and Water Conservation District
Contact Person: Alice Halloran
Mailing Address: PO Box 407
 Westport, NY 12993
Phone: 518-962-8225
E-mail: ahalloran@westelcom.com
Website: <http://www.essexcountyswcd.org/>



NEIWPCC Code: LS-2022-108
 EPA 0364-004-001
Start Date: 1/25/2023
Close Date:
Grant Amount: \$25,440.00
Non-federal Match: \$ 4,600.00
Total Amount: \$30,040.00

2023 Large Implementation Grant

in progress

Face the River: A Montpelier Collaboration

Project Description

Conduct education and outreach to students, citizens, businesses, and the city of Montpelier, VT, in order to build community-wide commitment to adopt practices that will improve water quality, foster a thriving downtown connected to its river, and involve the public in caring for its local waterways. Outputs include a semester-long high school course, middle school stormwater field tour, and educational graphics and video. This work seeks to inspire the community to effect change – in part, through individual action, but especially through collective action – with immediate and long-term outcomes including an informed and empowered citizenry, support for removal of four Winooski Watershed dams, and entrepreneurial investment in healthy rivers.

Outputs:

- One semester-long *Face the River* class at Montpelier High School for 12 students to learn about and connect with the Winooski Watershed and Lake Champlain Basin.
- 8 community leaders (eg. ecologists, Abenaki leaders, hydrologists, etc.) engaged as guest speakers.
- 12 students interview 16 older adults, and share/discuss their stories with classmates.
- Students' final project shared with more than 300 community members.
- middle school stormwater field tour

Outcomes:

- community-wide commitment to adopt practices that will improve water quality, foster a thriving downtown connected to its river, and involve the public in caring for its local waterways.

Organization: Vermont River Conservancy
Contact Person: Kassia Randzio
Mailing Address: 29 Main Street, Unit 11
 Montpelier, VT 05602
Phone: (802) 229-0820
E-mail: kassia@vermontriverconservancy.org
Website: www.vermontriverconservancy.org



NEIWPCC Code: LS-2022-084
 EPA 0364-004-001
Start Date: 6/15/2023
Close Date:
Grant Amount: \$26,583.00
Non-federal Match: \$ 7,624.00
Total Amount: \$34,207.00

2023 Large Implementation Grant

in progress

Free VT Rivers Dam Removal Story Map

Project Summary

This project will continue the work of VNRC and the VT Dam Task Force to share Lake Champlain Basin fluvial geomorphic data on the benefits of dam removal and river connectivity on our website FreeVermontRivers.org, by weaving together written narrative of active dam removal projects with aerial imagery using drones to create an online story map.

Outputs:

- update materials and create additional education and outreach material on the VT Dam Mapper, specifically educational, interactive online maps, drone imagery comparisons, dam histories and removal narratives, as well as press releases
- 20-30 minute presentation to practitioners and the public on dam removal

Outcomes:

- more informed public regarding what the river systems look like before and after removal
- the river channel morphology and restoration can be tracked over time, showing project progress in terms of habitat restoration, aquatic ecosystem recovery, and flood resilience.

Organization: Vermont Natural Resources Council

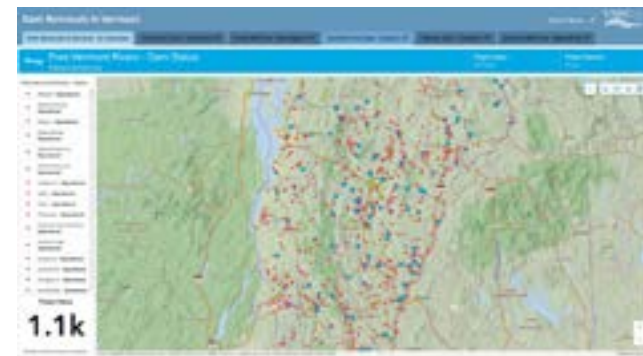
Contact Person: Karina Dailey

Mailing Address: 11 Baldwin Street
Montpelier, VT 05602

Phone: 802-223-2328

E-mail: kdailey@vnrc.org

Website: www.vnrc.org



Vermont Natural Resource Council's Vermont Dam Mapper (part of the Free VT Rivers website).



NEIWPC Code: LS-2022-085
EPA: 0364-004-001
Start Date: 11/14/2022
Close Date:
Grant Amount: \$15,218.00
Non-federal Match: \$ 3,654.00
Total Amount: \$18,872.00

2020 Large Implementation Grant

in progress

From Arrowhead to Yellow Pond Lily: An Outreach Campaign for Lake Champlain's Native Aquatic Plants

Project Summary

Aquatic plants are a common sight in the Lake Champlain Basin's waterbodies, yet the roles native species play in aquatic ecosystems are undervalued. Too often, native plants are viewed as weeds, rather than integral components of freshwater lake ecology. The goal of this project is to raise awareness about the critical role aquatic plants play in the Basin; it is an educational opportunity to connect individuals and communities to the Lake and increase their awareness about native plants and related pollution and aquatic invasive species (AIS) spread prevention issues. We will make science accessible via a combination of photographs, illustrations, descriptions of key plant characteristics, habitats, and how aquatic plants contribute to the ecological integrity of the Lake, as well as natural history notes.

Outputs:

- suite of educational materials including a set of durable pocket-sized native plant identification cards, educational info sheets, and a poster, distributed via targeted mailings, emailings, event tabling, and partners
- informal and formal field walks, workshops, or videos for the general public and teachers—these may occur virtually or in-the-field
- outreach via our Lake Look natural history and issues press column, social media posts profiling individual native plant species, and web content (info sheets will be available as downloadable PDFs).

Outcomes:

- impact lake users' views on native plants (not weeds!) to achieve a long-term increase in their knowledge of watershed issues and a change in personal behavior
- folks to be more supportive of projects that maintain and improve native plant populations, while simultaneously promoting AIS spread prevention behaviors to benefit the Basin's ecological integrity.

Organization: Lake Champlain Committee

Contact Person: Lori Fisher

Mailing Address: 208 Flynn Avenue, Bldng. 3
Studio 3F, Burlington, VT 05401

Phone: 802-658-1421

E-mail: lorif@lakechamplaincommittee.org

Website: <https://www.lakechamplaincommittee.org/>



American eelgrass (*Vallisneria spiralis*), which often accumulates along shorelines in large masses in the autumn, is an important food source for water birds. American eelgrass also provides shallow water fish habitat, as it offers shade and shelter, and harbors aquatic insects. Photo by LCC Director



NEIWPC Code: LS-2020-065
EPA: 0346-004-001
Start Date: 5/20/2020
Close Date:
Grant Amount: \$40,000.00
Non-federal Match: \$20,469.00
Total Amount: \$60,469.00

2022 Large Implementation Grant

in progress

Improving Communications through Updated Informational Kiosks at Winooski Valley Park District Parks

Project Summary

This project will support the revitalization of the Winooski Valley Park District's park signs, informational materials, and maps to better enhance user experience and visitor understanding of the importance of the park system to the health of the Winooski River and Lake Champlain. WVPD has identified improved signage as a key component to identifying our organization, educating park users, and fostering a sense of place. WVPD will hire a professional designer/firm to evaluate our current branding and to develop recommendations on how to redesign the information on our kiosks to better convey WVPD's mission and educate visitors of the natural, cultural, and recreational resources of our parks. WVPD will recruit community volunteers and/or student groups to create new standardized GIS maps for each WVPD park that will be incorporated into the design process. WVPD will also seek professional research to illustrate a more complete picture of the land use history of our properties to include an indigenous perspective/pre-contact through to present day.

Outputs:

- standardized branding plan for all signs across WVPD parks as developed by the hiring of a professional firm
- updated maps and information/interpretative materials including updated general WVPD information and rules, natural, cultural, and land use history, and information on the interconnectedness of the WVPD parks system and its relationship to the water quality and ecosystem health
- construction and installation of six information kiosks at WVPD parks that do not currently have them.

Outcomes:

- Increased park user/public understanding of and appreciation for Lake Champlain Basin resources, related threats, and priority actions needed to address them
- understanding of WVPD as a regional conservation organization and how its parkland positively contributes to the conservation and protection of the Lake Champlain Basin

Organization: Winooski Valley Park District
Contact Person: Lauren Chicote
Mailing Address: 1 Ethan Allen Homestead
 Burlington, VT, 05408
Phone: 802-379-0280 (cell); 802-863-5744 (office)
E-mail: info@wvdp.org
Website: www.wvdp.org

- better informed public on ecosystem services provided by floodplain, wetland, and forest land
- increased sense of place that encourages a sense of personal responsibility that results in behavioral changes and actions to reduce pollution.



NEIWPC Code: LS-2021-098
EPA: 0357-004-001
Start Date: 1/5/2022
Close Date:
Grant Amount: \$39,700.00
Non-federal Match: \$18,563.00
Total Amount: \$58,263.00

2022 Large Implementation Grant

concluded

Increasing Access to Field Trips in 2022

Project Summary

In 2022, the Museum reconnected with teachers and students by subsidizing school field trip experiences to make them accessible to underserved students and schools throughout the Lake Champlain Basin. The Museum engaged teachers through a direct outreach campaign that culminated in an in-person open house at the Museum during the fall of 2022. In addition, the Museum refreshed its school visit curriculum for its programs *1776: The American Revolution in the Champlain Valley* and *Lake Ecology*. Through these efforts to decrease barriers to access, students have had the opportunity to make connections to Lake Champlain's history and ecology and develop as stewards of the lake's cultural and natural resources.

Outputs:

- sixteen free field trips
- updated school visit website, curricula for "1776" and "Lake Ecology,"
- 4 pre-visit digital modules
- 7 free visits for "1776" (approx. 20 kids/visit, 140 students), 5 free visits for "Lake Ecology" (approx. 15 kids/visit, 75 students) (215 total students)
- 1 Open House day for 21 teachers

Outcomes:

- develop students and educators as lake stewards, who make new and relevant connections between Museum experiences, their in-classroom curriculum, their personal experiences, and their actions and lake health
- increase access to the lake's history, ecology, and archaeology.

Organization: Lake Champlain Maritime Museum
Contact Person: Elizabeth Lee
Mailing Address: 4472 Basin Harbor Road
 Vergennes, VT 05491
Phone: 802.475.2022 x 102
E-mail: ElizabethL@lcmm.org
Website: www.lcmm.org



NEIWPC Code: LS-2021-079
EPA: 0357-004-001
Start Date: 10/20/2021
Close Date: 3/27/2023
Grant Amount: \$20,310.00
Non-federal Match: \$ 4,583.00
Total Amount: \$24,893.00

2023 Large Implementation Grant

in progress

Lake Champlain Mercury Community Science Program

Project Summary

This project will engage high school teachers and classrooms in field science and data-driven community science curricula to increase understanding of the controls of mercury sources and bioaccumulation in the Lake Champlain region.

Outputs:

- biosentinel mercury data from the Lake Champlain Basin will contribute to a long-term, national database
- two to three teachers each in VT and NY will be engaged in a community science program to develop and implement research-based teaching modules in their classrooms
- four to eight classrooms of ~20 students each will conduct field research and “big data” analyses to answer self-directed questions on mercury and environmental science
- students will communicate their science to each other and to broader networks.

Outcomes:

- teachers and high school students are a broad and diverse audience who will share knowledge of mercury contamination in the Lake Champlain Basin to their family and community networks
- the Lake Champlain basin will be included in a long-term nationwide mercury monitoring database, providing a regional context for mercury levels in biota in this important ecosystem
- students will be involved in experiential education and teachers will gain access to new tools to meet Next Generation Science Standard core ideas, practices, and crosscutting concepts.

Organization: Dartmouth College - Department of Earth Science

Contact Person: Vivien Taylor

Mailing Address: 6105 Sherman Fairchild Hall
Hanover, NH 03755

Phone: 603-646-3318

E-mail: vivien.ftaylor@dartmouth.edu

Website: <https://earthsciences.dartmouth.edu/>

NEIWPCC Code: LS-2022-083
EPA 0364-004-001
Start Date: 1/26/2023
Close Date:
Grant Amount: \$50,000.00
Non-federal Match: \$26,818.00
Total Amount: \$76,818.00



2022 Local Implementation Grant

concluded

Lake George Floating Classroom and Stream Education Programs 2022

Project Summary

In 2022, 1,473 participants were able to experience the Floating Classroom to learn about the watershed, the quality of the lake’s water, and how to protect it; and stream monitoring programs to learn about water quality monitoring, collection and identification of stream macroinvertebrates. Students also learned about how soils, native and invasive vegetation, erosion, and other natural processes and characteristics of the watershed affect the lake. The majority of participants were students; however, the programs did see 394 adult participants.

The spring season (May-June) included 11 different schools/organizations. A total of 31 Floating Classroom and stream monitoring programs were conducted in the Spring with a total of 673 participants. Summer Floating Classroom programs were comprised of public programs, where anyone interested could sign up and take part. A total of 25 Floating Classroom programs were conducted during the Summer with a total of 346 participants. The fall 2022 Floating Classroom and stream monitoring program season (September-October) concluded another successful year. There were 8 returning schools and 2 new schools that participated. Twenty (20) Floating Classrooms were conducted in the Fall with a total of 454 participants. Nineteen (19) stream monitoring programs were done with a total of 426 participants.

Outputs:

- over 2,000 people educated on The Floating Classroom, over 1,400 students educated through at least 75 stream monitoring programs

Outcomes:

- education of students, homeowners, residents, and the general public about a variety of environmental topics related to water quality through hands-on water quality testing
- continue to be effective at raising awareness about water quality issues and affecting behavioral change that will help protect the Lake Champlain Basin

Organization: Lake George Association

Contact Person: Kristen Wilde

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Lake George, NY 12845

Phone: 518-668-3558

E-mail: kwilde@lakegeorgeassociation.org

Website: www.lakegeorgeassociation.org



NEIWPCC Code: LS-2021-080
EPA 0357-004-001
Start Date: 10/29/2021
Close Date: 3/17/2023
Grant Amount: \$28,614.00
Non-federal Match: \$12,300.00
Total Amount: \$40,914.00



2021 Large Implementation Grant

concluded

Multi-Cultural Interpretations on How Pollution Impacts the Lake Champlain Watershed

Project Summary

Scientist Curt Stager and artists: David Fadden, Katsitionni Fox, Carol Marie Vossler, Steven Kostell, Michale Glennon and Martin Loft took part, in introducing the project at a public presentation at BluSeed Studios in June of 2021. Over the course of the next year, six new works of art focused on pollution in the Lake Champlain Basin were produced, communicating awareness and concerns raised. Each artist hosted a public presentation, sharing their art and information about pollution in the LCB, in April and May 2022. Artist/educator Carol Vossler also developed programs for school age students which were presented February through May 2022. A culminating exhibit was held at BluSeed Studios in June 2022, featuring the works of the six artists. Students from the education program presented work relating to the project theme, and Dr. Curt Stager spoke and shared data with scientific information. The exhibit was featured on the BluSeed Studios website, press releases for all phases of the project were shared to media in the Lake Champlain Basin, social media posts were shared along every step of the project and various articles and publications were written about the project and culminating event.

Outputs:

- six new works of art focused on pollution in the Lake Champlain Basin
- 5 public school & local college presentations. Hands on projects including papermaking/invasive species, printmaking, learning to make and use visual journals.
- four-six community workshops / programs culminating exhibit will be held at BluSeed Studios

Outcomes:

- students will understand how human actions impact the watershed
- raised awareness among community members of pollution in the watershed.

Organization: BluSeed Studios
Contact Person: Jill Serrano Michalsky
Mailing Address: 24 Cedar St
Saranac Lake, NY 12983
Phone: 518-570-9493
E-mail: admin@bluseedstudios.org
Website: BluSeedStudios.org



Blu-Zoo Kids Program - Teaching Watershed Pollution Issues.



NEIWPC Code: LS-2021-062
EPA: 0356-004-001
Start Date: 6/24/2021
Close Date: 10/25/2022
Grant Amount: \$29,315.00
Non-federal Match: \$4,510.00
Total Amount: \$33,825.00

2022 Large Implementation Grant

in progress

Protecting our Waters - An experiential learning module for elementary students that Benefits the whole community

Project Summary

Protecting our Waters will engage and inform the public about water quality issues facing Lake Champlain by creating an immersive educational module for 4th grade students to learn more about water pollution issues facing Lake Champlain and building enduring stormwater mitigation projects (with elementary students, college students and community members) to apply student learning and enhance public understanding about what we can do as individual citizens to improve water quality.

Outputs:

- create an immersive educational module for 4th grade
- building enduring stormwater mitigation projects

Outcomes:

- engage and inform the public about water quality issues facing Lake Champlain

Organization: Champlain College
Contact Person: Robin Collins, Ph.D.
Mailing Address: 163 South Willard St
Burlington VT
Phone: 802-829-8724
E-mail: rcollins@champlain.edu
Website: https://www.champlain.edu/



Proposed location of BMP (CP Smith Elementary, East Parking lot)



NEIWPC Code: LS-2021-100
EPA: 0357-004-001
Start Date: 1/25/2022
Close Date:
Grant Amount: \$44,413.00
Non-federal Match: \$ 5,507.00
Total Amount: \$49,920.00

2023 Large Implementation Grant

in progress

Removing Barriers to Access in 2023

Project Summary

In 2021, Lake Champlain Maritime Museum broadened and deepened its commitment to build a healthier future and community for Lake Champlain by focusing on removing barriers to access. To this end, the Museum undertook three new initiatives: offered free admission to the Museum, utilized the “pay what you can” model for summer camps and expeditions, and created new digital exhibits to increase their online presence.

Outputs:

- 10,321 people visited the Museum, an increase of more than a 30% from 2019. One third visited because the Museum was free, and 65% were first-time visitors.
- 94 kids attended summer camps and overnight expeditions. Of those, 66 got to go for free or reduced tuition.
- 2,955 people visited our digital exhibits in 2021, a 37% increase over 2020.

Outcomes:

- make the Museum accessible to everyone
- provide opportunity for people to make personal connections with Lake Champlain that allow them to become stewards of the lake.
- An informed and engaged public who are connected to the Lake and involved in its stewardship.

Organization: Lake Champlain Maritime Museum

Contact Person: Susan Evans McClure

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Phone: 802-475-2022

E-mail: SusanM@lcm.org

Website: lcm.org



NEIWPC Code: LS-2022-096
EPA: 0356-004-001
Start Date: 1/14/2022
Close Date:
Grant Amount: \$49,900.00
Non-federal Match: \$13,354.00
Total Amount: \$63,254.00

2021 Large Implementation Grant

in progress

Restoration Roundup: A Podcast to Facilitate Riparian Forest Restoration Knowledge Sharing

Project Summary

This project will establish and produce an interview-format podcast exploring recent research and developments in best practices for riparian buffer restoration in the Lake Champlain Basin. Outputs include a list of questions addressing knowledge gaps among practitioners; 10 podcast episodes and three Q&A sessions with podcast interviewees; and evaluations of podcast success. By enabling practitioners, landowners, and individuals or organizations aspiring to start a riparian restoration project or program to access emerging information in an accessible, digestible, and convenient format, this project will improve the success of riparian restoration plantings and ultimately, water quality in Lake Champlain.

Outputs:

- list of questions addressing knowledge gaps among practitioners
- 10 podcast episodes and three Q&A sessions with podcast interviewees; and evaluations of podcast success.

Outcomes:

- improve the success of riparian restoration plantings and ultimately, water quality in Lake Champlain.

Organization: University of Vermont Extension

Contact Person: Alison Adams

Mailing Address: 23 Mansfield Ave., Rm 203
Burlington, VT 05401

Phone: 650-387-7526 (post-COVID) 802-656-3721

E-mail: alison.adams@uvm.edu

Website: <https://www.uvm.edu/seagrant/outreach/watershed-forestry-partnership>



A riparian forest restoration site in Vermont. On the left, the site shortly after planting in 2010. On the right, the site with establishing trees in 2015. Photographs courtesy of Katie Kain, US Fish & Wildlife Service.



NEIWPC Code: LS-2021-057
EPA: 0356-004-001
Start Date: 7/27/2021
Close Date:
Grant Amount: \$14,073.00
Non-federal Match:
Total Amount: \$14,073.00

2022 Local Implementation Grant

in progress

The Giant Lake Champlain Basin Map Project, Phase 2

Project Summary

Lake Champlain Maritime Museum will build on the success of its Giant Lake Champlain Basin Map Project to get more students and educators making personal connections to the lake through hands-on experiences on a 27' by 35' map of the Lake Champlain Basin. The Museum will conduct a summer training for teachers in 2022, increasing collaboration among school teaching teams. In 2023, the team will implement the curriculum in 6-10 schools, state parks, and informal education sites throughout the basin that will increase students' understanding of spatial/ecological relationships between distant corners of the watershed and Lake Champlain and develop new perspectives on how students can positively affect the Basin's future in a time of climate change.

Outputs:

- summer training for teachers
- implement curriculum in 6-10 schools, state parks, and informal education sites

Outcomes:

- more students and educators making personal connections to the lake
- increase students' understanding of spatial/ecological relationships between distant corners of the watershed and Lake Champlain
- develop new perspectives on how students can positively affect the Basin's future in a time of climate change.

Organization: Lake Champlain Maritime Museum

Contact Person: Elizabeth Lee

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Vergennes, VT 05491

Phone: 802-475-2022 x 102

E-mail: ElizabethL@lcm.org

Website: <https://www.lcm.org/>



NEIWPCC Code: LS-2021-087
EPA 0357-004-001
Start Date: 10/29/2021
Close Date:
Grant Amount: \$42,431.00
Non-federal Match: \$ 5,500.00
Total Amount: \$47,931.00

2023 Large Implementation Grant

in progress

Upping the game! Harnessing the power of games and puzzle quests to reach new audiences and enhance lake literacy in the Lake Champlain Basin

Project Summary

This project builds on the power of educational games to inform and encourage behavior change. A library of environmentally-focused educational games for different age groups and audiences will be created, and game plays for organizations and school groups will be hosted throughout the Lake Champlain Basin. Two games will focus on Lake Champlain and incorporate LCBP priorities. The first will be a role play that addresses climate adaptation and natural hazards. The second will be a Lake Champlain focused puzzle quest that builds on LCBP's State of the Lake Report. Two "48hr game jams" (small game playing and design competitions) will be hosted. Finally, the impact of the work will be evaluated through pre/post event surveys with participants.

Outputs:

- design of two games
- training of students in game facilitation
- hosting of game jams
- assessment of participation

Outcomes:

- amplification of LCBP's core messages and objectives by gamifying the State of the Lake report and *Opportunities for Action*
- better informed public and encouragement of behavior change

Organization: SUNY Plattsburgh

Contact Person: Curt Gervich

Mailing Address: 101 Broad Street-147 Hudson Hall
Plattsburgh NY, 12901

Phone: 518-564-4030

E-mail: cgerv001@plattsburgh.edu

Website: plattsburgh.edu



NEIWPCC Code: LS-2022-106
EPA 0364-004-001
Start Date: 1/25/2023
Close Date:
Grant Amount: \$31,379.00
Non-federal Match: \$ 3,597.00
Total Amount: \$34,976.00

2023 Large Implementation Grant

concluded

Wind, Waves, and Variables – Lessons about the Lake Champlain Basin 2023

Project Summary

Funds were used to establish curriculum and teach lessons about pertinent social and physical sciences of the Lake Champlain Basin to 5th or 6th grade students at 4 schools located in Grand Isle and Franklin counties. Friends of Northern Lake Champlain (FNLC), along with an educational partner, will visit schools to teach lessons and provide field trips that will focus on sound principles of data collection, interviewing, observation, and interpretation. FNLC will collect photos, audio files, sketches, reflection papers, and reports to help solidify and foster life-long commitments in the students to educate themselves and make informed decisions about Lake Champlain. The main outcome of the course is that the pupils will gain confidence in participating, and be capable of directing their future actions in a fashion that minimizes deleterious effects to Lake Champlain

Outputs:

- design curriculum and teach a series of classes

Outcomes:

- pupils will gain confidence in participating
- capable of directing future actions in a fashion that minimizes deleterious effects to Lake Champlain

Organization: Friends of Northern Lake Champlain
Contact Person: Alison Spasyk
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 St. Albans, VT 05478
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E-mail: aspasyk@friendsofnorthernlakechamplain.org
Website: <https://www.friendsofnorthernlakechamplain.org>



NEIWPC Code: LS-2022-086
EPA: 0364-004-001
Start Date: 11/15/2022
Close Date: 7/26/23
Grant Amount: \$29,224.00
Non-federal Match: \$ 3,162.00
Total Amount: \$32,386.00

2020 Large Implementation Grant

concluded

Wind, Waves, and Variables – Lessons about the Lake Champlain Basin

Project Summary

Funds will be used to establish curriculum and teach lessons about pertinent social and physical sciences of the Lake Champlain Basin to 5th or 6th grade students at 4 schools located in Grand Isle and Franklin counties. Friends of Northern Lake Champlain (FNLC), along with an educational partner, will visit schools to teach lessons and provide field trips that will focus on sound principles of data collection, interviewing, observation, and interpretation. FNLC will collect photos, audio files, sketches, reflection papers, and reports to help solidify and foster life-long commitments in the students to educate themselves and make informed decisions about Lake Champlain. The main outcome of the course is that the pupils will gain confidence in participating, and be capable of directing their future actions in a fashion that minimizes deleterious effects to Lake Champlain

Outputs:

- design curriculum and teach a series of classes

Outcomes:

- pupils will gain confidence in participating
- capable of directing future actions in a fashion that minimizes deleterious effects to Lake Champlain

Organization: Friends of Northern Lake Champlain
Contact Person: Alison Spasyk
Mailing Address: PO Box 1145
 St. Albans, VT 05478
Phone: 802.238.6973
E-mail: aspasyk@friendsofnorthernlakechamplain.org
Website: <https://www.friendsofnorthernlakechamplain.org>



NEIWPC Code: LS-2020-062
EPA: 0346-004-001
Start Date: 5/26/2020
Close Date: 12/12/22
Grant Amount: \$27,485.00
Non-federal Match: \$ 6,752.00
Total Amount: \$34,237.00

2023 Large Implementation Grant

in progress

Wool and Water: Using Fiber Art to Bring Science to Lake Champlain

Project Summary

Wool and Water will bring science to local communities using fiber art to convey scientific information about water quality concepts, threats, and trends throughout the Basin. Outputs from the proposed project will include improved digital and physical communication tools and display materials to enhance the quality and impact of the exhibit. Physical outputs will also include a take home Watershed Action Card that will accompany the display and provide a means by which citizens can feel empowered to address the water quality issues described. Outcomes from the project will include an increased understanding of and appreciation for Basin resources, related threats, and priority actions needed to address them on the part of those who view the display, as well as those who engage with accompanying online tools and resources. Outcomes may also include increased public engagement with art and science, as well as improved citizen action, knowledge, and behavior with regard to lake-and watershed-friendly products and practices. The PI is AWI science director and artist, Dr. Michale Glennon.+

Outputs:

- improved digital and physical communication tools and display materials to enhance the quality and impact of the exhibit. Physical outputs will also include
- a take home Watershed Action Card that will accompany the display and provide a means by which citizens can feel empowered to address the water quality issues described.

Outcomes:

- increased understanding of and appreciation for Basin resources, related threats, and priority actions needed to address them on the part of those who view the display, as well as those who engage with accompanying online tools and resources.
- include increased public engagement with art and science, as well as improved citizen action, knowledge, and behavior with regard to lake-and watershed-friendly products and practices.

Organization: Paul Smith's College Adirondack Watershed Institute
Contact Person: Zoë Smith
Mailing Address: PO Box 265 Paul Smiths NY 12970
Phone: 518-327-6276
E-mail: zsmith1@paulsmiths.edu
Website: www.adkwatershed.org



NEIWPCC Code: LS-2022-089
EPA 0364-004-001
Start Date: 11/16/2022
Close Date:
Grant Amount: \$36,949.00
Non-federal Match: \$21,430.00
Total Amount: \$58,379.00

2023 Large Implementation Grant

in progress

Your Watershed, Your Lake: an interpretive trail encouraging control

Project Summary

The project will fund a public three-mile interpretive trail through the Saint Michael's College campus explaining how restored wetlands, tree plantings, invasive species removal, and improved land use practices, improve habitat for native wildlife and reduce nutrient pollution in the Champlain basin. The trail will highlight best land-use practices being implemented at the college to reduce runoff and nutrient pollution export, and to control invasive species.

Outputs:

- development and design of exhibit content
- development of trifold brochure with trail map
- development of trail and installation of 10 interpretive exhibit panels

Outcomes:

- a better informed public of land-use practices to reduce runoff and control invasive species

Organization: Saint Michael's College
Contact Person: Declan McCabe
Mailing Address: Biology Box 283; 1 Winooski Park Colchester, VT 05439
Phone: 802 654 2626
E-mail: dmccabe@smcvt.edu
Website: <https://www.smcvt.edu/academics/majors-minors-and-curriculum/biology/>



Students planting native, habitat-appropriate trees by a constructed wetland where one of the interpretive signs will be placed. While the physical interpretive trail is the end goal of the current project, we anticipate that the ongoing efforts such as planting, survey implementation, and invasive species control will bring additional educational benefits to students and other participants.



NEIWPCC Code: LS-2022-091
EPA 0364-004-001
Start Date: 1/13/2023
Close Date:
Grant Amount: \$34,446.00
Non-federal Match: \$20,936.00
Total Amount: \$55,383.00

2022 Program Project

concluded

DEI Video Series

Project Summary

This project is a series of 3 DEI related videos to be produced in 7 different language versions.

Outputs:

- Three videos produced in six languages that explain cyanobacteria, mercury levels in fish, and swimming health and safety concerns, including coliform and cyanobacteria.
<https://www.lcbp.org/recreating-safely/>

Outcomes:

- Diverse audience will be aware of human health concerns related to their use of the lake.

Organization: Peregrine Productions
Contact Person: Vince Franke
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 Waterbury, VT 05676
Phone: (802) 318 - 5289
E-mail: vince@peregrineproductions.com
Website: vince@peregrineproductions.com



https://youtu.be/DXP2XwvQHDA?si=vOFDpV020E_7FQpQ



NEIWPCC Code: L-2022-070
EPA 0357-001-000
Start Date: 6/30/2022
Close Date: 8/10/2023
Grant Amount: \$15,613.00
Non-federal Match:
Total Amount: \$15,613.00

2021 Program Project

concluded

Meet the Scientist and TMDL video series

Project Summary

The project will produce 7 roughly three to four minute videos with the intended outcomes being to improve the general understanding of farmers work to utilize precision agriculture to improve the Lake Champlain watershed condition and raise awareness about successful practices towards reaching levels mentioned in the TMDL. The Meet the Scientist videos are aimed to engage and educate the public through examples and profiles of local scientists working within the Lake Champlain Basin. By profiling a variety of successful scientists and farmers there will be multiple opportunities for a wide range of viewers to relate and better understand all the work being done in the basin.

Outputs:

- Seven 3-4 minute videos
<https://www.lcbp.org/news-and-media/media2/video/meet-the-scientist-video-series/>

Outcomes:

- improve the general understanding of farmers work to utilize precision agriculture to improve the Lake Champlain watershed condition
- raise awareness about successful practices towards reaching levels mentioned in the TMDL.

Organization: Peregrine Productions
Contact Person: Vince Franke
Mailing Address: 92 S Main St. #3
 Waterbury, VT 05676
Phone: (802) 318 - 5289
E-mail: vince@peregrineproductions.com
Website: vince@peregrineproductions.com



https://youtu.be/3SHoomcR_3E?si=TnZvgHgmAYWQq7QW



NEIWPCC Code: L-2020-076
EPA 0995-004-001
GLFC 0100-328-004
Start Date: 9/29/2020
Close Date: 5/1/2023
Grant Amount: \$24,025.00
Non-federal Match:
Total Amount: \$24,025.00

2020 Program Project

concluded

Public Awareness and Engagement Survey

Project Summary

Lake Champlain Basin watershed experts and University of Vermont social science research specialists will conduct a survey and appropriate analyses 1) to assess public knowledge of lake issues and public engagement in watershed stewardship behaviors in the Lake Champlain Basin, 2) to assess outcomes of education and outreach efforts of the Lake Champlain Basin Program (LCBP) and its partners, and 3) to identify specific sectors of the public that will benefit from future outreach efforts of the Lake Champlain Basin Program. The survey will include a statistically representative sample of New York, Vermont, and Quebec residents living within the watershed, and will help achieve the goals of the LCBP's long-term management plan: *Opportunities for Action: An Evolving Plan for the Future of the Lake Champlain Basin*. It will be designed to be repeatable to facilitate measurement of broad-scale, long-term changes in knowledge, attitudes, and actions over time.

Outputs:

- development of a repeatable electronic survey to facilitate measurement of broad-scale, long-term changes in knowledge, attitudes, and actions over time

Outcomes:

- improved understanding of public knowledge, attitudes and behaviors related to water quality and ecosystem health of the basin
- improved ability for LCBP and its partners to develop and implement targeted education and outreach efforts to specific audiences or locations, ultimately to promote improved water quality as a result of actions taken by members of the public.

Organization: UVM
Contact Person: Jane Kolodinsky
Mailing Address: Center for Rural Studies
 202 Morrill Hall, Burlington, VT 05405
Phone: 802-656-4616
E-mail: jkolodin@uvm.edu
Website: <https://www.uvm.edu/crs>



As an example of the type of outreach LCBP does, Colleen Hickey works with a member of the public to explain why it is important to raise the blade on lawnmowers to a minimum of 3" while tabling at a summer 2019 program. Photo by Kris Stepenuck.



NEIWPCC Code: L-2020-074
GLFC: 0100-323-004
Start Date: 8/13/2020
Close Date: 5/1/2023
Grant Amount: \$118,500.00
Non-federal Match: \$ 18,960.00
Total Amount: \$137,460.00

2023 Program Grant

in progress

Stream Wise Award Program Development

Project Summary

This project funded revisions to streamline the program's processes based on feedback from the pilot year. Revisions were made to the field data collection app, Atlas, Assessment Protocol document, and associated materials. Suggestions for additional materials to develop were also given, in particular for outreach media and materials.

Outputs:

- Report Template Creation
- Photo Curation and Acquisition
- Support E-news and Social Media of Stream Wise and partners
- Training & Outreach Media Development
- Develop Event Poster, Postcard, Rack Card
- Introduction to Stream Wise – Webinar

Outcomes:

- behavior change resulting from consistent messages that describe specific actions, the effect of the action, and seeing other people take action
- reduce stream bank erosion in the Lake Champlain Basin
- enhance and protect water quality, aquatic and riparian habitat, and increase flood resilience

Organization: Fluid Consulting
Contact Person: Dana Allen
Mailing Address: 48 Stowe Street
 Waterbury, VT 05676
Phone: 802.999.9762
E-mail: dana@fluidstateconsulting.com
Website: www.fluidstateconsulting.com



NEIWPCC Code: LS-2023-017
EPA: 0357-004-001
Start Date: 4/7/2023
Close Date:
Grant Amount: \$49,947.00
Non-federal Match:
Total Amount: \$49,947.00

2021 Program Project

concluded

Stream Wise Data Collection Application and Streamwise Online Resource Website

Project Summary

This project will create a Stream Wise Data Collection Application and a Stream Wise Online Resource Website that contains a planning map and data resource hub that empowers local organizations to run successful Stream Wise Award Programs in the Lake Champlain Basin. The new Stream Wise Award Program is designed to incentivize communities within the Lake Champlain Basin to engage in activities that enhance and protect water quality, aquatic and riparian habitat, and increase flood resilience. LCBP is currently working with the Phase 1 Stream Wise Project Team to coordinate Phase 1 of this project with Federal and State partners serving on the project's Project Advisory Committee (PAC) and several local organizations providing input as Community Partners (CPs). A separate project will create the public-facing general website referred to the Stream Wise Online Resource Hub, on which these materials will be integrated.

Outputs:

- development of an award program designed to promote stream bank stability
- Stream Wise Data Collection Application and a Stream Wise Online Resource Website

Outcomes:

- behavior change resulting from consistent messages that describe specific actions, the effect of the action, and seeing other people take action
- reduce stream bank erosion in the Lake Champlain Basin
- enhance and protect water quality, aquatic and riparian habitat, and increase flood resilience

Organization: FluidState Consulting
Contact Person: Dana Allen
Mailing Address: 48 Stowe Street
 Waterbury, VT 05676
Phone: 802.999.9762
E-mail: dana@fluidstateconsulting.com
Website: www.fluidstateconsulting.com



NEIWPC Code: L-2021-070
GLFC: 0100-331-004
Start Date: 7/30/2021
Close Date: 10/27/2022
Grant Amount: \$9,405.00
Non-federal Match:
Total Amount: \$9,405.00

2022 Program Project

concluded

Stream Wise, Phase 2

Project Summary

Under Stream Wise Phase 2, the materials and methods developed during Phase 1 will be tested and refined using chosen project partners around the Lake Champlain Basin. Work accomplished under Phase 2 workplan will consist generally of assistance with translation of materials from English to French (the actual translation of Stream Wise language is subject to a different workplan and scope – work under this workplan will consist of integration of translation with existing documents graphically), an introductory webinar on the Stream Wise program for interested practitioners, training on the communications and outreach materials and how to leverage them, training on desktop and field assessment methods to use during property assessment (both online and in the field for each specific region of the Basin), photo acquisition for use in outreach and assessment material updates, development of social media channels and content, assistance with and facilitation of the feedback process once materials and methods have been tested, and integration of feedback with existing materials and methods (both in English and French).

Outputs:

- French version of all Stream Wise Phase 1 material
- development of introductory webinar
- Steam Wise social media account

Outcomes:

- educate and incentivize communities to engage in riparian stewardship activities

Organization: FluidState Consulting
Contact Person: Dana Allen
Mailing Address: 48 Stowe Street
 Waterbury, VT 05676
Phone: 802.999.9762
E-mail: dana@fluidstateconsulting.com
Website: www.fluidstateconsulting.com



NEIWPC Code: L-2022-015
GLFC: 0100-331-004
Start Date: 3/8/2022
Close Date: 3/28/2023
Grant Amount: \$ 34,047.00
Non-federal Match:
Total Amount: \$34,047.00

2023 Program Project

in progress

Stream Wise 2023 Season in the Ausable River Watershed

Project Summary

The Ausable River Association (AsRA) will participate in the 2023 Stream Wise partnership with the Stream Wise Project Team and other Stream Wise partners using Stream Wise program material in accordance with the Stream Wise Assessment Protocol. An estimated 8-12 Stream Wise Assessments will be conducted.


Outputs:

- attend Stream Wise trainings
- Create and distribute social media and print awareness campaign to spread the word and provide outreach to engage with stream and river property owners to participate in Stream Wise.
- conduct marketing campaign
- conduct destop and field visit assessments

Outcomes:

- engagement of landowners in riparian stewardship activities
- Ausable River Association has become a well-recognized resource for riparian restoration in New York

Organization: Ausable River Association
Contact Person: Carrienne Pershyn
Mailing Address: 1181 Haselton Road
 Wilmington, NY 12997
Phone: 518.637.6859
E-mail: cpershyn@ausableriver.org
Website: www.ausableriver.org

 NEIWPC Code: LS-2023-023
 EPA 0364-004-001
 Start Date: 4/7/2022
 Close Date:
 Grant Amount: \$15,000.00
 Non-federal Match: \$ 250.00
 Total Amount: \$17,250.00

2022 Program Project

concluded

Stream Wise Pilot Year in the Ausable River Watershed

Project Summary

The Ausable River Association participated in the 2022 Stream Wise pilot year in partnership with the Stream Wise Project Team and other Stream Wise pilot year partners using the Phase 1 Stream Wise program material in accordance with the Phase 1 Stream Wise Assessment Protocol. An estimated 5-10 Stream Wise Assessments will be conducted.

Outputs:

- attended Stream Wise trainings
- conducted marketing campaign
- conducted 10 destop and field visit assessments


Outcomes:

- engagement of landowners in riparian stewardship activities
- Ausable River Association has become a well-recognized resource for riparian restoration in New York

Organization: Ausable River Association
Contact Person: Carrienne Pershyn
Mailing Address: 1181 Haselton Road
 Wilmington, NY 12997
Phone: 518.637.6859
E-mail: cpershyn@ausableriver.org
Website: www.ausableriver.org



A landowner that received a Stream Wise award.

 NEIWPC Code: LS-2022-030
 EPA 0357-004-001
 Start Date: 4/7/2022
 Close Date: 12/19/2022
 Grant Amount: \$11,075.00
 Non-federal Match: \$ 555.00
 Total Amount: \$11,630.00

2023 Program Project

in progress

Stream Wise 2023 Season Pilot Year in the Franklin County Watershed

Project Summary

Franklin County Natural Resources Conservation District (FCNRCD) will participate in the 2023 Stream Wise pilot year in partnership with the Stream Wise Project Team and other Stream Wise pilot year partners using Stream Wise program materials in accordance with the Stream Wise Assessment Protocol. An estimated 12 Stream Wise Assessments will be conducted

Outputs:

- List of properties for test run of Stream Wise material
- up to 12 households participating in Stream Wise
- up to 12 entries of Stream Wise Assessments within Fulcrum App

Outcomes:

- engagement of landowners in riparian stewardship activities
- Franklin County NRCD has become a well-recognized resource for riparian restoration in Vermont

Organization: Franklin County NRCD
Contact Person: Lauren Weston
Mailing Address: 50 South Main St, Suite B-20
 St. Albans, VT 05478
Phone: (802) 528-4176
E-mail: lauren.weston@usda.gov
Website: www.franklincountynrcd.org



NEIWPCC Code: LS-2023-022
EPA 0364-004-001
Start Date: 4/5/2023
Close Date:
Grant Amount: \$15,000.00
Non-federal Match: \$ 2,500.00
Total Amount: \$17,500.00

2023 Program Project

in progress

Stream Wise 2023 Season Pilot Year in the Lake Champlain Watershed

Project Summary

The Lake Champlain Committee (LCC) will participate in the 2023 Stream Wise pilot year in partnership with the Stream Wise Project Team and other Stream Wise pilot year partners using Stream Wise program materials in accordance with the Stream Wise Assessment Protocol. An estimated eight to ten Stream Wise Assessments will be conducted based on responses to LCC outreach.

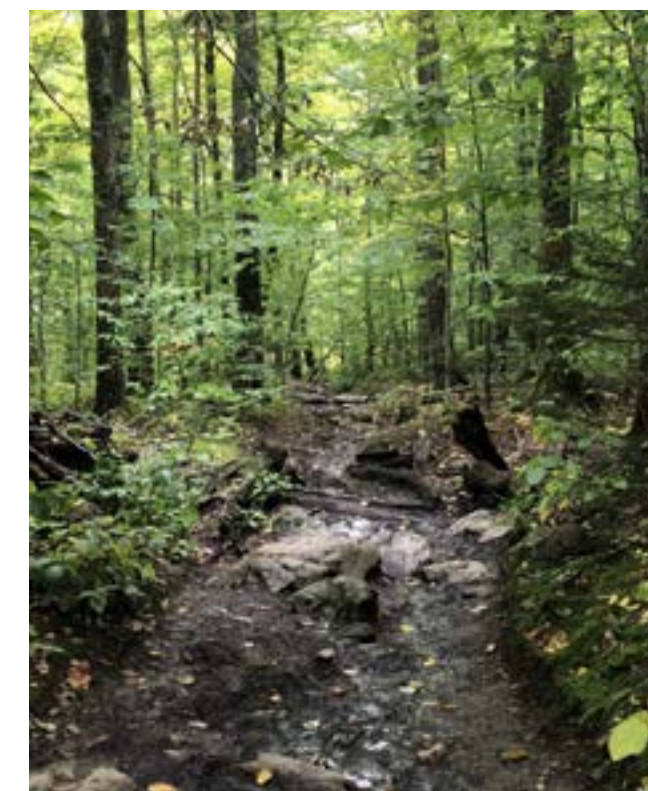
Outputs:

- Attend Stream Wise Outreach Materials/Content sign-up meeting and the three training sessions.
- An LCC outreach campaign with ten social media posts (Facebook, Front Porch Forum, and Instagram), one blog post, one website post to be regularly updated, a website volunteer form, three email blasts, one news column for print in regional media.
- 8-10 Stream Wise Assessments with written reports and recommendations for landowners.

Outcomes:

- engagement of landowners in riparian stewardship activities
- improved water quality in the Lake Champlain Basin through increased stream buffer quantity and quality
- greater public awareness of the Stream Wise Program after its pilot year
- increased public understanding of the value of stream buffers.

Organization: Lake Champlain Committee
Contact Person: Lori Fischer
Mailing Address: 208 Flynn Ave. Building 3
 Studio 3F, Burlington, VT 05401
Phone: (802) 658-1414
E-mail: lcc@lakechamplaincommittee.org
Website: lakechamplaincommittee.org



A stream meanders through Camel's Hump State Forest in Vermont, surrounded by dense vegetation at multiple canopy levels. (Photo by Eileen Fitzgerald).



NEIWPCC Code: LS-2023-021
EPA 0364-004-001
Start Date: 4/5/2023
Close Date:
Grant Amount: \$15,000.00
Non-federal Match: \$ 2,500.00
Total Amount: \$17,500.00

2023 Program Project

in progress

Stream Wise 2023 Season Pilot Year in the Lamoille Watershed

Project Summary

Lamoille County Conservation District will participate in the 2023 Stream Wise pilot year in partnership with the Stream Wise Project Team and other Stream Wise pilot year partners using Stream Wise program material in accordance with the Stream Wise Assessment Protocol. An estimated 5 of Stream Wise Assessments will be conducted.

Outputs:

- Attend Stream Wise Outreach Materials/Content sign-up meeting and the three training sessions.
- An LCC outreach campaign with ten social media posts (Facebook, Front Porch Forum, and Instagram), one blog post, one website post to be regularly updated, a website volunteer form, three email blasts, one news column for print in regional media.
- 8-10 Stream Wise Assessments with written reports and recommendations for landowners.

Outcomes:

- engagement of landowners in riparian stewardship activities
- improved water quality in the Lake Champlain Basin through increased stream buffer quantity and quality
- greater public awareness of the Stream Wise Program after its pilot year
- increased public understanding of the value of stream buffers.

Organization: Lamoille County Conservation District
Contact Person: Emily Porter-Goff
Mailing Address: 109 Professional Dr., Suite 2 Morrisville, VT 05661
Phone: 802-888-9218 ex 3007
E-mail: emilylccdedu@gmail.com
Website: lcnrcd.org



A stream meanders through Camel's Hump State Forest in Vermont, surrounded by dense vegetation at multiple canopy levels. (Photo by Eileen Fitzgerald).



NEIWPCC Code: LS-2023-026
EPA 0364-004-001
Start Date: 5/5/2023
Close Date:
Grant Amount: \$9,234.00
Non-federal Match:
Total Amount: \$9,234.00

2023 Program Project

in progress

Stream Wise 2023 Season in the Missisquoi Headwaters

Project Summary

The Missisquoi River Basin Association (MRBA) will participate in the 2023 Stream Wise pilot year in partnership with the Stream Wise Project Team and other Stream Wise pilot year partners using Stream Wise program material in accordance with the Stream Wise Assessment Protocol. MRBA will conduct four (4) Stream Wise Assessments.

Outputs:

- attend trainings
- conduct marketing campaign
- 4 households participating in Stream Wise
- 4 entries of Stream Wise Assessments within Fulcrum App

Outcomes:

- engagement of landowners in riparian stewardship activities
- MRBA has become a well-recognized resource for riparian restoration in Vermont

Organization: Missisquoi River Basin Association
Contact Person: Lyndsey Wright
Mailing Address: 2839 VT Route 105 East Berkshire, VT 05447
Phone: (450) 248-0100
E-mail: lindsey@mrbavt.com
Website: mrbavt.com



NEIWPCC Code: LS-2023-025
EPA 0364-004-001
Start Date: 4/5/2023
Close Date:
Grant Amount: \$15,000.00
Non-federal Match: \$ 2,500.00
Total Amount: \$17,500.00

2022 Program Project

in progress

Stream Wise Pilot Year in the Missisquoi Bay Watershed

Project Summary

OBVBM will participate in the 2023 Stream Wise program in partnership with the Stream Wise Project Team and other Stream Wise pilot year partners using Stream Wise program material in accordance with the Stream Wise Assessment Protocol. An estimated 5-10 Stream Wise Assessments will be conducted.

Outputs:

- List of properties for test run of Stream Wise material
- 5-10 households participating in Stream Wise
- 5-10 entries of Stream Wise Assessments within Fulcrum App

Outcomes:

- Education and incentivization of communities within the Québec portion of the Missisquoi Bay watershed to engage in riparian stewardship activities

Organization: OBVBM
Contact Person: Émile Veilleux
Mailing Address: 10 rue de la Rivière, #200
 Bedford (Québec) Canada, J0J 1A0
Phone: (802) 393-0076
E-mail: projet@obvbm.org
Website: www.obvbm.org



NEIWPCC Code: LS-2022-029
GLFC 0100-334-004
Start Date: 4/12/2023
Close Date:
Grant Amount: \$9,405.00
Non-federal Match: \$ 500.00
Total Amount: \$9,905.00

2023 Program Project

in progress

Stream Wise Pilot Year in the Pike River (Lake Carmi) Watershed

Project Summary

The Franklin Watershed Committee will participate in the 2023 Stream Wise pilot year in partnership with the Stream Wise Project Team and other Stream Wise pilot year partners using Stream Wise program material in accordance with the Stream Wise Assessment Protocol. An estimated 8 of Stream Wise Assessments will be conducted.

Outputs:

- attend Stream Wise trainings
- conduct marketing campaign
- conduct destop and field visit assessments

Outcomes:

- engagement of landowners in riparian stewardship activities
- Franklin Watershed Committee has become a well-recognized resource for riparian restoration in Vermont

Organization: Franklin Watershed Committee
Contact Person: Julia Crocker
Mailing Address: PO Box 79
 Franklin, VT 05457
Phone: (802) 825-1243
E-mail: juliamariecrocker@gmail.com
Website: https://www.franklinwatershed.org/



NEIWPCC Code: LS-2023-024
EPA 0364-004-001
Start Date: 6/29/2023
Close Date:
Grant Amount: \$7,739.00
Non-federal Match:
Total Amount: \$ 7,739.00

2023 Program Project

in progress

Stream Wise Pilot Year in the Saranac River Watershed

Project Summary

The Paul Smith's College Adirondack Watershed Institute will participate in the 2023 Stream Wise pilot year in partnership with the Stream Wise Project Team and other Stream Wise pilot year partners using Stream Wise program material in accordance with the Stream Wise Assessment Protocol. An estimated 10 Stream Wise Assessments will be conducted.

Outputs:

- attend Stream Wise trainings
- conduct marketing campaign
- conduct destop and field visit assessments

Outcomes:

- engagement of landowners in riparian stewardship activities
- Paul Smith's College has become a well-recognized resource for riparian restoration in New York

Organization: Paul Smith's College
Contact Person: Tom Collins
Mailing Address: PO Box 265
Phone: (518)-327-6155
E-mail: tcollins1@paulsmiths.edu
Website: <https://www.adkwatershed.org/>



NEIWPCC Code: LS-2023-028
EPA 0364-004-001
Start Date: 5/3/2023
Close Date:
Grant Amount: \$14,926.00
Non-federal Match: \$ 3,000.00
Total Amount: \$17,926.00

2023 Program Project

in progress

Stream Wise 2023 Season in the Winooski River Watershed

Project Summary

Stream Wise Project Team and other Stream Wise pilot year partners using Stream Wise program material in accordance with the Stream Wise Assessment Protocol. We propose to conduct approximate twelve assessments.

Outputs:

- attend Stream Wise trainings
- conduct marketing campaign
- conduct destop and field visit assessments

Outcomes:

- engagement of landowners in riparian stewardship activities
- Friends of the Winooski River has become a well-recognized resource for riparian restoration in Vermont

Organization: Friends of the Winooski River
Contact Person: Michele W. Braun
Mailing Address: PO Box 777
 Montpelier, VT 05601
Phone: 802-279-3771
E-mail: michele@winooskiriver.org
Website: winooskiriver.org



NEIWPCC Code: LS-2023-020
EPA 0364-004-001
Start Date: 4/4/2023
Close Date:
Grant Amount: \$11,355.00
Non-federal Match: \$ 438.00
Total Amount: \$11,793.00

2022 Program Project

concluded

Stream Wise Pilot Year in the Winooski River Watershed

Project Summary

Friends of the Winooski River participated in the 2022 Stream Wise pilot year in partnership with the Stream Wise Project Team and other Stream Wise pilot year partners using the Phase 1 Stream Wise program material in accordance with the Phase 1 Stream Wise Assessment Protocol. An estimated four Stream Wise Assessments will be conducted.

Outputs:

- attended Stream Wise trainings
- conducted marketing campaign
- conducted 6destop and field visit assessments, 4 received awards

Outcomes:

- engagement of landowners in riparian stewardship activities
- Ausable River Association has become a well-recognized resource for riparian restoration in Vermont

Organization: Friends of the Winooski River
Contact Person: Michele W. Braun
Mailing Address: PO Box 777
 Montpelier, VT 05601
Phone: 802-279-3771
E-mail: michele@winooskiriver.org
Website: winooskiriver.org



NEIWPCC Code: LS-2022-040
EPA 0357-004-001
Start Date: 4/29/2022
Close Date: 4/24/2023
Grant Amount: \$ 5,899.00
Non-federal Match: \$ 483.00
Total Amount: \$ 6,382.00

2022 Program Project

in progress

Summit to Shore Media Campaign

Project Summary

This project will produce a series of videos that highlight three of the major sub-basins in the Lake Champlain watershed by following the major tributary from its headwaters to the outlet at the Lake. Each sub-basin journey would, along the way, highlight 10-15 significant natural features, points of interest, community success stories, and/or stewardship or education outreach projects.

Outputs:

- A story map presentation (MapMe, Esri StoryMap, or other format) that includes points on an interactive map that link to video vignettes for each of the 10-15 sites
- one three-to-five-minute video that compiles the video elements from the story map.

Outcomes:

- The public is more aware of natural areas and recreational opportunities, water quality improvement efforts, and opportunities to get involved in efforts near them.

Organization: Peregrine Productions
Contact Person: Vince Franke
Mailing Address: 92 S Main St. #3
 Waterbury, VT 05676
Phone: (802) 318 - 5289
E-mail: vince@peregrineproductions.com
Website: vince@peregrineproductions.com



NEIWPCC Code: LS-2022-074
EPA 0356-004-001/0357-004-001
Start Date: 7/15/2022
Close Date:
Grant Amount: \$34,475.00
Non-federal Match:
Total Amount: \$34,475.00

2022 Program Project

concluded

TMDL Branding and Microsite (Clean Water Commitment)

Project Summary

The Lake Champlain Basin Program has requested branding, design, layout, programming, and testing of a new microsite for their TMDL (Clean Water Commitment) program. The site will host the content currently on the LCBP's Clean Water Commitment page, as well as additional information and resources. We are envisioning the new site to be 5-7 pages. Taylor Design will also develop a new logo for the initiative. LCBP will supply all content.

In addition, Taylor Design will employ the resources of a computer animator to provide updated visuals. Devin previously worked with LCBP on the Clean Water Commitment page.

Outputs:

- A website that explains the Vermont phosphorus TMDL and the work being done to achieve its goals.

Outcomes:

- The public will better understand the TMDL and what they can do to help achieve its goals.

Organization: Taylor Design
Contact Person: Dan Taylor
Mailing Address: 247 Main Street
 Stamford, CT 06901
Phone: 203.969.7200
E-mail:
Website: www.taylor design.com



NEIWPCC Code: L-2021-096
EPA 0356-004-001
Start Date: 1/4/2022
Close Date: 12/2/2023
Grant Amount: \$20,000.00
Non-federal Match:
Total Amount: \$20,000.00

2021 Program Grant

in progress

Vermont Agricultural Water Quality Partnership Coordination

Project Summary

This grant will support the coordination and communications efforts of the Vermont Agricultural Water Quality Partnership (VAWQP) in order to improve water quality and wildlife habitat in the Lake Champlain Basin and beyond. The VAWQP is composed of nine agencies and organizations that provide education, technical and financial assistance to the Vermont farming community to address water quality and other natural resource concerns on farms. The purpose of the partnership is to coordinate efforts to improve water quality and wildlife habitat on farmland; deliver educational, technical and financial assistance in the most efficient way possible; provide the best possible service experience for the landowner; and help the Vermont public understand the water quality achievements of the agricultural community and supporting partners. Coordination efforts include regular meetings and trainings, collective learning and policy dialogue, and facilitation of communication through a website, newsletter, shared file system, and other technologies.

Outputs:

- provide education, technical and financial assistance to the Vermont farming community to address water quality and other natural resource concerns on farms
- coordination of meetings and trainings, collective learning and policy dialogue, and facilitation of communication through a website, newsletter, shared file system, and other technologies.

Outcomes:

- improve water quality and wildlife habitat in the Lake Champlain Basin and beyond
- help the Vermont public understand the water quality achievements of the agricultural community and supporting partners

Organization: Vermont Association of Conservation Districts
Contact Person: Jill Arace
Mailing Address: PO Box 566
 Waitsfield, VT 05673-0566
Phone: (802) 496-5162
E-mail: jill.arace@vacd.org
Website: vacd.org



NEIWPCC Code: L-2020-088
GLFC 0100-331-002
Start Date: 11/20/2020
Close Date:
Grant Amount: \$100,000.00
Non-federal Match:
Total Amount: \$100,000.00

2021 Program Grant

concluded

Winooski Watershed Artist-in-Residence Project

Project Summary

Artists worked with three schools and community groups in the Winooski River watershed to engage students and members of the public in creating high-quality artwork that helps them interpret Lake Champlain basin scientific data, cultural trends, or historical facts, and express their connection to their watershed and relationship with the changing climate and its impacts on our landscapes, our communities, and our lives. The project provided an engaging story of changes in the landscape over time, to support teachers and teaching artists to put data on climate change into a local context. It will result in public exhibitions of artworks produced by artists partnering with students and community members, to the extent feasible in the context of the global covid-19 pandemic. It will invite and inform people of all ages through watershed and climate change education programs, community-based creative events, and art exhibitions that engage watershed residents in connection to their place in the watershed, including scientific data, cultural and historic trends, and future vision.


Outputs:

- public exhibitions of artworks produced by artists partnering with students and community members

Outcomes:

- engage watershed residents in connection to their place in the watershed, including scientific data, cultural and historic trends, and future vision.

Organization: Friends of the Winooski River
Contact Person: Michele Braun
Mailing Address: P.O. Box 777
 Montpelier, VT 05601-0777
Phone: 802-279-3771
E-mail: michele@winooskiriver.org
Website: <https://winooskiriver.org>

 **NEIWPCC Code:** L-2021-006
GLFC 0100-323-004 0100-328-004
Start Date: 1/25/2021
Close Date: 3/24/2023
Grant Amount: \$39,988.00
Non-federal Match:
Total Amount: \$39,988.00

2022 Small Implementation Grant

concluded

A Day at the River

Project Summary

This project provided a well-rounded, outdoor water appreciation and education full-day fieldtrips to 7 Lamoille County classes. Lessons included water quality, and watershed education, as well as lessons including creative writing and poetry, art, water's role in the community and each student's role in protecting their water. Students came away from this experience with a deeper understanding of the role of water in their lives, what they can do to protect it as a citizen of the watershed and how important it will be in the future to plan for water protection. Teachers were exposed to numerous lessons and activities which can easily be conducted out-of-doors with low-cost materials. Lessons offered a holistic approach to integrating nature and water into all subjects, providing inspiration for future classes.

Outputs:

- 7 full day field trips with lessons on water quality and watersheds
- planned curriculum


Outcomes:

- students will have deeper understanding of the role of water in their lives, what they can do to protect it as a citizen of the watershed and how important it will be in the future to plan for water protection.

Organization: Lamoille County NRCD
Contact Person: Emily Porter-Goff
Mailing Address: 109 Professional Dr., Suite 2,
 Morrisville, VT 05661
Phone: 802-888-9218 x 3007
E-mail: emilylccdedu@gmail.com
Website: lcnrcd.org



Students sampling for aquatic macroinvertebrates

 **NEIWPCC Code:** LS-2022-057
EPA 0357-004-001
Start Date: 5/13/2022
Close Date: 9/7/2023
Grant Amount: \$14,998.00
Non-federal Match: \$ 4,004.00
Total Amount: \$19,002.00

2022 Small Implementation Grant

in progress

A “Spiny” Project (Phase 2): Focusing on schools and municipalities to protect the spiny softshell turtle and its habitats, the Lake Champlain and its tributaries.

Project Summary

The spiny softshell turtle (SST), *Apalone spinifera*, is an endangered native species of Lake Champlain (LC) region and represents a meaningful ambassador to educate the public about the issues faced by Lake Champlain and its tributaries (LC & Tr.), and to engage citizens in actions promoting health of the whole ecosystem. First, students (and their families) will participate in a 2- to 3-week school program with interactive presentations about SST and its habitats. They will learn and act about the conservation of this species and the threats on it. Second, we will reach municipal officials with an annual meeting to raise awareness about the SST and the environmental issues faced by LC & Tr., giving them the importance of their support to protect this endangered species. With a temporary exhibition of a live SST at City Hall, municipal officials will be more aware of the fragility of that species and could transfer this knowledge with employees and community members welcomed at City Hall. Finally, we will educate community members with an annual special activity, accompanied by the release of the SST hatchlings incubated in the zoo’s laboratory for the Mikinak Festival, on site in Pike River.

Outputs:

- 2-3 week school program
- annual meeting with municipal officials
- temporary exhibit at City Hall
- annual community activity coordinated with the hatchling release

Outcomes:

- inform citizen audiences about threats to turtles and to the Lake Champlain watershed, and benefits of healthy ecosystems

Organization: Zoological Society of Granby
Contact Person: Véronique Bellavance
Mailing Address: 525 rue Saint-Hubert
 Granby, Qc Canada, J2G 5P3
Phone: 450-372-9113 ext. 2207
E-mail: vbellavance@zoodegranby.com
Website: www.zoodegranby.com



Students and teachers were enthusiastic of the school program “An endangered classmate” given in 2015. This photo, taken during a presentation show the involvement and excitement of the students for the spiny softshell turtle.



NEIWPCC Code: L-2022-034
GLFC 0100-334-004
Start Date: 4/13/2021
Close Date:
Grant Amount: \$14,901.00
Non-federal Match: \$19,515.00
Total Amount: \$34,416.00

2019 Small Implementation Grant

concluded

Ahead of the Storm - School Stormwater Education and Outreach

Project Summary

The Lake Champlain Committee partnered with St. Albans City Elementary School to implement a stormwater education program. We worked with lead 7th and 8th grade science teachers at the school and used the “Soaking Up Stormwater” curriculum to help students learn about stormwater issues. The project included a slide presentation and in-classroom demonstrations about stormwater, stormwater lessons, site tours of green infrastructure, a community open house, a school service project, and an E-newsletter. These activities helped students learn about stormwater, share their knowledge, and participate in efforts to reduce stormwater impacts on their school campus.

Outputs:

- Developed an educational program tailored to school individual stormwater assessment
- Created interactive lessons for educators
- Provided on-site instruction
- Advised on development of outreach materials tailored for individual school communities

Outcomes:

- Improved understanding of stormwater assessments, mitigation and infrastructure for students, school educators and staff
- More connection between the students, the community and the local environment
- A better understanding of water quality concerns

Organization: Lake Champlain Committee
Contact Person: Lori Fisher
Mailing Address: 208 Flynn Avenue, Building 3
 Studio F3, Burlington, VT 05401
Phone: 802-658-1421
E-mail: lorif@lakechamplaincommittee.org
Website: <https://www.lakechamplaincommittee.org/>



NEIWPCC Code: LS-2019-031
EPA 0995-003-001
Start Date: 3/11/2019
Close Date: 11/30/2022
Grant Amount: \$10,000.00
Non-federal Match: \$13,430.00
Total Amount: \$23,430.00

2021 Small Implementation Grant

in progress

Champlain-Adirondack Biosphere Network Traveling Exhibit

Project Summary

Bright Blue Ecomedia will oversee the development and deployment of a traveling exhibit that explains the concept, relevance, impact and vision of the Champlain Adirondack Biosphere Network (CABN) to communities across and adjacent to the Lake Champlain Basin lying within the boundary of the UNESCO designated Champlain Adirondack Biosphere Reserve. The overall project outcome is increased public recognition of the premise, promise and impact of the Champlain-Adirondack Biosphere Network and the larger UNESCO Man and Biosphere program, and how both can increase local environmental health and community sustainability. Outputs: (1) physical exhibit materials: 3-4 6' X 3' vinyl interpretive panels and display mounts; (2) audience: the exhibit will reach an estimated 10,000 viewers at 12 exhibition sites across the Lake Champlain Basin; (3) web presence: the CABN website will host a version of the exhibit content.

Outputs:

- traveling exhibit of 3-4 panels

Outcomes:

- increased public recognition of the premise, promise and impact of the Champlain-Adirondack Biosphere Network and the larger UNESCO Man and Biosphere program, and how both can increase local environmental health and community sustainability.

Organization: Bright Blue Ecomedia
Contact Person: Eric Holmlund
Mailing Address: 186 Kiwassa Road
Saranac Lake, NY 12983
Phone: 518 637 9257
E-mail: eholmlund@paulsmiths.edu
Website: <https://www.brightbluemedi.org/>



NEIWPCC Code: L-2021-064
EPA: 0356-004-001
Start Date: 6/11/2021
Close Date:
Grant Amount: \$9,776.00
Non-federal Match:
Total Amount: \$9,776.00



2022 Small Implementation Grant

concluded

Community News Service: Stories of the Lake

Project Summary

Community News Service: Stories of the Lake created a Lake Champlain news beat in which student reporters wrote stories for local news outlets about issues related to Lake Champlain to raise awareness and engagement -- under the direction of professional editors -- and drawing on the resources, relationships and academic supports of UVM, Lake Champlain Maritime Museum, and other stakeholders. These stories reached thousands of regional residents on print, radio and television media platforms in Vermont, New York, and Quebec. Stories focused in on the issues identified in the *State of the Lake Report* and *Opportunities for Action* and on the people and stakeholders active in and around Lake Champlain. 23 stories were published working directly with student reporters and professional journalists from January through December of 2023.

The project saw students' work published in at least 16 news outlets across Vermont. Professional editors expressed huge interest in their work, and this project helped us expand the pool of news partners we work with. As part of the project an environmental focused journalism team, Green Beat, was launched which due to the success of the last few months will remain a permanent part of the Community News Service. Readers and editors expressed appreciation for our focus on less-covered issues and topics and for our in-depth work -- something professional news operations often lack the resources to pursue. For our program, we learned that we could expand from our traditional offering of one group of students working with one outlet each. We will still have that, but also specialized groups such as Green Beat.

Outputs:

- 23 stories published working directly with student reporters and professional journalists

Outcomes:

- raise awareness and engagement around issues related to Lake Champlain

Organization: LCMM (for Center for Research on Vermont at the UVM)
Contact Person: Susan McClure
Mailing Address: 4472 Basin Harbor Rd.
Vergennes, VT 05491
Phone: 802-475-2022 ext. 102
E-mail: SusanM@lcmm.org
Website: lcmm.org



Screen grab of a story published on Vermont Digger

NEIWPCC Code: LS-2022-064
EPA: 0346-004-001
Start Date: 7/27/2022
Close Date: 8/7/2023
Grant Amount: \$14,993.00
Non-federal Match: \$ 9,077.00
Total Amount: \$24,070.00



2020 Small Implementation Grant

concluded

Connecting the North Branch Nature Center to the North Branch River

Project Summary

The North Branch Nature Center offers trails, exhibits, educational programs, summer camps, lectures, workshops, outings, and citizen science opportunities. While it has grown considerably in the past few years in terms of offerings and infrastructure, there is a need to increase the connection of programs and visitors to the river the Center is named after. The Center will partner with the Friends of the Winooski River to improve and develop river-related programming to include a series of guided river walks, a river festival, expansion of an aquarium exhibit, and a self-guided river tour. The emphasis in all of these efforts will be to encourage visitors not only to appreciate streams and rivers, but also to protect them by taking actions such as absorbing stormwater at home, planting riparian buffers along streams, preserving forestland, and maintaining gravel roads and driveways.

Outputs:

- series of weekly (4-5) community river walks and one public lecture/workshop
- develop and print reusable self-guided river tour brochures for visitors
- an updated and expanded aquarium exhibit
- developed and held a day-long river festival summer or fall of 2021
- self-guided river tour
- relationships built with river-related organizations

Outcomes:

- better appreciation of streams and rivers among the community
- more informed public that will take action to avoid activities that adversely affect waterways, install best management practices, and support statewide river and lake protection legislation

Organization: North Branch Nature Center
Contact Person: Shawn White
Mailing Address: P.O. Box 777
 Montpelier, VT 06501
Phone: 802-371-8988
E-mail: shawn@winooskiriver.org
Website: <https://northbranchnaturecenter.org/>



NEIWPCC Code: LS-2020-067
EPA: 0346-004-001
Start Date: 6/26/2020
Close Date: 2/2/2023
Grant Amount: \$ 9,187.00
Non-federal Match: \$ 1,952.00
Total Amount: \$11,139.00



2023 Small Implementation Grant

in progress

Conservation Block Parties: Inspiring Community Action for Water Quality

Project Summary

Nutrients, sediment, pathogens, and other pollutants move through the landscape and often find their way into Lake Champlain. Behind each of these pollution sources lies a chain of people who engage in behaviors that reduce the lake's water quality. That's why decreasing water pollution requires changes in behaviors that contribute to it. Grand Isle County Natural Resources Conservation District will embrace a community-level approach to the issue. GICNRCD will identify sub-watersheds within the county, one in each town, to host five Conservation Block Parties targeting their unique challenges. The outputs of this project will be five educational events. Each event will foster supportive, fun, and non-judgmental social environments that engender peer-to-peer intimacy aimed at improving ecosystem health. The outcome of the project will be a community with increased confidence, resources, and technical knowledge to implement action resulting in cleaner water.

Outputs:

- five educational events that will foster supportive, fun, and non-judgmental social environments that engender peer-to-peer intimacy aimed at improving ecosystem health.

Outcomes:

- increased confidence, resources, and technical knowledge to implement action resulting in cleaner water within the community

Organization: Grand Isle County Natural Resources Conservation District
Contact Person: Molly Varner
Mailing Address: P.O. Box 212
 North Hero, Vermont, 05474
Phone: (802) 372-8400
E-mail: molly.gicnrkd@gmail.com
Website: [Facebook.com/GrandIsleNRCD](https://www.facebook.com/GrandIsleNRCD)



The Grand Isle County community gather at Island Acres Farm in South Hero for an event hosted by Grand Isle County Natural Resources Conservation District and South Hero Land Trust. Guests toured a watershed through farmland, wetland, and shoreland.

NEIWPCC Code: LS-2023-052
EPA: 0364-004-001
Start Date: 6/14/2023
Close Date:
Grant Amount: \$12,635.00
Non-federal Match: \$ 2,174.00
Total Amount: \$14,809.00



2022 Small Implementation Grant concluded

Creating Meaningful Visitor Experience with a Museum Educator

Project Summary

Lake Champlain Maritime Museum hired a Museum Educator, Noah Johnson, to connect directly with the public and engage museum visitors with hands-on experiences and foster meaningful connections. Their role focused on creating opportunities for visitors that changed their experience from passive observation to active, memorable, and transformative engagement. By interacting with our visitors in a meaningful and impactful way, Noah empowered the public to act as more connected and invested stewards of Lake Champlain. Noah also trained museum docents on topics including clean water, healthy ecosystems, microplastic pollution, aquatic invasive species, and cyanobacteria.

Outputs:

- development of exhibit tours and interactive programming
- docent training

Outcomes:

- empowered stewards of Lake Champlain

Organization: Lake Champlain Maritime Museum

Contact Person: Katharine Noiva

Mailing Address: 4472 Basin Harbor Road
Vergennes VT 05491

Phone: 802-475-2022 ext. 109

E-mail: katharine@lcmm.org

Website: www.lcmm.org



Noah preparing interactive demonstrations for visitors



NEIWPC Code: LS-2022-028
 EPA 0346-004-001
 Start Date: 7/13/2022
 Close Date: 11/22/2022
 Grant Amount: \$15,000.00
 Non-federal Match: \$ 1,500.00
 Total Amount: \$16,500.00

2022 Small Implementation Grant in progress

Creation and distribution of private ponds management documentation

Project Summary

This project will create a booklet for owners of private ponds in the Quebec-portion of the Lake Champlain watershed to promote awareness and adoption of best management practices. The project will include information gathering and synthesis of best management practices, updated data on the number and owners of ponds, and document development and distribution to pond owners. An English version will be accessible online to reach the anglophone communities in the region. The project will cross three municipalités régionales de comté [regional county municipality]: Haut-Richelieu, Brome-Missisquoi and Memphrémagog and will include agricultural and recreational areas.

Outputs:

- development and distribution of 2000 booklets on the importance of good pond management available in English and in French.

Outcomes:

- increased awareness of the importance of good pond management
- increased adoption of best practices for pond management

Organization: OBVBM

Contact Person: Anthoni Barbé

Mailing Address: 110 rue de la Rivière
Bedford, Qc, Canada J0J 1A0

Phone: 514 404 5033

E-mail: anthoni.barbe@obvbm.org

Website: https://obvbm.org/



NEIWPC Code: L-2022-072
 GLFC 0100-334-004
 Start Date: 7/27/2022
 Close Date:
 Grant Amount: \$14,187.00
 Non-federal Match: \$ 600.00
 Total Amount: \$14,787.00



2022 Small Implementation Grant

concluded

Discovering the Ausable: An Aquatic Stewardship Program

Project Summary

ADK (Adirondack Mountain Club) and Ausable River Association (AsRA) teamed up to provide a once-in-a-lifetime experience for high schoolers age 13-15. *Discovering the Ausable: An Aquatic Stewardship Program* provides an immersive experience in aquatic ecology, hands-on science, and stewardship, while camping, paddling, and learning about responsible recreation. In this, the seventh year of the program, five students camped at ADK's Heart Lake Program Center outside of Lake Placid, NY for five days. Participants learned how to paddle a canoe safely, were introduced to watersheds, performed a variety of different chemical, physical, and biological tests on lakes and other water bodies within the Ausable River watershed and learned about aquatic invasive species. The program wrapped up by performing a clean-up at the mouth of the Ausable River by Lake Champlain.

Outputs:

- recruitment of youth campers (To comply with guidance from the New York State Department of Health, ADK had to limit the program to 5 participants)
- participants learned how to paddle a canoe safely, were introduced to watersheds, performed a variety of different chemical, physical, and biological tests on lakes and other water bodies within the Ausable River watershed and learned about aquatic invasive species.
- clean-up day participation

Outcomes:

- heightened environmental literacy and watershed stewardship of area youth
- stronger generation of environmental leaders with hands-on skills in the field of aquatic ecology.

Organization: Adirondack Mountain Club
Contact Person: Seth Jones
Mailing Address: 814 Goggins Road
 Lake George, NY 12845
Phone: 518-523-3480 x19
E-mail: seth@adk.org
Website: www.adk.org



2021 Participants too engrossed in macroinvertebrate identification on Marcy Brook to notice the mountain views.



NEIWPCC Code: LS-2022-060
EPA 0357-004-001
Start Date: 5/6/2022
Close Date: 7/26/2023
Grant Amount: \$11,181.00
Non-federal Match: \$ 2,297.00
Total Amount: \$13,478.00

2023 Small Implementation Grant

in progress

Diversifying Lake Stewardship

Project Summary

This project will engage 3rd-12th graders from Winooski and Burlington- VT's most racially diverse school districts, to participate in Floating Classrooms and LeaderShip. We seek to offer the program free of charge to these 2 student groups, specifically to create diversity among lake stewards. As with all Community Sailing Center (CSC) programming, students learn about the watershed, the importance of clean water, the impact of individual choices on the environment, how to respond to rapidly changing conditions and situations, communicate effectively, and rely on themselves, their crew, and their equipment. In the 2023-24 School Year, approximately 250 students from Winooski schools, and 150 from BSD's most economically impacted elementary schools will participate in CSC programming.

Outputs:

- approx 400 student participants will learn to sail and learn about the lake and themselves
- Seasonal Staff training

Outcomes:

- diversity among lake stewards benefits the health of Lake Champlain, by reaching new audiences and increasing access to waterways for diverse recreational activities.
- increased understanding of the watershed, the importance of clean water, and the impact of individual choices on the environment.

Organization: Lake Champlain Community Sailing Center
Contact Person: Janet Callison
Mailing Address: 505 Lake Street
 Burlington, VT 05401
Phone: 802-864-2499
E-mail: janet@communitysailingcenter.org
Website: www.communitysailingcenter.org



NEIWPCC Code: LS-2023-085
EPA 0364-004-001
Start Date: 9/19/2023
Close Date:
Grant Amount: \$15,000.00
Non-federal Match: \$41,260.00
Total Amount: \$86,269.00

2022 Small Implementation Grant

concluded

Diversity Access Initiative

Project Summary

The funded Diversity Access Initiative (DAI) took place at the Lake Champlain Community Sailing Center (CSC) during the summer of 2022. Activities were held at our location on the Burlington, VT waterfront, from where all summer camp participants, including those involved with the DAI, sailed, paddled, and learned about the lake, water quality, the importance of stewardship, and the impact of our actions on the lake and watershed.

CSC's Diversity Access Initiative was created to provide a long-term opportunity for BIPOC children to attend youth camps, learn to love and care for the lake, and explore the myriad educational and career opportunities that come through sailing.

Outputs:

- Updated curriculum for all camp levels
- Seasonal Staff training
- Sailing camps for children aged 11-15
- 29 Diversity Access campers, averaging 3 weeks of camp per camper, provided with hands-on stewardship education.

Outcomes:

- increased understanding of the watershed, the importance of clean water, and the impact of individual choices on the environment.

Organization: Lake Champlain Community Sailing Center
Contact Person: Janet Callison
Mailing Address: 505 Lake Street
 Burlington, VT 05401
Phone: 802-864-2499
E-mail: janet@communitysailingcenter.org
Website: www.communitysailingcenter.org



NEIWPCC Code: LS-2022-049
EPA 0357-004-001
Start Date: 4/21/2022
Close Date: 4/10/2023
Grant Amount: \$10,000.00
Non-federal Match: \$36,110.00
Total Amount: \$56,511.00

2021 Small Implementation Grant

in progress

Dog River Conservancy Outreach 2021

Project Summary

This project aims 1) to continue the ground-breaking research tracking Japanese knotweed, an invasive species, using drone imagery, and 2) to engage the community in an exploration of the historic evolution of the Water Street neighborhood of Northfield, VT. We will advance partnerships between Norwich University, the schools of the Central Vermont Supervisory Union, and the Town of Northfield's organizations that are active in the areas of land stewardship, civic engagement, and local history. The outputs include lesson plans on knotweed management strategies and signage and artwork on the cultural relevance of our conserved spaces. The outcomes include improved management of knotweed in the Dog River watershed and citizen engagement in the conservation and restoration efforts through scientific, artistic, and cultural connections.

Outputs:

- lesson plans on knotweed management strategies and signage
- artwork on the cultural relevance of our conserved spaces

Outcomes:

- improved management of knotweed in the Dog River watershed
- citizen engagement in the conservation and restoration efforts through scientific, artistic, and cultural connections

Organization: Center for Resilience and Security at Norwich University
Contact Person: Dr. Simon Pearish
Mailing Address: 158 Harmon Drive
 Northfield, Vermont 05663
Phone: 802-485-2177
E-mail: spearish@norwich.edu
Website: www.norwich.edu/cgrs



NEIWPCC Code: LS-2021-068
EPA 0356-004-001
Start Date: 7/27/2021
Close Date:
Grant Amount: \$10,000.00
Non-federal Match: \$ 2,953.00
Total Amount: \$12,953.00

2022 Small Implementation Grant

concluded

Engaging students and volunteers in stewardship projects along the Saranac River, Lake Champlain Islands, and Missisquoi River

Project Summary

This was a community engagement, public access improvement, and water quality project focused on the Saranac River, Lake Champlain's Valcour Island, and the Missisquoi River. We trained and deployed a team of stewardship interns that worked with over twenty volunteers to complete a series of projects that led to improved public access and reduced environmental impacts in the Lake Champlain Basin. Work was completed during the summer 2022 field season.

Outputs:

- Rehabilitation of ten campsites on Lake Champlain's Valcour Island, NY
- Construction of a new paddler campsite along Saranac River's Union Falls Pond, NY
- Creation of a formal take-out trail with signage at Indian Rapids Dam Carry, NY
- Installation of stone steps and boat slide to prevent erosion and provide access at Brownway Preserve's Missisquoi River Access, VT
- Articles and blog posts

Outcomes:

- Cultivation of stewardship skills for interns
- Increase of volunteer opportunities for residents
- improve public access, protect water quality, and reduce environmental impacts in the Lake Champlain Basin

Organization: Northern Forest Canoe Trail
Contact Person: Noah Pollock
Mailing Address: PO Box 565
 Waitsfield VT 05673
Phone: 802 496-2285x2
E-mail: noah@northernforestcanoetrail.org
Website: www.northernforestcanoetrail.org



Crew on Saranac River, NY



NEIWPC Code: LS-2022-067
EPA 0357-004-001
Start Date: 6/1/2022
Close Date: 4/4/2023
Grant Amount: \$14,615.00
Non-federal Match: \$ 8,649.00
Total Amount: \$23,264.00

2021 Small Implementation Grant

concluded

Franklin County Restoration Connections BioBlitz

Project Summary

This project will educate high school students about connections between land management, biodiversity, and water quality by providing place-based experiential learning and hands-on stewardship activities at a riparian restoration site in the Missisquoi Bay watershed. In a series of half-day field trips to a restored riparian buffer site along Black Creek, students will form and test hypotheses about how restoration planting influences local biodiversity as well as stream biological and chemical health. Students will also participate in hands-on environmental stewardship by assisting with site maintenance as a part of each field trip.

Outputs:

- 2 field trips, one each in the fall and spring with two combined classes, reaching 25 high school students, along with 4 teachers.

Outcomes:

- increased student knowledge of water quality issues in the Missisquoi Bay watershed, and how land management can support improved water quality, biodiversity, and ecosystem integrity.

Organization: Franklin County Natural Resources Conservation District
Contact Person: Lauren Weston
Mailing Address: 50 South Main Street, Suite B-20
 St. Albans, VT 05478
Phone: 802-528-4176
E-mail: lauren.weston@usda.gov
Website: www.franklincountynrcd.org



The restoration field site along Black Creek in July 2020



NEIWPC Code: LS-2022-026
EPA 0357-004-001
Start Date: 4/12/2022
Close Date: 6/29/2023
Grant Amount: \$13,612.00
Non-federal Match: \$ 376.00
Total Amount: \$13,988.00

2022 Small Implementation Grant

concluded

Growing Community Action

Project Summary

PMNRCD in collaboration with the Champlain Valley Native Plant Restoration Nursery (CVNPRN) will promote the water quality value of tree and shrub plantings and the positive effects individuals can have through use of restoration practices at their homes and by volunteering in their community.

Outputs:

- the development of a Poultney Mettowiee Watershed seed collection map for CVNPRN use
- the hosting of 3-4 community volunteer days at CVNPRN
- Stream Table Open House event at CVNPRN and volunteer days
- the creation of 2-3 CVNPRN internship descriptions
- 2-3 educational student events
- participation in 4+ local community events
- 7-8 press releases, media posts, and/or blog posts.

Outcomes:

- an engaged and informed community
- increased visibility of the CVNPRN
- promotion of native plants used in restoration
- increased student involvement in CVNPRN and restoration activities
- creation of resources to jumpstart CVNPRN's direct seeding initiative
- an increase in water quality practices implemented in the South Lake watershed.

Organization: Poultney Mettowiee Natural Resources Conservation District
Contact Person: Hilary Solomon
Mailing Address: P.O. Box 209
 Poultney VT 95764
Phone: (802) 558-3515
E-mail: hilary@pmnr.cd.org
Website: www.pmnrcd.org



Completed pollinator garden at the Poultney post office.



NEIWPC Code: LS-2022-068
EPA: 0357-004-001
Start Date: 5/27/2022
Close Date: 4/24/2023
Grant Amount: \$10,570.00
Non-federal Match: \$ 5,370.00
Total Amount: \$15,940.00

2023 Small Implementation Grant

in progress

Guided Watershed Tours: Interpretive Outdoor Trips to Educate Community Members and Inspire Stewardship.

Project Summary

The 2023 Guided Watershed Tours will include 15 themed interpretive trips with AsRA staff and guest naturalists, all lasting from two to four hours depending on the type of trip. All participants will receive an informational brochure with measurable actions they can personally take to improve the water quality of Lake Champlain, accompanied by LNT Ethics cards which include specific and measurable guidelines for recreationists to take while enjoying low-impact outdoor trips.

Outputs:

- A Wildflowers Hike, Bat and Moth Night, and Birding Hike in the spring for teens and adults
- An Insect Hike, Aquatic Ecology Exploration, Paddling Trip, and Geology Hike Tour in partnership with local youth centers in the summer
- A Teen/Adult Interpretive Paddling Tour and Lake Ecology in the summer for teens and adults
- An Edible Aquatic Plant Paddling Tour, Mushroom Hike, and Night Sky Tour in the fall for teens and adults
- One LCBP Stream Wise community event in the fall for teens and adults
- A Winter Tree ID Hike and Animal Tracking Hike in the winter for teens and adults.
- Purchase of terrestrial insect identification equipment, snowshoes, hiking poles, and micro spikes for the relevant programming

Outcomes:

- participants engaged in naturalist education, personal stewardship, low-impact recreation, and the Stream Wise Program
- engagement of citizens with the natural world, learning the benefits of a healthy river, while also challenging them to consider the threats facing the river, the watershed, and the Lake Champlain Basin.

Organization: Ausable River Association
Contact Person: Tyler Merriam
Mailing Address: PO Box 8
 Wilmington NY 12997
Phone: 518-637-6859
E-mail: tyler@ausableriver.org/
Website: https://www.ausableriver.org/



2021 guided hike adults and teens learning about spongy moth caterpillar impacts." Photo: Tyler Merriam



NEIWPC Code: LS-2023-054
EPA: 0364-004-001
Start Date: 4/28/2022
Close Date:
Grant Amount: \$15,000.00
Non-federal Match: \$ 7,084.00
Total Amount: \$22,084.00

2022 Small Implementation Grant

concluded

Guided Watershed Tours: Interpretive Outdoor Trips to Educate Community Members and Inspire Stewardship.

Project Summary

The 2022 Guided Watershed Tours will include 15 themed interpretive trips with AsRA staff and guest naturalists, all lasting from two to four hours depending on the type of trip. All participants will receive an informational brochure with measurable actions they can personally take to improve the water quality of Lake Champlain, accompanied by LNT Ethics cards which include specific and measurable guidelines for recreationists to take while enjoying low-impact outdoor trips.

Outputs:

- 15 tours were held:
- One LCBP Stream Wise community event in the fall for teens and adults
- A Winter Tree ID Hike and Animal Tracking Hike in the winter for teens and adults.
- Purchase of terrestrial insect identification equipment, snowshoes, hiking poles, and micro spikes

Outcomes:

- participants engaged in naturalist education, personal stewardship, low-impact recreation, and the Stream Wise Program
- engagement of citizens with the natural world, learning the benefits of a healthy river, while also challenging them to consider the threats facing the river, the watershed, and the Lake Champlain Basin.

Organization: Ausable River Association
Contact Person: Tyler Merriam
Mailing Address: PO Box 8
 Wilmington NY 12997
Phone: 518-637-6859
E-mail: tyler@ausableriver.org/
Website: <https://www.ausableriver.org/>



Kids learn about a rock they found along the river from AsRA geologist Gary Henry.



NEIWPC Code: LS-2022-036
 EPA 0357-004-001
 Start Date: 4/28/2022
 Close Date: 3/28/2023
 Grant Amount: \$15,000.00
 Non-federal Match: \$ 7,084.00
 Total Amount: \$22,084.00

2023 Small Implementation Grant

in progress

Immersive Maritime Exploration Program

Project Summary

Students in the Lake Champlain Basin will gain an appreciation of the lake's Revolutionary War naval history through hands-on maritime trades programming. 20 Maritime Artificer's Apprentice programs will be presented to 700 students from across the Lake Champlain Basin. Students and Scouts across the Lake Champlain Basin will have a hands-on exploration of Revolutionary War naval history, expanding their appreciation of the cultural heritage of Lake Champlain. They will grow their critical thinking and historical literacy skills, helping shape better stewards of the future of the Lake Champlain Basin.

Outputs:

- two new maritime interpreters
- train staff and construct period clothing
- offer and deliver special living history maritime student and scout programs

Outcomes:

- promote an appreciation of natural and cultural resources, and the capacity to implement actions that will result in sound stewardship of these resources while maintaining strong local economies
- increase and improve public access opportunities to the waterbodies of the Basin and interconnected waterways of the Champlain Valley for diverse recreational activities

Organization: The Fort Ticonderoga Association
Contact Person: Martha Strum
Mailing Address: PO Box 390
 Ticonderoga, NY 12883
Phone: 518-585-2821
E-mail: mstrum@fort-ticonderoga.org
Website: www.FortTiconderoga.org



NEIWPC Code: LS-2023-082
 EPA 0364-004-001
 Start Date: 6/29/2023
 Close Date:
 Grant Amount: \$14,810.00
 Non-federal Match: \$ 2,700.00
 Total Amount: \$17,510.00

2019 Small Implementation Grant

concluded

Invasive Plant and Riparian Restoration of the Intervale Service Learning Curricula

Project Summary

This project supported a collaborative and concerted effort to develop a service-learning curriculum focusing on invasive plant management and riparian forest restoration by bringing together the expertise of several project partners to meet each organizations' goals of conservation and natural resource management, and increased education and outreach to the community. The goal was to bring together project partners to utilize their experience and existing curriculum plans for invasive plant management, watershed health, and water quality, to develop a curriculum for invasive plant management and riparian restoration specific to the lands of the intervale. The curriculum evolved to be a transferable model that could be used more broadly throughout the state of Vermont and used across a greater audience to include school/teacher lead groups, organizational lead volunteer groups, and individuals

Outputs:

- Develop and implement hands-on learning projects for local schools and volunteer groups

Outcomes:

- Increase understanding of invasive plant identification and impact on riparian forest habitat and water quality
- Removal of targeted invasive plant species on lands within the Intervale
- Restoration of native tree and shrub species in the areas of invasive plant removal

Organization: Winooski Valley Park District
Contact Person: Lauren Chicote
Mailing Address: 1 Ethan Allen Homestead
 Burlington, VT 05408
Phone: 802-863-5744
E-mail: info@wvdp.org
Website: www.wvdp.org



NEIWPCC Code: LS-2019-060
EPA 0995-004-001
Start Date: 4/15/2019
Close Date: 9/29/2023
Grant Amount: \$ 9,989.00
Non-federal Match: \$ 3,780.00
Total Amount: \$13,769.00

2023 Small Implementation Grant

in progress

Lake Carmi Watershed Workshops and Lake Wise Outreach

Project Summary

This project will support improved adoption of stream and lakeshore Best Management Practices (BMPs) to reduce nutrient (i.e. phosphorus) loading in the Lake Carmi watershed via a series of public workshops paired with one-on-one Lake Wise technical assistance for lakeshore residents. The expected outputs of this project are 4 workshops and 6 additional landowners participating in Lake Wise evaluations. The expected outcomes are increased public awareness and knowledge of riparian and lakeshore BMPs, an increase in public stewardship ethic, and ultimately improved BMP adoption in the Lake Carmi watershed.

Outputs:

- 4 workshops
- 6 additional landowners participating in Lake Wise evaluations

Outcomes:

- increased public awareness and knowledge of riparian and lakeshore BMPs
- increase in public stewardship ethic
- improved BMP adoption in the Lake Carmi watershed

Organization: Franklin County NRCD
Contact Person: Katy Dynarski
Mailing Address: 50 South Main Street, Suite B-20
 St. Albans, VT 05478
Phone: (802) 528-4185
E-mail: katherine.dynarski@usda.gov
Website: franklincountynrcd.org



Lake Carmi campers Pete and Marion Benevento earned a Lake Wise Award in Summer 2022 following an evaluation by Franklin County Natural Resources Conservation District and Franklin Watershed Committee.



NEIWPCC Code: LS-2023-049
EPA 0364-004-001
Start Date: 6/1/2023
Close Date:
Grant Amount: \$14,780.00
Non-federal Match:
Total Amount: \$14,780.00

2021 Small Implementation Grant

in progress

Lake Champlain Committee Water Protection Internship Program

Project Summary

LCC will develop and implement a Lake Champlain Basin-wide internship program to engage higher education students in our work, provide professional learning opportunities, share our expertise, expand our organization's capacity, reach new audiences, and enhance our diversity, equity, and inclusion (DEI) initiatives. LCC will produce an internship manual, foster new or expand existing relationships with three higher education institutions within the Basin, and host two interns during the grant period. Interns will produce reports and news columns on LCC's high priority issues, such as new generation contaminants and aquatic invasive species (AIS) threats, assist with field work and outreach projects, update web content and print materials, and engage in social marketing. Anticipated outcomes are science-based summaries and articles on water-related concerns in the Basin and improved public knowledge of watershed issues, with a focus on including underserved populations.

Outputs:

- hire 2 interns
- science-based summaries and articles on water-related concerns in the Basin

Outcomes:

- improved public knowledge of watershed issues, with a focus on including underserved populations.

Organization: Lake Champlain Committee
Contact Person: Lori Fisher
Mailing Address: 208 Flynn Avenue, Building 3 Studio 3F, Burlington, VT 05401
Phone: 802-658-1421
E-mail: lorif@lakechamplaincommittee.org
Website: www.lakechamplaincommittee.org



LCC volunteer and ECO AmeriCorps member Kate Wettergreen sieves for Asian clam at Burlington's North Beach. Photo by LCC ECO AmeriCorps member Lindsey Carlson © Lake Champlain Committee.



NEIWPCC Code: LS-2021-052
EPA 0356-004-001
Start Date: 4/27/2021
Close Date:
Grant Amount: \$10,000.00
Non-federal Match: \$ 3,250.00
Total Amount: \$13,250.00

2022 Small Implementation Grant

concluded

Lake Champlain Headwaters Summer Education Program

Project Summary

The Lake Champlain Headwaters Summer Education Program supported the design and delivery of hands-on aquatic invasive species (AIS) education on the NYS side of the Lake Champlain Basin during spring, summer and fall of 2022. Target audiences are members of the public reached through tabling and presenting at existing summer community events such as farmer's markets, canoe races, and fishing tournaments, lake shore owners via tailored presentations at lake association meetings, and boaters at launches via watercraft inspectors. The materials will teach AIS identification, explore pathways to AIS introduction and dispersal, and guide people on how to prevent the spread of AIS in their community.

Outputs:

- design and delivery of hands-on aquatic invasive species (AIS) education to 500+ people through in-person events and programs
- outreach to community organizations, agencies
- watercraft inspector training

Outcomes:

- increased knowledge of AIS identification, pathways to AIS introduction and dispersal
- greater community awareness of AIS spread prevention

Organization: Paul Smith's College, Adirondack Watershed Institute
Contact Person: Tom Collins
Mailing Address: PO Box 265 Paul Smiths, NY 12970
Phone: 518-327-6155
E-mail: tcollins1@paulsmiths.edu
Website: www.adkwatershed.org



NEIWPCC Code: LS-2022-051
EPA 0357-004-001
Start Date: 4/26/2022
Close Date: 6/30/2023
Grant Amount: \$9,999.00
Non-federal Match: \$7,642.00
Total Amount: \$17,641.00

2022 Small Implementation Grant concluded

Lake Champlain Lake George Regional Planning Board Septic Smart Campaign

Project Summary

This project developed a campaign to educate property owners, residents, renters, and vacationers occupying homes that utilize on-site wastewater treatment systems and are within 500 feet of a lake or 100 feet of a DEC designated stream within the Warren County portion of the Lake Champlain Basin. The goal of the campaign is education that will result in behavior change that directly impacts water quality. Educational materials for septic systems from the USEPA will be adapted so the content better resonates with Warren County residents and visitors. Resulting flyers and posters will be distributed via mail and digitally.

Outputs:

- Design and distribution of educational flyers, posters, and a social media campaign targeting septic smart behaviors.
- 1,000 mailers were distributed, and six social media posts were created targeting residents and visitors of the Lake George watershed and providing best practices for the proper usage and maintenance of residential septic systems

Outcomes:

- Better informed public and adoption of positive behavioral changes related to septic system maintenance and use
- increased awareness of Warren County's and the Lake George Park Commission's potential new septic regulations, and more participation in public input and greater public support for the initiative.

Organization: Lake Champlain Lake George Regional Planning Board
Contact Person: Allison Gaddy
Mailing Address: 1 Lower Amherst Street Box 765 Lake George, New York 12845
Phone: 518-668-5773
E-mail: Allison.Gaddy@lclgrpb.org
Website: www.lclgrpb.org



NEIWPC Code: LS-2022-047
EPA: 0357-004-001
Start Date: 4/25/2022
Close Date: 4/18/2023
Grant Amount: \$7,150.00
Non-federal Match: \$1,215.00
Total Amount: \$8,365.00

2022 Small Implementation Grant in progress

Late Night for Lake Champlain! Building Lake Champlain awareness through transformative entertainment and comedy.

Project Summary

This project expands the reach of the Center for Earth and Environmental Science's Late Night for the Planet (LN4TP) talk/game show through partnership, assessment and the purchase of digital video production equipment. With this grant the team will: purchase audio/video equipment to enhance the live stream/digital presence of LN4TP; Create pop-up LN4TP experiences called *Late Night for Lake Champlain (LN4LC)* with partners such as SeaGrant, Adirondack Watershed Institute, Adirondack North Country Association, the Lake Champlain Maritime Museum, ECHO and others; Assess the impact of LN4TP/LN4LC on the audience and on our student production team; Develop a business plan for LN4TP/LN4LC by partnering with faculty and students in SUNY Plattsburgh's Marketing and Entrepreneurship program

Outputs:

- purchase audio/video equipment to enhance the live stream/digital presence of LN4TP
- create pop-up LN4TP experiences called *Late Night for Lake Champlain (LN4LC)* with partners such as SeaGrant, Adirondack Watershed Institute, Adirondack North Country Association, the Lake Champlain Maritime Museum, ECHO and others
- development of professional skills such as public speaking, project management, collaboration, facilitation and audio/video production.

Outcomes:

- expands the reach of the Center for Earth and Environmental Science's Late Night for the Planet
- greater awareness of local environmental challenges, promote and appreciate the work of local environmental professionals, and encourage personal behavior change.

Organization: Research Foundation for the State University of New York
Contact Person: Curt Gervich
Mailing Address: 101 Broad Street 147 Hudson Hall, Plattsburgh NY, 12901
Phone: 518-564-4030
E-mail: cgerv001@plattsburgh.edu
Website: plattsburgh.edu



NEIWPC Code: LS-2022-082
EPA: 0357-004-001
Start Date: 9/29/2022
Close Date:
Grant Amount: \$14,551.00
Non-federal Match: \$16,829.00
Total Amount: \$31,380.00

2023 Small Implementation Grant

in progress

LCC “Don’t P On Your Lawn” Campaign

Project Summary

LCC will work with the Lawn to Lake partners, community members, and other agencies and partners to create and implement the “Don’t P On Your Lawn” campaign to educate property owners about the legal requirements that a soil test is needed to show a lawn needs phosphorus before you can apply it. Adding phosphorus to lawns that don’t need it wastes money, resources, and degrades water quality. Getting a soil test is an easy act of stewardship that everyone who has a lawn can readily undertake.

Outputs:

- Campaign strategy outline and schedule
- Press releases and media outreach
- Updated “Don’t P On Your Lawn” rack cards, fliers, and signage for stores
- Toolkit for community outreach volunteers with background information, rack cards and fliers, sample social media posts, and sample Front Porch Forum posts
- Lake Look columns reinforcing the messages about “Don’t P On Your Lawn”
- Mailings and emails to community members
- Updated website content

Outcomes:

- increased awareness about and compliance with the law requiring a soil test before applying phosphorus-based fertilizer to lawns
- reduction of phosphorus

Organization: Lake Champlain Committee (LCC)

Contact Person: Lori Fisher

Mailing Address: 208 Flynn Ave. Building 3
Studio 3F, Burlington, VT 05401

Phone: (802) 658-1421

E-mail: lorif@lakechamplaincommittee.org

Website: <https://www.lakechamplaincommittee.org>



LCC will work with Lawn to Lake partners to help raise awareness about why it’s important not to “P” on your lawn. Photo from Lake Champlain Committee.



NEIWPCC Code: LS-2023-069
EPA 0364-004-001
Start Date: 9/1/2023
Close Date:
Grant Amount: \$15,000.00
Non-federal Match: \$ 5,630.00
Total Amount: \$20,630.00

2022 Small Implementation Grant

concluded

“Libraries Love Lakes” Events at Lake St. Catherine”, our local celebration of the 50 year anniversary of the Clean Water Act

Project Summary

A brand new partnership with the Wells Village Library enabled the Lake St Catherine Association’s (LSCA) first education and outreach event to engage and empower students and adults to understand and participate in Lake stewardship. It organized and promoted a focused educational event on July 3rd at the Wells Town Park with hands on exhibits and demonstrations on issues facing the Lake St. Catherine watershed. It also established a longer-term creation of a special section of the library dedicated to Lake issues.

Outputs:

- Acquisition of materials for July 3rd event and the new Library section
- Participation in July 3rd event with six exhibits and purchase of Water Quality Test kits for the Watershed and Boat Tours
- Creation and maintenance of a new dedicated lake-focused space in the Wells Village Library

Outcomes:

- engage and empower students and adults to understand and participate in Lake stewardship
- inform students and adults about key Lake Champlain Basin issues through hands-on stewardship activities in order to develop awareness, knowledge, skills, and commitment to local Lake issues and their impact on the Lake Champlain South Basin

Organization: Lake St. Catherine Association

Contact Person: Martha Pofit

Mailing Address: 1444 West Lake Rd.
Wells, VT 05774

Phone: (802) 345-3965

E-mail: martha.pofit@lakestcatherine.org

Website: www.lakestcatherine.org



NEIWPCC Code: LS-2022-058
EPA 0357-004-001
Start Date: 5/6/2022
Close Date: 3/28/2023
Grant Amount: \$9,191.00
Non-federal Match: \$5,000.00
Total Amount: \$14,191.00

2019 Small Implementation Grant

concluded

242 Main Documentary Film, Public Archive and Interactive Exhibit

Project Summary

The project produced a documentary video about the historic significance and social meaning of this youth-led teen center, the longest-running all-ages punk rock venue in the country; developed an interactive museum display and public archive on the subject of 242 Main. Sixty-five interviews have been recorded and transcribed and hundreds of photographs and posters have been collected.

Outputs:

- A film about the historic significance and social meaning of this youth-led teen center that was the longest-running all-ages punk rock venue in the country, an initiative of Mayor Bernie Sanders' city youth office
<https://youtu.be/vtechbDGAZcU?si=eBq1yGrYMQy7ist>
- A hands-on interactive museum video exhibit featuring selectable content curated by regional high school students from interview transcripts and footage. On display at the Tiny Museum of Vermont Music History in Burlington
- An online archive of full interview footage and all other poster and photographic artifacts collected during production to be a resource to municipalities, researchers, and other youth programs
www.bigheavyworld.com

Outcomes:

- Raise awareness of the longest-running all-ages punk rock venue in the country
- Provide a historic record of significant contribution to Lake Champlain heritage by a traditionally marginalized demographic population
- Develop public insight that helps create equitable multigenerational empathy for informing future policy and programming decisions.

Organization: Big Heavy World
Contact Person: James Lockridge
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 Burlington, VT 05402-0428
Phone: (802) 865-1140
E-mail: jim@bigheavyworld.com
Website: www.bigheavyworld.com



NEIWPCC Code: L-2019-024
GLFC: 0100-323-004
Start Date: 3/11/2019
Close Date: 9/27/2023
Grant Amount: \$ 7,280.00
Non-federal Match: \$ 5,242.00
Total Amount: \$12,522.00

2020 Small Implementation Grant

in progress

Molly of Denali PBS Kids Library Play Date Kit

Project Summary

MLPBS will produce and distribute a *Molly of Denali* PBS Kids Play Date event kit for regional libraries focused on ecology, environmental stewardship and community values. Educational materials will be developed in consultation with local experts and partner organizations. Each of the five kits created will include indoor/outdoor educational activities and materials, and free books for all participants. As families engage in quality, hands-on activity focused time together using the materials provided, the youngest members of our communities are exposed to the cultural and ecological value of the lake and basin, building a strong connection to the natural world and scientifically-driven discovery.

Outputs:

- develop curriculum elements
- activities and crafts for *Molly of Denali* Library Play Date Kits developed and prototyped
- 5 *Molly of Denali* Library Play Date Kits built

Outcomes:

- pride in local communities and appreciation of natural and cultural resources will be encouraged
- knowledge of how to implement certain stewardship practices
- sense of personal responsibility to effect change

Organization: Mountain Lake PBS
Contact Person: Logan Brody
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 Plattsburgh, NY 12901
Phone: 518-324-0102
E-mail: lbrody@mlpbs.org
Website: mountainlake.org



NEIWPCC Code: L-2020-071
GLFC: 0100-328-004
Start Date: 7/15/2020
Close Date:
Grant Amount: \$ 5,000.00
Non-federal Match: \$16,895.00
Total Amount: \$21,895.00

2020 Small Implementation Grant

in progress

Montpelier Green Stormwater Infrastructure Educational Walking Tour

Project Summary

This project will develop a proposed educational walking tour of Green Stormwater Infrastructure (GSI) practices in Montpelier, and place interpretive signage at key sites. The tour proposal was developed by UVM Sea Grant professor Kris Stepenuck and a student, Colin Brown. It will begin near the LCBP-funded Rain Garden and Bioretention Practice at VSECU, and continue along Montpelier’s multi-use path, called the Siboinebi (“river water” in the Abenaki language) Path, which runs along part of the Winooski River. Signs will explain GSI techniques, identify key GSI practices, and educate visitors about the significance of the City’s rivers and the need for action to curb contamination. The anticipated outcome is a more educated community inspired to their own acts of stewardship to improve the health of our waterways. MCC expects to add signs along the tour route in the future.

Outputs:

- develop educational walking tour of Green Stormwater Infrastructure (GSI) practice
- print and web brochure
- installation of 3 interpretive signs

Outcomes:

- more educated community inspired to their own acts of stewardship to improve the health of our waterways

Organization: Montpelier Conservation Commission

Contact Person: Page Guertin

Mailing Address: 39 Main St.
Montpelier, VT 05602

Phone: 802-461-7929

E-mail: mcc@montpelier-vt.org

Website: <https://www.montpelier-vt.org/398/Conservation-Commission>



The first sign will be installed at VSECU Rain Garden that was constructed last summer and will inform people walking on the Siboinebi Path about the significance, functions and capabilities of Green Stormwater Infrastructure.



NEIWPCC Code: L-2020-044
 GLFC 0100-328-004
 Start Date: 4/23/2020
 Close Date:
 Grant Amount: \$8,480.00
 Non-federal Match: \$1,000.00
 Total Amount: \$9,480.00

2023 Small Implementation Grant

in progress

MRBA Community Water Walks

Project Summary

Engaging our community in unique events through MRBA’s Community Water Walks will highlight successful projects that the MRBA has implemented or identify problem areas and help community members better understand the types of things that they can do, or assist with, to improve water quality throughout our region. This project will have an output of four to five Community Water Walks throughout the watershed, and throughout the summer/fall season; three or four of these will be set through conversations with conservation partners (i.e. Conservation Commissions in our towns), and will focus on successful projects or opportunities for improvements, based on the desires of that community. The final Community Water Walk will highlight the MRBA’s ongoing work to combat Japanese knotweed and mechanical control efforts at a town park in Montgomery. All Walks will be open to the public, and the outcome will be better informed and more engaged communities, with increased understanding of and interest in the ways our actions can and do impact our waterways.

Outputs:

- four to five Community Water Walks throughout the watershed

Outcomes:

- better informed and more engaged communities, with increased understanding of and interest in the ways our actions can and do impact our waterways.

Organization: Missisquoi River Basin Association

Contact Person: Lindsey Wight

Mailing Address: 2839 VT Route 105
East Berkshire, VT 05447

Phone: (802) 393-0076

E-mail: lindsey@mrbavt.com

Website: mrbavt.com



MRBA’s 2020/2021 Education and Outreach Coordinator, Ari Lattanzi, discusses our ongoing knotweed research with attendees to a Community Day held in Montgomery in May 2021.



NEIWPCC Code: LS-2023-045
 EPA 0364-004-001
 Start Date: 6/29/2023
 Close Date:
 Grant Amount: \$ 9,644.00
 Non-federal Match: \$ 1,463.00
 Total Amount: \$11,107.00

2021 Small Implementation Grant

concluded

Native Plants for Water Quality

Project Summary

The Poultney Mettowee Natural Resource Conservation District (PMNRCD) in collaboration with the Champlain Valley Native Plant Restoration Nursery (CVNPRN) provided hands-on learning opportunities and expanded educational resources to the South Lake community, with a focus on the role native plants play in improving water quality.

Outputs:

- development of three how-to manuals focused on bank stabilization, planted wetland restoration, and plant uses in stormwater practices and one 'how-to' planting guide.
- two train-the-trainer stream table events for educators and students with associated social media coverage
- implementation of two demonstration gardens (rain and pollinator) with associated educational signage and social media coverage
- updated CVNPRN brochure and seed collection guide
- participation in four partner outreach events and three or more volunteer planting days with associated social media coverage

Outcomes:

- expanded and informed volunteer base
- a watershed community with a deeper understanding of the functional connection between native plants and water quality; armed with the knowledge and ability, and tools to take action

Organization: Poultney Mettowee Natural Resources Conservation District

Contact Person: Hilary Solomon

Mailing Address: P.O. Box 209
Poultney VT 05764

Phone: (802) 287-6880

E-mail: hilary@pmnrcd.org

Website: <https://www.pmnrcd.org/>



NEIWPCC Code: LS-2021-029
EPA 0356-004-001
Start Date: 4/26/2021
Close Date: 3/28/2023
Grant Amount: \$10,000.00
Non-federal Match: \$ 2,150.00
Total Amount: \$12,150.00

2022 Small Implementation Grant

concluded

North County Stormwater Tradeshow and Conference Educational Outreach Event

Project Summary

The North Country Stormwater Tradeshow and Conference is an educational event for municipal employees, engineers, landscape architects, and other stormwater professionals. The event has been hosted and organized by the Champlain Watershed Improvement Coalition of New York (CWICNY) for 17 years. The event was held in person for the first time since 2019 with nearly 100 attendees and presenters from state agencies, educational institutions, nonprofit organizations, and local municipalities. Thirty seven (37) attendees received continuing education credits from the Practicing Institute of Engineering (PIE), 13 received CPECS credits (certified professional in erosion and sediment control), 11 received credits for municipal planning board and zoning board of appeals training, and seven (7) code enforcement officers were in attendance.

Outputs:

- develop session content/schedule
- create educational handouts and conference packets
- 37 attendees received continuing education credits from the Practicing Institute of Engineering, 13 received CPECS credits (certified professional in erosion and sediment control), 11 received credits for municipal planning board and zoning board of appeals training, and seven (7) code enforcement officers were in attendance.
- held annual conference October 20, 2022 - 100 attendees with six presentations from representatives from state agencies, and private engineering and consulting firms

Outcomes:

- promotion of watershed protection and stormwater best practices in the Lake Champlain Basin

Organization: CWICNY

Contact Person: Allison Hargrave-Gaddy

Mailing Address: P O Box 765
Lake George, New York 12845

Phone: 518-668-5773

E-mail: Allison.gaddy@lclgrpb.org

Website: www.cwicny.org



Steve Ovitt, WMP, presents at the 2022 North Country Stormwater Tradeshow and Conferenc October 20, 2022



NEIWPCC Code: LS-2022-075
EPA 0357-004-001
Start Date: 7/15/2022
Close Date: 7/26/2023
Grant Amount: \$8,698.00
Non-federal Match: \$1,000.00
Total Amount: \$9,698.00

2022 Small Implementation Grant

in progress

Northern Lake Champlain Shoreline Socials Event Series

Project Summary

Friends of Northern Lake Champlain (FNLC) will build upon last year's Shoreline Social event series to reconfigure and implement three educational outreach events in the shoreline communities of South Hero, Alburgh or Isle La Motte, and Fairfield during the summer of 2023. By utilizing the expertise of local environmental consulting firms, regional watershed groups, and the Vermont Lake Wise Program, we plan to continue educating community residents about the importance of protecting and enhancing water quality, and what they can do to protect the shoreline on their property. Each event will take place at an outdoor, waterside location, and food will be provided for all attendees. The output of this project will be three educational events for residents to learn about water quality and ways to prevent erosion and runoff on their properties. The outcomes of this project are greater awareness and understanding of practices that improve water quality and greater implementation of these practices on lake-front residences.

Outputs:

- Media announcements and postcard mailings to targeted communities
- three educational events at outdoor lake-side locations the shoreline communities of South Hero, Alburgh/Isle La Motte, and Fairfield
- 135 members of the shoreline communities participating in the series

Outcomes:

- greater awareness and knowledge among shoreline property owners about the importance of improving water quality and what they can do to protect the shoreline on their property

Organization: Friends of Northern Lake Champlain

Contact Person: Alison Spasyk

Mailing Address: PO Box 1145
St. Albans, VT 05478

Phone: 802-881-7845

E-mail: aspasyk@friendsofnortherlakechamplain.org

Website: <https://www.friendsofnorthernlakechamplain.org/>



Photo from Georgia Shoreline Social on June 30, 2022



NEIWPCC Code: LS-2023-064
EPA 0364-004-001
Start Date: 7/13/2023
Close Date:
Grant Amount: \$6,726.00
Non-federal Match: \$1,556.00
Total Amount: \$8,282.00

2022 Small Implementation Grant

in progress

Nulhegan Abenaki Cultural Education Program

Project Summary

The Nulhegan Abenaki Cultural Education Program will develop a framework of a historically accurate educational program that draws upon the ancestral connection to the land and water resources. The grant will support tribal members and other indigenous people who have expertise and knowledge for traditional arts, stories, and customs, to lead workshops, to create historically accurate props and materials, to incorporate some of these materials within educational kits, and to make the kits available for educators in Lake Champlain Basin and throughout the State of Vermont. The project will take place at various venue locations, Abenaki landholding, and events in Burlington and Shelburne of Chittenden County (Lake Direct Basin), and Stowe, Morrisville, Elmore of Winooski and Lamoille Basin. The grant project will serve tribal members, other indigenous descendants, and the general public.

Outputs:

- Five tribal craft/object workshops developed in collaboration with tribal members and indigenous experts
- development of three educational kits available for use by the public and tribal members

Outcomes:

- Increased public awareness and appreciation of Abenaki history and culture

Organization: Abenaki Helping Abenaki Inc

Contact Person: Jon Bosley

Mailing Address: 3930 Noyestar Rd
East Hardwick, VT 05836

Phone: (802) 730-2795

E-mail: blackbearlogging@gmail.com

Website: <https://abenakitribe.org/aha%2C-inc>



Abenaki children learn about the traditional Snow Snake Games at a 2020 winter gathering in Derby, Vermont. Photo and permission provided by Diane Stevens.



NEIWPCC Code: LS-2022-077
EPA 0357-004-001
Start Date: 8/5/2022
Close Date:
Grant Amount: \$ 11,300.00
Non-federal Match: \$ 3,500.00
Total Amount: \$14,800.00

2021 Small Implementation Grant

concluded

Public Access Site Support Program

Project Summary

Friends of the Winooski River (FWR) created a pilot public access site stewardship program and recruited and trained volunteers to monitor 2 of their public access sites in 2022. FWR also worked with a graphic design consultant to design and build interpretive signs for two completed restoration sites (Dog River Park and Bull Run at The Woods Lodge).

Outputs:

- development of a Friends of the Winooski River sign design template, which will facilitate their inclusion of interpretive signs in future projects
- construction and installation of two signs
- built roster of trained volunteers
- creation of a form within Friends of Winooski River's website for volunteers to report site conditions

Outcomes:

- public education about site histories and the benefits of floodplain restoration
- long-term maintenance of the two restoration sites
- engagement with individuals and communities within the Winooski River watershed

Organization: Friends of the Winooski River
Contact Person: Michele W. Braun
Mailing Address: P.O. Box 777
 Montpelier, VT 05601-0777
Phone: 802-279-3771
E-mail: michele@winooskiriver.org
Website: winooskiriver.org



Sign installed at Woods Lodge



NEIWPC Code: LS-2021-059
EPA: 0356-004-001
Start Date: 4/27/2021
Close Date: 5/16/2023
Grant Amount: \$ 9,976.00
Non-federal Match: \$ 780.00
Total Amount: \$10,756.00

2022 Small Implementation Grant

concluded

Riparian Restoration and Public Access Community Workdays at the McCuin Island Preserve, Lamoille River

Project Summary

This project engaged community volunteers and student interns in riparian restoration and public access improvement projects at McCuin Island, a four-acre island in the Lamoille River. This is a wild, semi-forested island managed primarily as a nature preserve. It is home to a paddler campsite and valuable plant and wildlife habitat. Project objectives included reducing invasive species on the island, engaging students and volunteers in hands on stewardship projects, and providing an educational paddling opportunity to showcase this work. Actions included developing a restoration plan, eradicating over 7,000 square feet of Japanese Knotweed, restoring treated areas with native plants, adding steps, a moldering privy, and signage to the paddler campsite, and coordinating an educational community paddle. The project was initiated in June of 2022 and completed in April of 2023.

Outputs:

- 1 educational community paddle showcasing the unique ecology of the Lamoille River, McCuin Island, and innovative invasive species spread prevention techniques
- Volunteer work days on McCuin Island to reduce the invasive honeysuckle and Japanese knotweed populations
- Installation of a set of timber access steps and a box privy to the McCuin Island paddler campsite

Outcomes:

- reduction of invasive species on the McCuin Island Preserve
- the protection of a rare, state significant population of Great Johns Wart
- the engagement of volunteers in a hands on stewardship project
- restoration of an important riparian preserve

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McCuin Island in spring. Note the invasive honeysuckle.



NEIWPC Code: LS-2022-066
EPA: 0357-004-001
Start Date: 6/15/2022
Close Date: 5/22/2023
Grant Amount: \$7,706.00
Non-federal Match: \$2,428.00
Total Amount: \$10,134.00

2019 Local Implementation Grant

concluded

Saranac River Trail Phase 2 Explorations

Project Summary

To create the downtown walks along the Saranac River, Friends of the Saranac River Trail (FSRT) updated the Saranac River Trail brochure (in both French and English) to reflect the new trail. Brochures were distributed to appropriate venues, including, but not limited to, events such as the World Water Day celebration hosted by LCBP and the Champlain Centre Mall, a SUNY Plattsburgh community outreach event sharing updates on the Saranac River remediation project, and visitor information locations at the City of Plattsburgh as well as the local Amtrak depot. The Saranac River Trail Phase 2 Explorations project was delayed by the Covid-19 pandemic, but FSRT has recovered to finish a final Downtown trek in 2023. During the pandemic, FSRT was able to update the website to inform people of the NYSEG – Plattsburgh – Saranac St. site remediation project. (See saranacrivertail.org). During the early days of the pandemic, people were advised to stay inside, and many businesses and schools were closed but the remediation site continued and was documented on the website.

Outputs:


- develop educational programs based on specific trail sections
- develop and implement public outreach campaign
- develop promotional materials for Friends of the Saranac River Trail Treks

Outcomes:

- community awareness of the Saranac River Trail
- greater community use of the resource
- improved student (K-12) and community knowledge of the significance of the Saranac River

Organization: Friends of Saranac River Trail
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 Plattsburgh, NY 12901
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 **NEIWPCC Code:** LS-2019-015
EPA: 0995-004-001
Start Date: 3/1/2019
Close Date: 7/25/2023
Grant Amount: \$2,901.00
Non-federal Match: \$ 500.00
Total Amount: \$3,401.00

2023 Small Implementation Grant

in progress

Water Quality Awareness in Champlain Basin Communities

Project Summary

The Water Quality Awareness in Champlain Basin Communities will build awareness and knowledge among all age groups about watershed issues affecting water resources as well as stewardship actions that protect Lake Champlain watersheds. Specifically, participants in the program will gain a greater understanding of watersheds and the threats to water quality such as AIS and nonpoint pollution. Furthermore, they will learn how those threats impact them, and how they can help mitigate the threats and improve water quality in the Basin.


Outputs:

- *Junior Watershed Steward Program* materials are updated and printed with 250 delivered to youth at NYS campgrounds, boat launches and other youth-oriented locations
- 8-12 events celebrating NYS Invasive Species Awareness Week and Adirondack Water Week coordinated among regional partners and promoted and implemented across the Basin
- 1000+ members of the public are engaged and informed about watershed issues and stewardship actions through all programs.

Outcomes:

- greater understanding of watersheds and the threats to water quality such as AIS and nonpoint pollution.
- public learns how those threats impact them, and how they can help mitigate the threats and improve water quality in the Basin.

Organization: Paul Smith's College Adirondack Watershed Institute
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Website: <https://www.adkwatershed.org/>

 **NEIWPCC Code:** LS-2023-053
EPA: 0364-004-001
Start Date: 6/1/2023
Close Date:
Grant Amount: \$15,000.00
Non-federal Match: \$ 3,802.00
Total Amount: \$18,802.00

2020 Small Implementation Grant

concluded

Watershed Bound! Creating Watershed Education Opportunities for Upward Bound Teachers and Students in the Lake Champlain Basin

Project Summary

This project will provide K-12 teachers with resources and training to aid in the successful integration of interdisciplinary watershed science curricula, while also providing an entry point for potential first-generation college students to the field of watershed science, and show them the opportunities that exist for them in that field. Outputs will include two workshops for K-12 teachers, at least 10 Upward Bound summer courses that incorporate elements of watershed science, the creation of at least 10 lessons plans, at least 10 student blog posts, at least one peer reviewed manuscript, three quarterly progress reports, and one final report.

Outputs:

- two workshops that each serve at least 5 teachers
- 10 Upward Bound summer courses will include elements of watershed science and research
- 10 high school level lesson plans that focus on water science
- 10 blog posts featured on the Lake Champlain Sea Grant website
- One manuscript for peer review

Outcomes:

- K-12 educators will have the training and tools they need to integrate watershed science content into any course they teach
- Upward Bound students will become interested in studying, and ultimately working in, the field of watershed science
- Upward Bound students will report greater pro-environmental intentions related to Lake Champlain after they participate in this project.

Organization: SUNY Plattsburgh
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 Plattsburgh, NY 12901
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NEIWPCC Code: LS-2020-070
EPA: 0346-004-001
Start Date: 8/13/2020
Close Date: 5/10/2023
Grant Amount: \$ 9,977.00
Non-federal Match: \$ 2,630.00
Total Amount: \$12,607.00

2022 Small Implementation Grant

in progress

Waterways Stage Collaboration

Project Summary

K – 8th grade classrooms collaborate with expert educators from Very Merry Theatre and ECHO, Leahy Center for Lake Champlain to research and perform original plays on the ecology, culture, and history of a selected Lake Champlain Basin topic. Past years topics have included invasive species, endangered aquatic species, and climate impacted species. This year our theme is Adaptations in Species of the Lake Champlain Basin. For six continuous years we have run this program with approximately 8-10 schools totaling 200-250 students participating each year. We offer this program free of charge to participating classrooms and have always depended upon generous grants from Vermont Arts Council, Ben and Jerrys Foundation, and Lake Champlain Basin Program.

Outputs:

- development of outreach materials
- 6-8 performances of original students plays
- Provide watershed content and theater arts training and guidance to participating classrooms via site visits

Outcomes:

- educate public about the natural and cultural heritage of the Lake Champlain Basin

Organization: Very Merry Theatre
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 Morrisville Vt 05661
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Website: <https://verymerrytheatre.org/>



NEIWPCC Code: LS-2022-059
EPA: 0357-004-001
Start Date: 5/16/2022
Close Date:
Grant Amount: \$ 12,078.00
Non-federal Match: \$ 3,300.00
Total Amount: \$15,378.00

Funds appropriated through the LCBP Section 120 authorization in the Clean Water Act may be distributed to NEIWPC on behalf of LCBP, or to the States of New York or Vermont. For the purposes of this annual report, projects managed by the States of New York and Vermont are considered “Externally Managed Contracts”, and may also be accounted for within annual reports published by each State.

The externally managed projects reported on the following pages may address any of the four goals within *Opportunities for Action*, and, as with many of the LCBP-managed projects described above, will span multiple fiscal years to complete.

Each project description includes information for the point of contact for that project; please reach out to that individual directly for more information about that specific project.

2022 Externally Managed Project

in progress

Aquatic Connectivity and Barrier Removal Project

Project Summary

The fragmentation of river habitats through dams and poorly functioning culverts is one of the primary threats to aquatic species. These funds will support ongoing efforts to assess, prioritize, and implement aquatic barrier mitigation within the Lake Champlain Basin. This proposed project will promote ecosystem function and habitat connectivity while reducing threats to human safety and property.

Outputs

- 300-500 Stream Crossing Structure and Dam Assessments entered in the spatial database with AOP assessment data.
- 1-3 AOP projects designed.
- 1-2 projects implemented.

Outcomes

- Increase capacity for state and federal agencies, watershed and conservation organizations, and municipalities to address aquatic organism passage needs in Vermont.
- Improved aquatic habitats and aquatic organism passage.
- Expanded information on the distribution of aquatic organism passage barriers to identify ecologically significant aquatic organism passage enhancement projects.

Organization: VT DEC to Department of Fish & Wildlife

Contact Person: Will Eldridge

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Montpelier, VT 05620

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EPA (FFY22)
Open Date: 7/1/2022
Close Date:
Grant Amount: \$200,000.00

2019 Externally Managed Project in progress

Bioengineering and Shoreland Best Management Practices to Restore Living Shorelands and Protect Water Quality

Project Summary

The Lake Wise Program develops and coordinates science-based, lake friendly, shoreland methods for protecting water quality and habitat. The Lake Wise Program leads and partners with hundreds of contractors, shoreland owners, Natural Resource Conservation District staff, Regional Planning Commissions, and watershed groups to teach and promote these practices for shoreland protection and restoration. By 2019, several first time ever Bioengineering Projects and shoreland Best Management Practices will have been installed along Vermont shorelands. These practices, ecological techniques to protect water quality and wildlife habitat, need monitoring and maintenance, and continued replication to spread awareness and understanding of their benefits. This project aims to monitor and maintain existing installed bioengineering practices, while continuing to offer classroom as well as field opportunities to train and teach contractors, engineers, and landscape designers how to construct and install these ecological approaches to prevent erosion and manage stormwater runoff. In order to publicize and spread the word about the bioengineering projects to restore living shorelands in Vermont, there will also be a statewide map created, highlighting the location of projects, photos, and the design concepts.

Outputs:

- two classroom Natural Shoreland Erosion Control Certification Trainings
- one Field Erosion Control Training
- Vermont's first Living Shoreland Webinar Series on restoring shorelands to protect water quality
- twenty contractors trained
- ten shoreland sites in the Lake Champlain basin in Vermont assessed
- ten project sites in the Lake Champlain basin in Vermont identified
- one demonstration project sites in the Lake Champlain basin in Vermont installed
- development of Living Shoreland Restoration Projects Map Tour Pamphlet

Organization: VT DEC
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 Montpelier, VT 05620
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EPA (FFY19)
Start Date: 11/1/2019
Close Date:
Grant Amount: \$62,000.00

2020 Externally Managed Project in progress

Conservation of the Lamoille River Mudpuppy (*Necturus maculosus*) Population Using Translocation and Monitoring

Project Summary

The mudpuppy is designated as a high priority species of greatest conservation need (SGCN) in Vermont, whose native populations are restricted to Lake Champlain and lower sections of some of its tributaries. The VFWD has identified the Lamoille River as supporting one of the state's largest mudpuppy populations. In our efforts to ensure long-term population viability in this river, the VFWD will attempt to establish a novel sub-population upstream of the Arrowhead Mt. Dam. No mudpuppies are currently known to occur upstream of this structure.

This project focuses on a trapping and translocation effort on the Lamoille River, capturing mudpuppies from below the Peterson Dam and moving them upstream of the Arrowhead Mountain Dam. If we determine that the target number of mudpuppies (50) may not be achieved following the first year, trapping may be moved to the Poultney River, which also supports a population. Translocated mudpuppies will be marked so they can be identified during subsequent assessments within the relocation area. A subset of captured mudpuppies will be fitted with radio transmitters prior to release and investigators will use telemetry equipment to locate these animals for assessment of survival and movement.

Outputs

- Translocate a minimum of 50 mudpuppies.
- Track movements of radio-tagged mudpuppies.

Outcomes

- Develop a novel population of mudpuppies upstream of Arrowhead Mt. Dam.
- Develop an understanding of post-transplant and seasonal mudpuppy movement and survival.

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EPA (FFY20)
Open Date: 10/1/2020
Close Date:
Grant Amount: \$140,687.00

2020 Externally Managed Project in progress

Deer Brook Restoration Project

Project Summary

The Deer Brook, in Milton and Georgia, is impaired due to sediment and is a significant source of phosphorus to Lake Champlain within the Lamoille River basin. There are numerous project opportunities in South Georgia Village, chief among which are the restoration of the Deer Brook Gully and related stormwater practices. In this location, stormwater flows collect together and discharge to a severely eroding gully, causing substantial amounts of sediment and phosphorus to be delivered each year to the Deer Brook. The brook is on the 2018 Federal 303d list of impaired waters for sediment pollution. This project will fully address the most significant sources of sediment pollution to the brook by treating all remaining untreated stormwater sources located in the VTrans right-of-way discharging to the gully, as well as restoring the gully itself. The project elements, all in the VTrans road right-of-way will include construction of three gravel wetlands, construction of two catch basin risers, one deep sump catch basin installation and a closed drainage system upgrade, and the gully stabilization. This project is located near I-89 Exit 18 in Georgia just northeast of the intersection of Rte. 7 and Rte. 104 and is one of the highest priority projects in the Lamoille Tactical Basin Plan.

Outputs

- Construction of three gravel wetlands.
- Construction of two catch basin risers.
- Construction of one deep sump catch basin installation and a closed drainage system upgrade.
- One gully stabilization.
- Estimated reduction of total suspended solids load of more than 24,040 kilograms/year and a reduction of the total phosphorus load by nearly 9 kilograms/year over the projected 50-year project lifespan from Deer Brook gully stabilization alone.

Outcomes

- Reduced phosphorus and sediment loading to Lamoille River and Lake Champlain Basin through restoration to Deer Brook.
- High visibility of improved stormwater and erosion practices.

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EPA (FFY20)
Open Date: 10/1/2020
Close Date:
Grant Amount: \$400,000.00

Externally Managed Project in progress

Education, Outreach and Planning for Flood Resiliency

Project Summary

After the extreme flooding in July of 2023, many communities are struggling to rebuild, understand what flood resiliency means, how it can be achieved, and how to create plans to improve flood resilience. Manufactured Housing Communities (MHCs) are often extremely vulnerable to flooding because many were built in floodplains. After the July 2023 flood, some MHCs incurred severe damage. While MHCs will be a specific focus of this project, education will also be provided to the public. While MHCs will be a specific focus of this project, education will also be provided to the public.

Outputs

Targeted Education, Outreach, and Planning for Manufactured Housing Communities

- Online publishing of lived experiences before, during, and after flooding, and summary “Lessons Learned” report of themes and key observations taken from the collected lived experiences
- 3-5 “After the Flood” key consideration handouts targeted to different groups (i.e., homeowners, renters, Co-op Boards, park owners)
- 2-5 enhanced community mitigation plans developed

General Education for the Public

- 2-3 Flood mitigation alternative handouts and supporting web content for the general public and municipal officials

Outcomes

- support communities for better floodplain and river stewardship
- Increased knowledge of floodplain management
- Improved climate resiliency for Lake Champlain Basin communities
- Support water quality in Lake Champlain Basin through No Adverse Impact (NAI) practices

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EPA
Open Date: 10/1/2022
Close Date:
Grant Amount: \$200,000.00

2020 Externally Managed Project in progress

Enhanced Agricultural Practice Implementation

Project Summary

This project supports increased implementation of soil-based agronomic practices and barnyard conservation practices to reduce the potential for nutrient impacts to surface waters in Vermont through:

1. Increased implementation of Farm Agronomic Practices (FAP) such as, but not limited to, cover crops, reduced tillage, manure injection, crop rotation, and rotational grazing.
2. Increased implementation of practices that address runoff from agricultural fields.
3. Development and implementation of low-cost and/or innovative barnyard/production area water quality practices

Outputs

- An additional 6,000 – 35,000 acres of conservation practices on agricultural fields. Conservation practices will include, but not limited to, cover crops, reduced tillage, manure injection, crop rotation, and rotational grazing, all of which have proven effective in reducing phosphorus from entering Lake Champlain, and for which interest exceeds available resources.
- Development and implementation of production area water quality practices
- Estimated phosphorus load reductions achieved through activities above

Outcomes

- Improved water quality through implementation of production area and field Best Management Practices (BMPs) and reduced nutrient loading to surface waters, with increased BMP capacity in high priority watersheds.
- Extended visibility and demonstration value of farm water management and agronomic practices.

Organization: VT DEC
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EPA (FFY 21)
 Open Date: 7/1/2021
 Close Date:
 Grant Amount: \$1,150,000.00

2021 Externally Managed Project in progress

Enhanced Agricultural Practice Implementation

Project Summary

This project supports increased implementation of soil-based agronomic practices and barnyard conservation practices to reduce the potential for nutrient impacts to surface waters in Vermont through:

1. Increased implementation of Farm Agronomic Practices (FAP) such as, but not limited to, cover crops, reduced tillage, manure injection, crop rotation, and rotational grazing.
2. Engineering and technical assistance services and farmstead best management practices (BMP) program
3. Conservation reserve enhancement program (CREP) Services

Outputs

- Outputs FAP: An additional 12,000 acres of conservation practices on agricultural fields
- Engineering and Technical Assistance Services: 10 designs/plans, eight practice installations
- BMP: Five to 20 structural conservation practices through cost share
- CREP: Up to 20 acres of riparian forested buffers and/or grassed filter strips
- Estimated phosphorus load reductions achieved through activities above

Outcomes

- Improved water quality through implementation of production area and field Best Management Practices (BMPs) and reduced nutrient loading to surface waters, with increased BMP capacity in high priority watersheds

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EPA (FFY 21)
 Open Date: 7/1/2022
 Close Date:
 Grant Amount: \$2,000,000.00

2022 Externally Managed Project in progress

Enhanced Agricultural Practice Implementation

Project Summary

This project supports increased implementation of soil-based agronomic practices and barnyard conservation practices to reduce the potential for nutrient impacts to surface waters in Vermont through:

1. Increased implementation of Farm Agronomic Practices (FAP) such as, but not limited to, cover crops, reduced tillage, manure injection, crop rotation, and rotational grazing.
2. Engineering and technical assistance services and farmstead best management practices (BMP) program
3. Conservation reserve enhancement program (CREP) Services

Outputs

- FAP: An additional 12,000 acres of conservation practices on agricultural fields
- Engineering and Technical Assistance Services: Estimated target of 10 designs/plans, eight practice installations
- CREP: 10 to 20 acres of riparian forested buffers and/or grassed filter strips
- Environmental Stewardship Programs: Up to 2,000 lbs. of Phosphorus reduced from farmers enrolled in environmental stewardship programs
- Estimated phosphorus load reductions achieved through activities above

Outcomes

- Improved water quality through implementation of production area and field Best Management Practices (BMPs) and reduced nutrient loading to surface waters, with increased BMP capacity in high priority watersheds

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EPA (FFY 22)
Open Date: 7/1/2023
Close Date:
Grant Amount: \$2,000,000.00

2023 Externally Managed Project in progress

Enhanced Agricultural Practice Implementation & Jewett Brook Treatment Train Easement

Project Summary

This project supports increased implementation of soil-based agronomic practices and barnyard conservation practices to reduce the potential for nutrient impacts to surface waters in Vermont through:

1. Increased implementation of Farm Agronomic Practices (FAP) such as, but not limited to, cover crops, reduced tillage, manure injection, crop rotation, and rotational grazing.
2. Engineering and Technical Assistance Services and Farmstead Best Management Practices (BMP) Program. The Best Management Practices program provides engineering services on a priority basis for the design of BMPs at no cost to the farmer and can cost share on the construction of eligible practices.
3. Conservation Reserve Enhancement Program (CREP). Vermont's Conservation Reserve Enhancement Program (CREP) is a voluntary program designed to reduce sediment runoff and improve water quality by removing land from agricultural production and establishing vegetative buffers.
4. In FFY23 additional funding will also support a separate initiative working with partners to secure a Land Easement for the Jewett Brook Treatment Train project. A "Treatment Train" is a series of treatment practices, typically constructed wetlands, placed in sequence. Water is withdrawn from the stream, pumped to the topmost treatment cell, and sequentially passed through remaining cells.

Outputs

- FAP: An additional 12,000 acres of conservation practices on agricultural fields
- Engineering and Technical Assistance Services: Estimated target of 10 designs/plans, eight practice installations
- CREP: 10 to 20 acres of riparian forested buffers and/or grassed filter strips
- Estimated phosphorus load reductions achieved through activities above
- Jewett Brook Treatment Train Land Easement

Outcomes

- Improved water quality through implementation of production area and field Best Management Practices (BMPs) and reduced nutrient loading to surface waters, with increased BMP capacity in high priority watersheds

Organization: VT DEC
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EPA (FFY 22)
Open Date: 7/1/2023
Close Date:
Grant Amount: \$2,280,000.00

2021 Externally Managed Project in progress

Enhanced Agricultural Riparian Buffer Pilot Projects

Project Summary

This project proposes to address gaps in existing funding opportunities in Vermont supporting enhanced agricultural land buffers. The phosphorus load reduction benefits of riparian wooded buffers along agricultural fields are well known; not only do wooded buffers improve filtration, infiltration, and uptake of field runoff, but they also decrease erosion and the loss of legacy phosphorus from streambanks. While multiple programs exist to identify sites and plant trees (Trees for Streams, Conservation Reserve Enhancement Program (CREP), and Natural Resources Conservation Service (NRCS) riparian buffer practice), there is very limited support available for the long-term comprehensive management of these buffers. The ongoing success of a buffer is contingent on the implementation of multiple best practices including mitigation of deer browse, management of weeds, and other ongoing maintenance activities. Funding will support stewardship in the first 1-3 years following project installation.

Outputs

- Implementation of agricultural riparian buffers on 5-10 sites using innovative methods.
- Additional maintenance of agricultural riparian buffers on 5-10 sites.
- Minimum of two trainings for partners on Agricultural Riparian Buffer establishment and stewardship.

Outcomes

- Improved water quality through implementation and maintenance of critical riparian practices, resulting in increased success rate of riparian buffer plantings and reduced nutrient loading to surface waters.
- Increased knowledge of BMPs to ensure successful establishment and stewardship of riparian buffers.

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EPA (FFY 21)
Open Date: 10/1/2021
Close Date:
Grant Amount: \$200,000.00

2022 Externally Managed Project in progress

Enhanced Agricultural Riparian Buffer Pilot Projects

Project Summary

This project proposes to address gaps in existing funding opportunities in Vermont supporting enhanced agricultural land buffers. The phosphorus load reduction benefits of riparian wooded buffers along agricultural fields are well known; not only do wooded buffers improve filtration, infiltration, and uptake of field runoff, but they also decrease erosion and the loss of legacy phosphorus from streambanks. While multiple programs exist to identify sites and plant trees (Trees for Streams, Conservation Reserve Enhancement Program (CREP), and Natural Resources Conservation Service (NRCS) riparian buffer practice), there is very limited support available for the long-term comprehensive management of these buffers. The ongoing success of a buffer is contingent on the implementation of multiple best practices including mitigation of deer browse, management of weeds, and other ongoing maintenance activities. Funding will support stewardship in the first 1-3 years following project installation.

Outputs

- Implementation of agricultural riparian buffers on 5-10 sites using innovative methods.
- Additional maintenance of agricultural riparian buffers on 5-10 sites.
- Minimum of two trainings for partners on Agricultural Riparian Buffer establishment and stewardship.

Outcomes

- Improved water quality through implementation and maintenance of critical riparian practices, resulting in increased success rate of riparian buffer plantings and reduced nutrient loading to surface waters.
- Increased knowledge of BMPs to ensure successful establishment and stewardship of riparian buffers.

Organization: VT DEC
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EPA (FFY 22)
Open Date: 7/1/2022
Close Date:
Grant Amount: \$200,000.00

2019 Externally Managed Project concluded

Enhanced Implementation of Vermont Environmental Stewardship Program (VESP)

Project Summary

The Vermont Environmental Stewardship Program (VESP) is a voluntary program that encourages and supports local agricultural producers to achieve environmental and agricultural excellence.

VESP applicants are evaluated by a team of conservation planners and technical service providers to ascertain current land-use practices. The resulting data is used to set customized environmental goals for the farm and to enact a long-range plan encompassing a full range of regenerative farming practices.

This project supports the comparison of stewardship evaluation tools and models and the development and integration of water quality and ecosystem service valuation criteria and proposals for incentives. Acreage from the pilot farms that has been assessed through USDA's Resource Stewardship Evaluation Tool (REST) will be compared with USDA's Agricultural Policy/Environmental eXtender Model (APEX). The same fields will be evaluated by both tools and compared based on the following outputs: phosphorus losses, nitrogen losses, erosion, soil carbon and organic matter.

Outputs:

- comparison and evaluation of a secondary stewardship evaluation tool, Agricultural Policy/Environmental eXtender Model (APEX). Acreage from the pilot farms will be assessed through APEX and compared with the Resource Stewardship Evaluation Tool (RSET). Outputs to be compared between the tools include phosphorus losses, nitrogen losses, erosion, soil carbon and organic matter.
- development of the chosen tool, if necessary, to meet the needs of VESP
- phosphorus reduction accounting through chosen tool for farms that improve management over time

Outcomes:

- anticipated outcomes include increased enrollment in VESP with launch of the full program, and improved farmer knowledge of where and what conservation practices would meet nutrient reduction goals.

Organization: VT DEC to Vermont Agency of Agriculture, Food and Markets

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EPA (FFY19)
Start Date: 10/1/2019
Close Date: 12/31/2022
Grant Amount: \$100,000.00

2019 Externally Managed Project in progress

Floodplain Restoration and Functional Assessment

Project Summary

The purpose of this initiative is to develop and apply methods for mapping and quantifying opportunities to reconnect streams, riparian forests, wetlands, and floodplains. This project supports further development of methods and maps that quantify and display the natural erosion and depositional processes, as well as floodplain functions and values that could be achieved with stream and floodplain connectivity. The resulting products will help identify and track priority protection and restoration projects and be made available through outreach and training of watershed organizations and other natural resources restoration partners. This project will support production of a set of products that explain and track existing and potential river form and process, as well as the effectiveness of interventions to improve river and floodplain connectivity and function, integrate stakeholder programs involved in restoring stream and floodplain connectivity, and engage the public to support these interventions.

Outputs:

- Vermont Lake Champlain Basin maps depicting:
 - ◊ Existing and restoration potential of stream, wetland, and floodplain connectivity, hydrology, and sediment transport (erosion & deposition) processes;
 - ◊ Natural functions, social values, and economic assets within riverine landscapes; and
 - ◊ Strategic projects and practices that maximize the protection and restoration of stream, wetland, riparian, and floodplain function and achieve relatively high benefit-cost ratios in consideration of affected socio-economic values.
- A tracking system to help explain existing reach and watershed departures from obtainable stream/floodplain form and process and facilitate the identification and tracking of restoration and protection through implemented projects and practices.
- Outreach tool(s) on floodplain and wetland natural functions and socio-economic values and or training module(s) supporting map use and tracking system components.
- Estimated phosphorus load reductions achieved through floodplain/wetland restoration and protection.

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Outcomes:

- Reduced phosphorus loading and improved surface water quality.
- Increased flood resilience.
- Improved fish and wildlife habitat.
- Enhanced public recreational opportunities.
- increased state agency, public, and partner knowledge of the cost-benefits of implementing strategic floodplain/wetland restoration and protection practices, including potential to provide stormwater treatment credits through the restoration of natural floodplain and wetland functions.



EPA (FFY19)
Start Date: 10/1/2019
Close Date:
Grant Amount: \$600,000.00

2020 Externally Managed Project in progress

Forest Phosphorus Load Allocation: Developing Assessment and Planning Tools for Implementation of the Lake Champlain TMDLs

Project Summary

This project builds on a prior project using existing LiDAR to identify and map forest roads, trails, and log landings on private forests in Vermont. This proposal seeks to assess forestlands to identify and prioritize legacy erosion associated with critical source areas located within forestlands and to develop accounting methods for estimating phosphorus and sediment reductions from forestland Best Management Practices (BMPs).

Outputs

- Calibrated spatial data analysis of Critical Source Areas (CSAs) on publicly accessible websites
- Project prioritization framework integrating CSA spatial data and the forest Road Erosion Inventory (REI) and Trail Erosion Inventory (TEI)
- 1-2 pilot project prioritization assessments completed

Outcomes

- Increased understanding of phosphorus and sediment sources from forestland uses and how to address them
- Inform future state and federal investments to support TMDL implementation and reduced nutrient loading from forested land uses and improved surface water quality in the Lake Champlain Basin.
- Provide a framework for clean water service providers for regional/local-scale practice identification, implementation, tracking, operation, and maintenance.

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EPA (FFY20)
Open Date: 10/1/2020
Close Date:
Grant Amount: \$100,000.00

2021 Externally Managed Project in progress

Forest Phosphorus Load Allocation: Developing Assessment and Planning Tools for Implementation of the Lake Champlain TMDLs

Project Summary

This project is the follow-up phase to work completed in FFY20. It entails ground truthing of the landscape analysis to develop and calibrate a prioritization framework of critical source areas (CSAs) to address legacy erosion in high priority basins (South Lake Champlain and Missisquoi Bay) to achieve target load allocations for lake segments that will not meet reduction targets through Vermont Acceptable Management Practices (AMPs) compliance alone. In addition, this phase will include the ground truthing of existing best management practice (BMP) implementation for recreation trails and other forestland uses to calibrate BMP design life and operation and maintenance requirements. As a result of both phases (FFY20 and FFY21) of work, the project will produce analytical tools that guide the design and implementation of forestland BMPs as well as be used directly by Clean Water Service Providers to guide implementation for high priority sub-basins (i.e., HUC-12 scale) to meet natural resource restoration targets as envisioned by Act 76 of 2019 (Clean Water Service Delivery Act). This project is part of a larger targeted design initiative to implement forestland BMPs, achieve target load reductions, and meet Lake Champlain and Lake Memphremagog TMDL requirements.

Outputs:

- Complete 3-5 project prioritization assessments at the HUC-12 scale across Missisquoi and South Lake basins
- Design and implementation of 10-15 priority restoration projects in the Missisquoi and South Lake basins (e.g., gully remediation)
- Conduct 1-2 trainings or webinars
- Create outreach materials

Outcomes:

- Increased understanding of phosphorus and sediment
- Reduce phosphorus and sediment from forestlands and improved surface water quality in Lake Champlain.
- Increase understanding of phosphorus and sediment sources from forestland uses and how to address them.
- Inform future state and federal investments to support TMDL implementation and reduced nutrient loading from forested land uses and improved surface water quality in the Lake Champlain Basin.

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EPA
Open Date: 7/1/2021
Close Date:
Grant Amount: \$200,000.00

- Provide a framework for clean water service providers for basin-scale forestland BMP identification, prioritization, implementation, tracking, operation, and maintenance

2021 Externally Managed Project in progress

Green Schools Initiative to Meet the Three Acre Stormwater General Permit

Project Summary

This initiative proposes to continue to assist public schools through the Green Schools Initiative to provide technical and financial assistance to achieve compliance with the Three-Acre General Permit in the Lake Champlain Basin. Over 60 K-12 public schools in the Lake Champlain Basin may be affected and therefore would need to start complying with the permit requirements. The Green Schools Initiative supports two phases with funding from federal fiscal project years 2018-2020. Phase 1 supports obtainment of the Stormwater General Permit 3-9050, including 100% design, site plans, and an engineering feasibility analysis to achieve coverage under the Three-Acre General Permit. Phase 2 supports implementation of construction work needed for permit compliance. Work may only begin under Phase 2 for sites that have completed the Phase 1 requirements (i.e., Stormwater General Permit 3-9050 coverage).

Outputs

- Construction of stormwater treatment practices to comply with General Permit 3-9050 standards at as many schools as practicable given the funding (Phase 2).
- Anticipated total phosphorus load reduction 18.2 - 127.4 kilograms per year (stormwater treatment practices designed and permitted within project timeframe; some projects will be constructed beyond project timeframe).

Outcomes

- Reduced stormwater runoff, phosphorus, and pollutant loading to Lake Champlain Basin.
- Early adoption and increased visibility of sites with three acres or more of impervious surface meeting enhanced stormwater standards.
- Increased knowledge of Green Stormwater Infrastructure (GSI) to address stormwater runoff for students, teachers, and administrators.

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EPA (FFY 21)
Open Date: 10/1/2021
Close Date:
Grant Amount: \$2,000,000.00

2022 Externally Managed Project in progress

Green Schools Initiative to Meet the Three Acre Stormwater General Permit

Project Summary

This initiative proposes to continue to assist public schools through the Green Schools Initiative to provide technical and financial assistance to achieve compliance with the Three-Acre General Permit in the Lake Champlain Basin. Over 60 K-12 public schools in the Lake Champlain Basin may be affected and therefore would need to start complying with the permit requirements. The Green Schools Initiative supports two phases with funding from federal fiscal project years 2018-2020. Phase 1 supports obtainment of the Stormwater General Permit 3-9050, including 100% design, site plans, and an engineering feasibility analysis to achieve coverage under the Three-Acre General Permit. Phase 2 supports implementation of construction work needed for permit compliance. Work may only begin under Phase 2 for sites that have completed the Phase 1 requirements (i.e., Stormwater General Permit 3-9050 coverage).

Outputs

- Construction of stormwater treatment practices to comply with General Permit 3-9050 standards at as many schools as practicable given the funding (Phase 2).
- Total phosphorus reduction through stormwater treatment at as many schools as practicable. An average removal rate for each site of impervious surface is about 3.64 kg/acre, with an average of 6.5 impervious acres per school.

Outcomes

- Reduced stormwater runoff, phosphorus, and pollutant loading to Lake Champlain Basin.
- Early adoption and increased visibility of sites with three acres or more of impervious surface meeting enhanced stormwater standards.
- Increased knowledge of Green Stormwater Infrastructure (GSI) to address stormwater runoff for students, teachers, and administrators.

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EPA (FFY 21)
Open Date: 7/1/2022
Close Date:
Grant Amount: \$4,000,000.00

2023 Externally Managed Project in progress

Green Schools Initiative to Meet the Three Acre Stormwater General Permit

Project Summary

This initiative proposes to continue to assist public schools through the Green Schools Initiative to provide technical and financial assistance to achieve compliance with the Three Acre General Permit in the Lake Champlain Basin. Over 60 K-12 public schools in the Lake Champlain Basin may be affected and therefore would need to start complying with the permit requirements. The Green Schools Initiative supports two phases with funding from federal fiscal project years 2018-2020. Phase 1 supports obtainment of the Stormwater General Permit 3-9050, including 100% design, site plans, and an engineering feasibility analysis to achieve coverage under the Three-Acre General Permit. Phase 2 supports implementation of construction work needed for permit compliance. Work may only begin under Phase 2 for sites that have completed the Phase 1 requirements (i.e., Stormwater General Permit 3-9050 coverage).

Outputs

- Construction of stormwater treatment practices to comply with General Permit 3-9050 standards at as many schools as practicable given the funding (Phase 2).
- Total phosphorus reduction through stormwater treatment at as many schools as practicable. An average removal rate for each site of impervious surface is about 3.64 kg/acre, with an average of 6.5 impervious acres per school.

Outcomes

- Reduced stormwater runoff, phosphorus, and pollutant loading to Lake Champlain Basin.
- Early adoption and increased visibility of sites with three acres or more of impervious surface meeting enhanced stormwater standards.
- Increased knowledge of Green Stormwater Infrastructure (GSI) to address stormwater runoff for students, teachers, and administrators.

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EPA (FFY 23)
Open Date: 7/1/2023
Close Date:
Grant Amount: \$4,000,000.00

2022 Externally Managed Project in progress

Growing the Lake Wise Program Through Increased Work with Bioengineering Practices

Project Summary

The Vermont Lake Wise Program offers science-based solutions for restoring and protecting shorelands, and the LCBP support has helped grow these lake-friendly practices throughout the basin. The Vermont Lake Wise Program has grown into a statewide umbrella program, leading efforts to improve shoreland conditions to protect water quality, wildlife habitat, and property. Lake Wise practices ensure lake-friendly development, which means it is possible to develop along a lake while also protecting water quality and habitat. Continuing to grow Lake Wise through training more Lake Wise Evaluators, Contractors, Environmental Consultants, Engineers, Landscape Designers, and all Shoreland Owners (State Parks, private residences, Towns, and businesses) furthers the movement from cleared shores to buffered shores, which is the highest priority practice for protecting water quality. This FFY22 project seeks funding for on-going Lake Wise work for annual trainings with Natural Resource Conservation Districts (NRCD) staff and other local partners to ensure increased capacity and expertise of technical resource staff available in the Lake Champlain Basin for assisting lake communities with stormwater management practices, protecting lake conditions, wildlife habitat, and building resilient shorelands. These trainings and work with other lake user groups, will connect the emerging Stream Wise practices with the Lake Wise work to present a watershed approach to protecting lakes and broaden the tool kit for how and why to practice watershed-friendly development.

Outputs

- 1-2 Group Lake Wise Evaluator Trainings
- 1-2 Virtual Natural Shoreland Erosion Control Training
- 1-3 additional Bioengineering Fact Sheets
- Ten new Lake Wise participants and shoreland sites assessed within the Lake Champlain Basin
- Ten BMP installation project sites identified
- Identify Five Potential Public Project Sites on Lake Champlain
- One ecological design of a public recreational beach area

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EPA (FFY22)
Open Date: 10/1/2022
Close Date:
Grant Amount: \$2,000,000.00

Outcomes

- Additional outreach resources on water quality and shoreland habitat protection practices and the promotion, demonstration, and normalization of those practices will result in improved lake water quality and shoreland habitat.

2020 Externally Managed Project in progress

Implementing Methods to Map, Inventory, and Prioritize Non-Municipal Road Improvements in Vermont

Project Summary

This project will use the inventory methods and tools established in the Lake Carmi watershed to assess private roads for road networks throughout the Lake Champlain Basin. It will identify three to five priority road networks across the Vermont Lake Champlain Basin to complete inventories (with the goal of inventorying one priority area within each of Vermont's six sub-basins as future funding allows). Additional tasks will include mapping and segmenting non-regulated private roads within priority areas, providing outreach to landowners about the private roads inventory, collecting of road assessment field data, and producing a prioritized list of potential private road improvement projects.

Outputs:

- complete private road erosion inventories in three to five priority road networks.

Outcomes:

- improved understanding of practices that reduce stormflows and associated nutrient loading from roads and increase resiliency to flood damage.
- members of the public are informed about watershed issues of the region and are more likely to make improvements on their property and/or encourage stewardship actions that decrease impacts to the Basin.

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EPA (FFY20)
Open Date: 7/1/2021
Close Date:
Grant Amount: \$100,000.00

2021 Externally Managed Project in progress

Implementing Methods to Map, Inventory, and Prioritize Non-Municipal Road Improvements in Vermont

Project Summary

This project will use the inventory methods and tools established in the Lake Carmi watershed to assess private roads for road networks throughout the Lake Champlain Basin. It will identify three to five priority road networks across the Vermont Lake Champlain Basin to complete inventories (with the goal of inventorying one priority area within each of Vermont's six sub-basins as future funding allows). Additional tasks will include mapping and segmenting non-regulated private roads within priority areas, providing outreach to landowners about the private roads inventory, collecting of road assessment field data, and producing a prioritized list of potential private road improvement projects.

Outputs:

- complete private road erosion inventories in three to five priority road networks.

Outcomes:

- improved understanding of practices that reduce stormflows and associated nutrient loading from roads and increase resiliency to flood damage.
- members of the public are informed about watershed issues of the region and are more likely to make improvements on their property and/or encourage stewardship actions that decrease impacts to the Basin.

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EPA (FFY21)
Open Date: 7/1/2021
Close Date:
Grant Amount: \$100,000.00

2022 Externally Managed Project in progress

Implementing Methods to Map, Inventory, and Prioritize Non-Municipal Road Improvements in Vermont

Project Summary

This project will use the inventory methods and tools established in the Lake Carmi watershed to assess private roads for road networks throughout the Lake Champlain Basin. It will identify three to five priority road networks across the Vermont Lake Champlain Basin to complete inventories (with the goal of inventorying one priority area within each of Vermont’s six sub-basins as future funding allows). Additional tasks will include mapping and segmenting non-regulated private roads within priority areas, providing outreach to landowners about the private roads inventory, collecting of road assessment field data, and producing a prioritized list of potential private road improvement projects.

Outputs:

- complete private road erosion inventories in three to five priority road networks.

Outcomes:

- improved understanding of practices that reduce stormflows and associated nutrient loading from roads and increase resiliency to flood damage.
- members of the public are informed about watershed issues of the region and are more likely to make improvements on their property and/or encourage stewardship actions that decrease impacts to the Basin.

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EPA (FFY22)
 Open Date: 7/1/2021
 Close Date:
 Grant Amount: \$100,000.00

2023 Externally Managed Project in progress

Implementing Methods to Map, Inventory, and Prioritize Non-Municipal Road Improvements in Vermont

Project Summary

This project will use the inventory methods and tools established in the Lake Carmi watershed to assess private roads for road networks throughout the Lake Champlain Basin. It will identify three to five priority road networks across the Vermont Lake Champlain Basin to complete inventories (with the goal of inventorying one priority area within each of Vermont’s six sub-basins as future funding allows). Additional tasks will include mapping and segmenting non-regulated private roads within priority areas, providing outreach to landowners about the private roads inventory, collecting of road assessment field data, and producing a prioritized list of potential private road improvement projects.

Outputs:

- complete private road erosion inventories in three to five priority road networks

Outcomes:

- improved understanding of practices that reduce stormflows and associated nutrient loading from roads and increase resiliency to flood damage.
- members of the public are informed about watershed issues of the region and are more likely to make improvements on their property and/or encourage stewardship actions that decrease impacts to the Basin.

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EPA (FFY21)
 Open Date: 7/1/2023
 Close Date:
 Grant Amount: \$100,000.00

2018 Externally Managed Project in progress

Increased Implementation of Water Quality Improvement Projects in the Lake Champlain Basin of Vermont

Project Summary

The purpose of this project is to increase the successful implementation of accepted best management practices that will reduce the potential for nutrient impacts to surface waters in Vermont. Addressing the high subwatershed load reduction goals will require extensive education and practice implementation above and beyond regulatory compliance. This project expands financial assistance to farms through three existing programs:

1. Farm Agronomic Practices (FAP) program to implement soil-based practices that improve soil quality, increase crop production, and reduce erosion and phosphorus pollution.
2. Conservation Reserve Enhancement Program (CREP) to restore forested riparian buffers on critical agricultural lands; and
3. Best Management Practices (BMP) Program increased engineering services to install production area practices.

Outputs:

Increased implementation of verified and critical best management practices for nutrient reduction and prevention from farms. Estimated targets include:

- A minimum of 30 acres of riparian agricultural land will be removed from production and converted to riparian forested buffers and/or grassed filter strips.
- Engineering support resulting in 8 practice installations, 10 designs, and 3 manure and wastewater handling plans.
- A minimum of 5,500 acres of conservation practices on agricultural fields. Conservation practices may include cover crops, reduced tillage, crop rotations, grassed waterways, and alternative manure incorporation, all of which have proven effective in reducing phosphorus from entering Lake Champlain.
- estimated phosphorus load reductions achieved through activities above

Outcomes:

- improved water quality through implementation of production area and field best management practices and reduced nutrient loading to surface waters.

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EPA (FFY18)
Start Date: 10/1/2018
Close Date: 10/21/2021
Grant Amount: \$972,000.00

2020 Externally Managed Project in progress

Lake Carmi Watershed Restoration

Project Summary

This FFY2020 project focuses on Lake Carmi, including its largest tributary, Marsh Brook. Lake Carmi is a relatively shallow lake in Franklin, Vermont that suffers from cyanobacteria blooms because of high nutrient concentrations. A Total Maximum Daily Load (TMDL) for phosphorus was issued for the lake in 2009 with the aim of reducing phosphorus loading to the lake. Lake Carmi feeds the headwaters of the Pike River, which drains into the heavily impaired Missisquoi Bay. A coarse calculation for data collected 2010 to 2018 indicates that Lake Carmi's outlet could deliver up to 4,000 pounds of phosphorus per year to the Pike River. In May 2018, the Vermont State Legislature passed Act 168, which designated Lake Carmi as a Lake in Crisis. In response, the Vermont Department of Environmental Conservation (VTDEC) issued a Crisis Response Plan, which lists managing stormwater from developed areas and private road assessments as a primary objective. This initiative would build upon an FFY19 LCBP funded project to mitigate runoff from private roads, a significant source of phosphorus to Lake Carmi and the Pike River. The project will implement high-priority road remediation projects in support of Lake Carmi improvement beginning in calendar 2021, substantially reducing phosphorus runoff to the Pike River and Lake Champlain.

Outputs:

- Design and implement 5-8 segments of priority road erosion projects previously inventoried from private and park roads within Lake Carmi watershed.
- Anticipated outcome of 91 kilograms per year total phosphorus load reduction to the Pike River and the Missisquoi Bay Section of Lake Champlain, achieved by road best management practices, which will result in improved surface water quality.

Outcomes:

- Reduced phosphorus and sediment loading to Lake Carmi and Lake Champlain Basin.
- Continued demonstration of the use of Private Road Erosion Inventory app as tool to prioritize mitigation efforts for eventual wider use by watershed associations across Lake Champlain Basin.

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EPA (FFY20)
Open Date: 7/1/2023
Close Date:
Grant Amount: \$200,000.00

2020 Externally Managed Project concluded

Long-Term Water Quality and Biological Monitoring Project for Lake Champlain

Project Summary

Long-term water quality and biological monitoring is necessary to detect environmental change in Lake Champlain and support implementation of the phosphorus TMDLs in Vermont and New York. Environmental indicators, monitoring stations, monitoring frequencies, and sampling procedures have been selected for this purpose. Statistical considerations were applied to optimize the design of the monitoring program. The project maintains a database and serves as the basis for establishing water quality, biological community, and lake environmental health relationships. The project has been ongoing since 1990.

Outputs:


- chemical and biotic data are collected at lake and tributary monitoring stations each year from late April through October. These data are made available on the Vermont DEC website and are summarized in an annual report.
- the annual report consists of a summary of the history and purpose of the project, description of the sampling network, summary of field sampling and analytical methods, parameter listings, and data tables. An up-to-date program description, graphical presentations of the data, and an interactive database, including statistical summaries, are maintained on the project website.

Outcomes:

- continue and expand monitoring of key baseline parameters in the Lake Champlain Basin to support the adaptive management process.
- maintain a unified data access system for coordination and data sharing among stakeholders in the Basin and produce timely and accessible summary reports for the general public.
- utilize data in support of ongoing phosphorus reduction efforts and other management activities.

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Organization: NYS DEC
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EPA (FFY20)
Start Date: 10/1/2020
Close Date: 9/30/2022
 NY \$185,000.00
 VT \$274,267.00
Grant Amount: \$459,267.00

2022 Externally Managed Project in progress

New York Enhanced Agricultural Best Management Practice (BMP) Projects (Year 1 and 2)

Project Summary

Agriculture provides one of the greatest sources of phosphorus loads in the Lake Champlain Basin. An estimated 8.7% of the New York portion of the Lake Champlain watershed is agriculture. However, agriculture provides the greatest load across all land use sectors at an estimated 38% of the loading². While many state and federal programs exist to assist agricultural operations, there are gaps in funding opportunities to achieve greater phosphorus load reductions in the agricultural sector.

For this project NYSDEC supports the implementation of agricultural best management practices (BMP) projects that supplement other state and federal funding initiatives. In Year 1, New York expanded upon the watershed-wide cover crop program funded under FFY21. The model for this project is based off of a successful pilot program implemented in the Finger Lakes region of New York, New York would propose to implement a comprehensive soil health and erosion control program. Soil health has been identified as a key component to not only improve water quality but to mitigate impacts from climate change.

In Year 2, for this project New York will target farms enrolled in the cover crop program to introduce other component practices, including but not limited to soil health tests, reduced tillage, diverse crop rotations, and/or rotational grazing. This project would be coordinated by the NY Agronomist in collaboration with the NYS Department of Agriculture and Markets and county soil and water conservation districts.


Outputs:

- Development and implementation of a pilot cover crop program that will maximize phosphorus reduction that otherwise would not be implemented due to funding gaps.
- Outreach to farms on soil health practices and enroll interested farms into program.
- Implementation of soil health practices such as utilizing soil health tests, reduced tillage, diverse crop rotations and rotational grazing.

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Outcomes:

- Phosphorus reductions from one of the largest loading sectors and providing cost share to farms that otherwise may be unable to afford to implement BMPs due to the current state of the agricultural economy.



EPA (FFY21)
Open Date: 4/1 2022
Close Date:
Grant Amount: \$400,000.00

2023 Externally Managed Project in progress

New York Flood Resiliency Capacity Building and Implementation

Project Summary

The focus of NYSDEC work in the Lake Champlain Basin is to reduce excess nutrients (mainly phosphorus) from going into the streams, rivers and eventually the Lake. One source of extra nutrients is sediment erosion from stream and riverbanks during flooding and ice jam events. Reducing the severity of floods and ice jams in the river systems of the Lake Champlain Basin will have multiple benefits: reducing nutrient loading, improving habitat for native species, and making our shoreline communities safer for residents.

NYSDEC and Office of General Services has identified high-priority flood-prone watersheds throughout New York State to develop state-of-the-art studies to reduce flooding and ice jam formations and improve riparian ecology. The studies for the watersheds within the Lake Champlain Basin (Little Chazy, Chazy, Ausable, Boquet, Mettawee and Indian Rivers) are being completed by SLR. The reports for the Little Chazy and Chazy River should be completed in 2022, and the Ausable and Boquet River reports in 2024. Proposed flood mitigation projects are being identified and evaluated using hydrologic and hydraulic modeling to quantitatively determine which proposed recommendations will likely result in the greatest flood reduction benefits. Flood mitigation scenarios such as levee enhancement, sediment management, floodplain enhancement and channel restoration are being investigated and will be recommended where appropriate. While the focus of the work is on flood resiliency, many of the likely recommended projects will achieve multiple co-benefits with investments in natural solutions, such as habitat enhancement, shoreline protection, and ecological restoration practices to achieve multiple OFA goals.

Outputs:

- At least one presentation(s) on funding opportunity to potential applicants.
- RFP issued, applications scored, and successful applicants selected for funding.
- Planning for or implementation of 1-5 projects recommended in the NY Flood Mitigation & Resilience Reports

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Outcomes:

- Reduced sediment and nutrient loading, and natural resource restoration after projects identified and prioritized in the plans are implemented. Increased awareness of NY Flood Mitigation & Resilience Reports and the multiple co-benefits with investments in natural solutions for local communities.



EPA (FFY22)
Open Date: 4/1/2023
Close Date:
Grant Amount: \$200,00.00

2020 Externally Managed Project in progress

New York Forest Load Inventory and Mapping - Year 1 and 2

Project Summary

Forested lands compose 73% of land use in the Lake Champlain basin and contribute 20% of total phosphorus loading to Lake Champlain. Phosphorus reductions from forested land uses will primarily involve remediating erosion and altered hydrology associated with forest trails and roads and legacy logging operations. Due to the remote nature of these sites, they are not easily identifiable without assessment to determine optimal locations for phosphorus reducing best management practices (BMPs) or acceptable management practices (AMPs). This project could support the following phases and associated tasks:

Phase 1

1. identifying forestland parcels, including managed forestland parcels such as national forests, state forests, state parks, municipal parks, and Use-Value Appraisal lands (lands enrolled in current-use programs) and the current and historic activities within them that could contribute to loading (e.g., recreational trails, forest roads, timber harvesting, sugaring)
2. determining erosion risk hotspots on managed forestlands including streambank erosion, BMPs to address them, and associated phosphorus load reductions
3. estimating interim phosphorus reduction targets by sub-basin, achieved through regulatory and non-regulatory means
4. prioritizing areas for implementation of forestland BMPs through a pilot program
5. compiling all the forestland parcels information, priority areas and recommended forestland BMPs in a final report that can be used to guide implementation.

Phase 2

1. design and implementation of forestland BMPs to reduce sediment erosion

Outputs:

- Inventory of disturbed areas and other areas at risk for erosion in managed forestlands and tracking/accounting methods for forestland BMPs.
- Interim targets for forested land use by sub-basin, to be achieved through regulatory and non-regulatory means.
- Design and implementation of forestland best management practices.

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Outcomes:

- increase in understanding of phosphorus and sediment sources from forested land uses and how to address them, which will help to inform future state and federal investments to support TMDL implementation
- reduced nutrient loading from forested land uses and improved surface water quality in the Lake Champlain Basin



EPA (FFY20, FFY21)
Open Date: 4/1/2021
Close Date:
Grant Amount: \$200,000.00

2023 Externally Managed Project in progress

New York Onsite Wastewater Treatment System Education and Maintenance Incentive Program

Project Summary

Onsite wastewater treatment systems (OWTS) have been identified as source of nonpoint source pollution in the Lake Champlain Basin, potentially contributing to water quality degradation via pathogen and nutrient input. Old and failing septic systems can cause serious water quality impacts and human waste can degrade water bodies with impacts ranging from elevated bacteria levels to contributing to the creation of harmful algal blooms. The Lake Champlain Basin has an estimated 8,200 OWTS within 250 ft of a waterbody, and failing septic systems contribute an estimated 12,485.86 lbs. of phosphorus per year³. OWTS pump out and maintenance is a valuable component of pollution reduction as well as engaging the community in how their contribution can positively impact water quality.

New York will create a OWTS education and maintenance program led by local interested partners like municipalities, Soil and Water Conservation Districts, river and lake associations and watershed coalitions. The educational component of the program in New York would engage with the public by sponsoring educational workshops. Workshops will be held in locations throughout the basin to encourage participation of residents, with an emphasis on impaired watersheds with nutrients as the pollutant of concern as well as environmental justice communities. The maintenance component of the program is to propose incentives or rebates with cooperation from local property owners to perform OWTS inspection and pump out of at least 300 OWTS tanks. The inspection and pump outs will be organized into a tiered fashion as to prioritize the program to assist traditionally underserved communities first. Previous OWTS programs in New York State have found that by providing an incentive equal to or even less than 50% of the cost of maintenance activities, most landowners are willing to conduct maintenance work, especially after learning about the importance of proper management in comparison to the cost of replacement. By offering a rebate program for OWTS pump out, regular maintenance can be completed and reduce the potential for OWTS failure in the future. Data acquired from these inspections may also be used to help prioritize implementation of the New York State Septic System Replacement Fund Program through the Environmental Facilities Corporation (EFC).

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- Outputs:**
- Create OWTS educational materials to be utilized for educational workshops.
 -
- Outcomes:**
- Reduced sediment and nutrient loading, and natural resource restoration after projects identified and prioritized in the plans are implemented.



EPA (FFY22)
Open Date: 4/1/2023
Close Date:
Grant Amount: \$200,000.00

2020 Externally Managed Project in progress

New York Rural Roads BMP Implementation - Year 1, 2 and 3

Project Summary

In New York, the Champlain Watershed Improvement Coalition (CWICNY) of New York has been working with local municipalities to implement the Rural Road Active Management Program (RRAMP) on municipal owned roadways. This project supports the continued use of RRAMP methods and tools for completing inventories of roadside erosion “hotspots” on rural roads. In FFY20, New York state adopted a framework to inventory non-regulatory road networks (specifically, rural and municipal roads in New York) to identify and prioritize road best management practices (BMPs) to reduce phosphorus loads from roadside erosion to Lake Champlain. FFY21 funds continued to support inventory on non-regulatory road networks and implementation of road improvements geographically targeted to priority subwatersheds. In the most recent inventory identified 321 sites were assessed, inventoried, and prioritized areas of roadside erosion with a total remediation cost of nearly \$2.5 million. FFY22 funds were utilized to support additional inventories as well as directed to implement the resulting prioritized projects in New York. Inventory and implementation work was targeted geographically to priority subwatersheds.

- Outputs:**
- Supplemental roadside erosion data collected and added to roadside erosion inventory.
 - Roadside erosion inventory database updated to include newly identified projects for implementation, re-prioritization of existing inventory to include newly identified locations.
 - Construction/implementation of high and medium priority projects to reduce erosion and improve water quality.

- Outcomes:**
- Reduced sediment and nutrient loading from unregulated roadways in New York within the Lake Champlain Basin.
 - Improved understanding of practices that reduce stormflows and associated nutrient loading from roads and increase resiliency to flood damage.

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EPA(FFY20, FFY21, FFY22)
Open Date: 4/1/2021
Close Date:
Grant Amount: \$300,000.00

2022 Externally Managed Project in progress

New York Stormwater Master Planning - Year 1 and 2

Project Summary

Due to population thresholds, many municipalities in the New York portion of the basin are unable to be designated as MS4 communities. As a result, these communities must voluntarily address excessive stormwater flow and often do not have the resources to develop comprehensive stormwater assessments that identify areas for implementation.

New York will pilot stormwater planning in impervious corridors not regulated by New York's Municipal Separate Stormwater Sewer System (MS4) General Permit. Stormwater planning is a critical step in determining cost-effective approaches to mitigate negative impacts of stormwater and target pollution prevention. By completing these assessments, communities can determine where best to implement retrofits and will be better positioned to seek future funding for stormwater remediation projects. Guidelines for stormwater master planning have been developed by VTDEC; similar guidelines will be followed for plans developed in New York. Master plan content will include assessment and mapping of existing stormwater infrastructure, areas that have potential to generate pollutants that could enter the stormwater system and making recommendations for areas where infiltration could be increased.

Under Phase I of this program, NYSDEC received funding in FFY21 to develop stormwater master plans for 1-2 non-regulated municipalities. Under Phase II, NYSDEC proposes to develop stormwater master plans for 2-4 non-regulated highly impervious "corridors" that cross municipal and subwatershed borders, that have been identified regionally as needing assistance with stormwater infrastructure. Plans developed under both Phase I and Phase II can serve as examples for future stormwater master plans and both the municipal and corridor level. Communities that receive stormwater master plans will become eligible for further planning, design, and implementation funding through NYSDEC's water quality grant programs.

Outputs:

- Three to six Stormwater Master Plans developed.

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Outcomes:

- Reduced sediment and nutrient loading, and natural resource restoration after projects identified and prioritized in the plans are implemented.



EPA (FFY21, FFY22)
Open Date: 4/1/2022
Close Date:
Grant Amount: \$400,000.00

2020 Externally Managed Project in progress

New York Wastewater Treatment Facility Optimization to Reduce Effluent Phosphorus - Year 2 and 3

Project Summary

This project focuses on the development and implementation of detailed optimization plans for wastewater treatment facilities (WWTFs) in the Lake Champlain basin of New York. WWTF optimization offers the potential for innovative solutions that can help to improve facility efficiencies, reduce effluent phosphorus loads, and reduce costs associated with other phosphorus control strategies by adjusting internal operations and process control within the existing treatment works. With the high costs associated with capital upgrades coupled with reductions in available funding, it is increasingly important that wastewater treatment facility operators look toward improving internal efficiencies and innovative solutions to help them achieve treatment necessary to meet permit limits. The project will result in implementation of WWTF optimization and will also provide technical assistance, education, and outreach for to municipal WWTF operators subject to reduced effluent phosphorus limits.

Outputs:

- Development of facility optimization plans, including an evaluation of alternative methods for phosphorus reduction and recommendations for process control adjustments to improve phosphorus removal efficiency, implementation plans and timelines, and the projected total phosphorus load reduction with full implementation of wastewater optimizations.
- Informing managers of innovative phosphorus reduction opportunities.
- Demonstrating tools and techniques to reduce phosphorus loading from wastewater treatment facilities.
- An annual report documenting project activities, outputs, and outcomes, including the estimated phosphorus reductions achieved through implementation of the optimization plans.

Outcomes:

- Acceptance of new management approaches.
- Utilization of improved optimization strategies to further reduce phosphorus loadings from wastewater treatment facilities to Lake Champlain.

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EPA (FFY219, FFY20)
Start Date: 4/1/2020
Close Date:
Grant Amount: \$200,000.00

2022 Externally Managed Project in progress

Onsite Wastewater Treatment System Education and Maintenance Incentive Program

Project Summary

Onsite wastewater treatment systems (OWTS) are a key component to reducing nonpoint source pollution in the Lake Champlain Basin. Properly designed, installed, and maintained systems can virtually eliminate water quality degradation from pathogen and nutrient input. Proper OWTS installation and maintenance is a valuable component of pollution reduction as well as engaging the community in how their diligence can positively impact water quality. This project provides local training programs or certification programs directed towards onsite wastewater treatment system installers and service providers to improve industry standards. In addition to the workshops, handouts and fact sheets will be developed for OWTS owners and practitioners regarding proper installation and maintenance, as well as current resources available for financial support.

Outputs

- 1-2 Interactive Service Provider Focused Trainings/Workshops
- 1-2 OWTS Installer Focused Trainings/Workshops
- 1-2 Landowner Focused Trainings
- New OWTS Fact Sheets

Outcomes

- Increased knowledge of best practices for onsite wastewater system installation and maintenance
- Improved management and maintenance of onsite wastewater systems

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EPA
Open Date: 10/1/2022
Close Date:
Grant Amount: \$200,000.00

2019 Externally Managed Project in progress

Program to Expand and Accelerate Wetland Conservation and Restoration in Vermont's Lake Champlain Basin

Project Summary

Through this project, the Vermont Fish and Wildlife Department (FWD) will develop a focused land acquisition program around wetland acquisition and restoration in the Lake Champlain Basin. FWD will coordinate closely with a range of partners to identify, develop and implement wetland conservation and restoration projects that will result in water quality protection, improvement and long-term management under FWD ownership.

Outputs:

- four to seven wetland acquisition projects completed in the Lake Champlain Basin with a minimum of 40% of the total land acquired including a change in land management strategy that will result in water quality improvement, and a minimum of 200 acres restored.
- estimated phosphorus load reductions achieved through wetlands conservation and restoration. While we are unable to estimate this at present, we will track the necessary data and anticipate this capacity within the project timeline.

Outcomes:

- improved functions and values of existing, degraded wetland acres in the Lake Champlain Basin, such as surface water nutrient retention, stormwater retention, filtration, and gradual discharge, groundwater recharge, reduced soil erosion, and floodwater attenuation, which will result in improved surface water quality.
- improved coordination of wetland acquisition and restoration projects for efficiency and more effective use of federal and state resources.
- enhancement of wildlife habitat, public access, flood protection, and wildlife-based recreation.

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EPA (FFY18, FFY19)
Start Date: 7/1/2019
Close Date:
Grant Amount: \$1,700,652.00

2020 Externally Managed Project in progress

Priority Wetland Aquisition, Restoration, and Conservation to Improve Water Quality in Vermont's Lake Champlain Basin

Project Summary

This initiative implements the highest-priority, shovel-ready wetland acquisition, restoration, and conservation projects to improve water quality in Vermont's Lake Champlain Basin through the Vermont Department of Fish and Wildlife (VDFW). VDFW will implement projects to restore natural wetland functions and improve conditions for wildlife, water quality, flood resilience, and groundwater recharge.

Outputs:

- VFWD will develop 4-6 wetland acquisition and restoration projects in the Champlain Basin, with a minimum of 40% of the lands acquired restorable to wetlands.
- Estimated phosphorus load reductions are anticipated to be achieved through wetlands conservation and restoration. Estimation approaches are in development by the DEC Clean Water Initiative Program, and VFWD will track and provide the necessary data to estimate total phosphorus reductions attributable to this project by the end of the project timeline.

Outcomes:

- Improved functions and values of existing, degraded wetland acres in the Lake Champlain Basin, such as surface water nutrient retention, stormwater retention, filtration, and gradual discharge, groundwater recharge, reduced soil erosion, and floodwater attenuation, which will result in improved surface water quality.
- Improved coordination of wetland acquisition and restoration projects for efficiency and more effective use of federal and state resources.
- Enhancement of wildlife habitat, public access, flood protection, and wildlife-based recreation.

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EPA (FFY 20)
 Open Date: 7/1/2020
 Close Date:
 Grant Amount: \$1,650,000.00

2021 Externally Managed Project in progress

Priority Wetland Aquisition, Restoration, and Conservation to Improve Water Quality in Vermont's Lake Champlain Basin

Project Summary

This initiative implements the highest-priority, shovel-ready wetland acquisition, restoration, and conservation projects to improve water quality in Vermont's Lake Champlain Basin through the Vermont Department of Fish and Wildlife (VDFW). VDFW will implement projects to restore natural wetland functions and improve conditions for wildlife, water quality, flood resilience, and groundwater recharge.

Outputs:

- VFWD will develop 4-6 wetland acquisition and restoration projects in the Champlain Basin, with a minimum of 40% of the lands acquired restorable to wetlands.
- Estimated phosphorus load reductions are anticipated to be achieved through wetlands conservation and restoration. Estimation approaches are in development by the DEC Clean Water Initiative Program, and VFWD will track and provide the necessary data to estimate total phosphorus reductions attributable to this project by the end of the project timeline

Outcomes:

- improved functions and values of existing, degraded wetland acres in the Lake Champlain Basin, such as surface water nutrient retention, stormwater retention, filtration, and gradual discharge, groundwater recharge, reduced soil erosion, and floodwater attenuation, which will result in improved surface water quality.
- improved coordination of wetland acquisition and restoration projects for efficiency and more effective use of federal and state resources.
- enhancement of wildlife habitat, public access, flood protection, and wildlife-based recreation.

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EPA (FFY 21)
 Open Date: 7/1/2021
 Close Date:
 Grant Amount: \$2,000,000.00

2022 Externally Managed Project in progress

Priority Wetland Aquisition, Restoration, and Conservation to Improve Water Quality in Vermont’s Lake Champlain Basin

Project Summary

This initiative implements the highest-priority, shovel-ready wetland acquisition, restoration, and conservation projects to improve water quality in Vermont’s Lake Champlain Basin through the Vermont Department of Fish and Wildlife (VDFW). VDFW will implement projects to restore natural wetland functions and improve conditions for wildlife, water quality, flood resilience, and groundwater recharge.

Outputs:

- VFWD will develop 4-6 wetland acquisition and restoration projects in the Champlain Basin, with a minimum of 40% of the lands acquired restorable to wetlands.
- Estimated phosphorus load reductions are anticipated to be achieved through wetlands conservation and restoration. Estimation approaches are in development by the DEC Clean Water Initiative Program, and VFWD will track and provide the necessary data to estimate total phosphorus reductions attributable to this project by the end of the project timeline

Outcomes:

- improved functions and values of existing, degraded wetland acres in the Lake Champlain Basin, such as surface water nutrient retention, stormwater retention, filtration, and gradual discharge, groundwater recharge, reduced soil erosion, and floodwater attenuation, which will result in improved surface water quality.
- improved coordination of wetland acquisition and restoration projects for efficiency and more effective use of federal and state resources.
- enhancement of wildlife habitat, public access, flood protection, and wildlife-based recreation.

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EPA (FFY 22)
Open Date: 10/1/2022
Close Date:
Grant Amount: \$2,000,000.00

2018 Externally Managed Project in progress

Stormwater Planning, Design, and Construction of Green Stormwater Infrastructure at Public Schools and Vermont State Colleges in the Lake Champlain Basin in Vermont

Project Summary

The Green Schools Initiative supports two phases with funding from federal fiscal project years 2018, 2019, and 2020 and builds off assessments to better understand the number of schools interested in early adoption and stormwater needs. Phase 1 supports schools in their obtainment of a permit that meet the stormwater standards outlined in Stormwater General Permit 3-9050, including 100% design, completion of site plans, and an engineering feasibility analysis to demonstrate compliance with the Vermont Stormwater Management Manual. Phase 2 supports implementation of construction work needed for permit compliance. This initiative builds on efforts already underway with the goal of obtaining permit coverage and subsequent construction to reduce phosphorus and sediment discharges from developed parcels with three or more acres of impervious surface.

Outputs:

- obtainment of General Permit 3-9050 coverage at 2-4 public schools (Phase 1).
- anticipated outcome of 3.4 – 6.7 kilograms per year total phosphorus load reduction achieved by stormwater best management practices, resulting in improved surface water quality. This includes the reductions from designs once they are constructed as required to comply with General Permit 3-9050, which is not anticipated in the timeframe of this workplan.

Outcomes:

- Reduced stormwater runoff, phosphorus, and pollutant loading to Lake Champlain Basin
- Early adoption and increased visibility of sites with three acres or more of impervious surface meeting enhanced stormwater standards.
- Increased knowledge of GSI as a means to address stormwater runoff for students, teachers, and administrators.

Organization: VT DEC

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EPA (FFY18)
Open Date: 10/1/2018
Close Date:
Grant Amount: \$202,908.00

2019 Externally Managed Project in progress

Stormwater Planning, Design, and Construction of Green Stormwater Infrastructure at Public Schools and Vermont State Colleges in the Lake Champlain Basin in Vermont

Project Summary

The Green Schools Initiative supports two phases with funding from federal fiscal project years 2018, 2019, and 2020 and builds off assessments to better understand the number of schools interested in early adoption and stormwater needs. Phase 1 supports schools in their obtainment of a permit that meet the stormwater standards outlined in Stormwater General Permit 3-9050, including 100% design, completion of site plans, and an engineering feasibility analysis to demonstrate compliance with the Vermont Stormwater Management Manual. Phase 2 supports implementation of construction work needed for permit compliance. This initiative builds on efforts already underway with the goal of obtaining permit coverage and subsequent construction to reduce phosphorus and sediment discharges from developed parcels with three or more acres of impervious surface.

Outputs:

- Obtainment of General Permit 3-9050 (or Individual Permit) coverage at up to 30 public schools and state colleges (Phase 1).
- Construction of stormwater treatment practices to comply with General Permit 3-9050 standards at as many schools as practicable given the funding (Phase 2).
- Anticipated outcome of 47.5 kilograms per year total phosphorus load reduction achieved by stormwater best management practices, resulting in improved surface water quality. This includes the reductions from designs once they are constructed as required to comply with General Permit 3-9050, which is not anticipated in the timeframe of this workplan.

Outcomes:

- Reduced stormwater runoff, phosphorus, and pollutant loading to Lake Champlain Basin
- Early adoption and increased visibility of sites with three acres or more of impervious surface meeting enhanced stormwater standards.
- Increased knowledge of GSI as a means to address stormwater runoff for students, teachers, and administrators.

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EPA (FFY19)
Start Date: 10/1/2019
Close Date:
Grant Amount: \$2,200,200.00

2020 Externally Managed Project in progress

Stormwater Planning, Design, and Construction of Green Stormwater Infrastructure at Public Schools and Vermont State Colleges in the Lake Champlain Basin in Vermont

Project Summary

The Green Schools Initiative supports two phases with funding from federal fiscal project years 2018, 2019, and 2020 and builds off assessments to better understand the number of schools interested in early adoption and stormwater needs. Phase 1 supports schools in their obtainment of a permit that meet the stormwater standards outlined in Stormwater General Permit 3-9050, including 100% design, completion of site plans, and an engineering feasibility analysis to demonstrate compliance with the Vermont Stormwater Management Manual. Phase 2 supports implementation of construction work needed for permit compliance. This initiative builds on efforts already underway with the goal of obtaining permit coverage and subsequent construction to reduce phosphorus and sediment discharges from developed parcels with three or more acres of impervious surface.

Outputs:

- Obtainment of General Permit 3-9050 (or Individual Permit) coverage at up to 30 public schools and state colleges (Phase 1).
- Construction of stormwater treatment practices to comply with General Permit 3-9050 standards at as many schools as practicable given the funding (Phase 2).
- Phase 1 anticipated outcome (stormwater treatment practices designed and permitted within project timeframe, likely to be constructed beyond project timeframe): 46 kilograms per year total phosphorus load reduction.
- Phase 2 anticipated outcome (stormwater treatment practices constructed within project timeframe): 18 kilograms per year total phosphorus load reduction.

Outcomes:

- Reduced stormwater runoff, phosphorus, and pollutant loading to Lake Champlain Basin
- Early adoption and increased visibility of sites with three acres or more of impervious surface meeting enhanced stormwater standards.
- Increased knowledge of GSI as a means to address stormwater runoff for students, teachers, and administrators.

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EPA (FFY20)
Open Date: 10/1/2020
Close Date:
Grant Amount: \$2,314,000.00

Targeted Organizational Capacity and Workforce Development to Support Implementation of Clean Water Projects

Project Summary

This project proposes to support watershed groups and partners in the Lake Champlain Basin to increase technical expertise, capacity, and workforce development to support clean water project implementation and funding initiatives. In the fall of 2021, VT DEC launched Phase 1 of a Clean Water Organizational Capacity Development Initiative. Phase 1 is an assessment process, in collaboration with watershed organizations and partners, to learn more about the various needs for workforce development and organizational capacity on the ground. Phase 1 will determine the capacity challenges that need to be addressed and will recommend priority investments in capacity building to accelerate clean water project implementation. Phase 2 will implement priority recommendations from Phase 1. This funding would expand on VT DEC's Phase 2 capacity-building investments in Lake Champlain Basin.

Outputs

- 10-15 organizations access the capacity building intervention.

Outcomes

- Participating organizations are better equipped to meet the challenges and opportunities to protect Lake Champlain Basin.

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EPA (FFY22)
 Open Date: 7/1/2022
 Close Date:
 Grant Amount: \$100,000.00

Targeted Organizational Capacity and Workforce Development to Support Implementation of Clean Water Projects

Project Summary

This project proposes to support watershed groups and partners in the Lake Champlain Basin to increase technical expertise, capacity, and workforce development to support clean water project implementation and funding initiatives. In the fall of 2021, VT DEC launched Phase 1 of a Clean Water Organizational Capacity Development Initiative. Phase 1 is an assessment process, in collaboration with watershed organizations and partners, to learn more about the various needs for workforce development and organizational capacity on the ground. Phase 1 will determine the capacity challenges that need to be addressed and will recommend priority investments in capacity building to accelerate clean water project implementation. Phase 2 will implement priority recommendations from Phase 1. This funding would expand on VT DEC's Phase 2 capacity-building investments in Lake Champlain Basin.

Outputs

- 10-15 organizations access the capacity building intervention.

Outcomes

- Participating organizations are better equipped to meet the challenges and opportunities to protect Lake Champlain Basin.

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EPA (FFY23)
 Open Date: 7/1/2023
 Close Date:
 Grant Amount: \$300,000.00

2018 Externally Managed Project in progress

Using GSI (Green Stormwater Infrastructure) and Other Technologies to Reduce Combined Sewer Overflows (CSOs)

Project Summary

Combined sewage overflow (CSO) events release phosphorus and pathogen pollution into Vermont's surface waters, trigger beach closures, increase the health risk to the public, and violate Vermont Water Quality Standards. The purpose of this project is to employ green stormwater infrastructure (GSI) to reduce polluted runoff and high stormflows from developed lands that drain into combined sewer system (CSS) areas and contribute to combined sewer overflows (CSOs). Installation of GSI stormwater treatment practices will slow, infiltrate, and/or treat stormwater runoff from roads and other impervious developed lands and/or disconnect impervious surfaces from CSSs.

Outputs:

- Final design(s) completed.
- Constructed GSI or other rainwater harvesting stormwater treatment practices.
- Signed 10-year (minimum) O&M Plan(s) and Agreement(s).
- 15 acres of impervious surface treated, with a reduction of 9-12 kilograms of total phosphorus load

Outcomes:

- Reduced stormflows and associated phosphorus pollution from developed lands.
- 20-25 acres of impervious surface treated, with a reduction 9-12 kilograms of total phosphorus load delivered to Lake Champlain reduced per year, which will result in improved surface water quality.
- Reduced CSO events and associated beach closures, bacteria pollution, and violation of Vermont Water Quality Standards.
- Reduced flooding associated with stormflows from developed lands.

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EPA (FFY18)
Start Date: 10/1/2018
Close Date:
Grant Amount: \$1,118,843.00

2019 Externally Managed Project in progress

Wastewater Treatment Facility Optimization to Reduce Effluent Phosphorus

Project Summary

This project focuses on the development and implementation of detailed optimization plans for wastewater treatment facilities (WWTFs) in the Lake Champlain basin of Vermont. WWTF optimization offers the potential for innovative solutions that can help to improve facility efficiencies, reduce effluent phosphorus loads, and reduce costs associated with other phosphorus control strategies by adjusting internal operations and process control within the existing treatment works. The project will result in implementation of WWTF optimizations and will also provide technical assistance, education and outreach for to municipal WWTFs subject to reduced effluent phosphorus limits.

Outputs:

- Outreach on innovative phosphorus reduction opportunities to WWTF managers.
- Demonstration of tools and techniques to reduce phosphorus loading from WWTFs.
- Phosphorus optimization plans, including an evaluation of alternative methods for phosphorus reduction and recommendations for process control adjustments to improve phosphorus removal efficiency, implementation plans

Outcomes:

- Acceptance of new management approaches.
- Implementation of improved optimization strategies to further reduce phosphorus loadings from WWTFs in the Lake Champlain Basin of Vermont.

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EPA (FFY19)
Open Date: 10/1/2019
Close Date:
Grant Amount: \$150,000.00

2020 Externally Managed Project in progress

Wastewater Treatment Facility Optimization to Reduce Effluent Phosphorus

Project Summary

This project focuses on the development and implementation of detailed optimization plans for wastewater treatment facilities (WWTFs) in the Lake Champlain Basin of Vermont. WWTF optimization offers the potential for innovative solutions that can help to improve facility efficiencies, reduce effluent phosphorus loads, and reduce costs associated with other phosphorus control strategies by adjusting internal operations and process control within the existing treatment works. The project will result in implementation of WWTF optimizations and will also provide technical assistance, education, and outreach for to municipal WWTFs subject to reduced effluent phosphorus limits.

Outputs

- Technical assistance provided to 15-25 WWTFs in Vermont's Lake Champlain Basin
- Phosphorus optimization plans or wastewater asset management planning for 3-4 facilities in Vermont's Lake Champlain Basin
- For the facilities where Phosphorus Optimization Plans (POPs) are developed, projected total phosphorus load reductions over a five-year period with full implementation of wastewater optimizations.

Outcomes

- Managers and operators informed of innovative phosphorus reduction opportunities and demonstrating tools and techniques to reduce phosphorus loading from WWTFs
- Acceptance of new management approaches as well as utilization of improved optimization strategies to further reduce phosphorus loadings from WWTFs.

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EPA (FFY20)
Open Date: 10/1/2021
Close Date:
Grant Amount: \$150,000.00

2021 Externally Managed Project in progress

Water Chestnut Management Partnership 2021 - Lake Champlain Basin

Project Summary

The Vermont Department of Environmental Conservation (VT DEC) continued water chestnut management north-to-south in the waters of Lake Champlain and the surrounding basin. In 2020 and 2021, VTDEC will monitor, remove, and dispose of hand harvested water chestnut at up to 81 Lake Champlain sites and 29 other water bodies via contract and multiple partnerships. U.S EPA funds awarded via the Lake Champlain Basin Program (LCBP) in FFY2020 will contribute to a VTDEC-overseen contracted hand harvesting program at the majority of these sites, all of which are within the Lake Champlain Basin. VTDEC will also continue a new initiative piloted in 2018, to employ unmanned aircraft systems (UAS or drones) technology to increase the efficiency of hand-harvesting efforts, and to monitor sites that have been the focus of long-term efforts. It is expected that this monitoring data will inform management plans in the future, and further increase the efficacy of the program. A portion of the funds sought from LCBP will contribute to this element.

Outputs:

- Number and weight of plants harvested.
- Water chestnut population locations and maps
- 2022 Water Chestnut Harvesting Tracking Sheet for up to 81 Lake Champlain sites and over 25 other waterbodies in the basin

Outcomes:

- Water chestnut management goals: reduce densities, prevent further spread, shift harvesting techniques in Lake Champlain populations from mechanical means to hand harvest and continued surveillance. Results of monitoring project will help to inform future management decisions.

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EPA (FFY21)
Start Date: 4/1/2022
Close Date:
Grant Amount: \$90,000.00

2022 Externally Managed Project in progress

Water Chestnut Management Partnership 2022 - Lake Champlain Basin

Project Summary

In Federal Fiscal Year 2022, VTDEC will continue a new hand pulling operation that will target unharvested and challenging locations by using motorboats rather than kayaks, to access and hand harvest dense mats of water chestnut that are mixed with native plants. This operation will work in concert with the mechanical harvesting operators, and load spoils onto the transporter. Activities will include:

1. Survey and manage over 80 Lake Champlain water chestnut sites between St. Albans, VT and Dresden, NY on both sides of the lake by removal by hand, mechanical removal, or a combination of the two methods.
2. Manage over 25 other waters within the Lake Champlain Basin in Vermont by the removal of water chestnut by hand.
3. Dispose of collected material via composting or in approved, upland, non-wetland locations.
4. Early detection and rapid response for water chestnut in other areas of Lake Champlain and Basin waters of Vermont. Implement a control response if water chestnut is found.

Outputs:

- Number and weight of plants harvested.
- Water chestnut population locations and maps
- 2023 Water Chestnut Harvesting Tracking Sheet for up to 81 Lake Champlain sites and over 25 other waterbodies in the basin

Outcomes:

- Water chestnut management goals: reduce densities, prevent further spread, shift harvesting techniques in Lake Champlain populations from mechanical means to hand harvest and continued surveillance. Results of monitoring project will help to inform future management decisions.

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EPA (FFY21)
Start Date: 4/1/2023
Close Date:
Grant Amount: \$90,000.00

2018 Externally Managed Project in progress

Wetland Restoration and Mapping

Project Summary

This project provides funds to achieve expansion of wetland restoration and protection efforts through easement acquisition and restoration, or restoration of existing conserved lands. Wetland restoration projects will target critical areas where restoration would result in the attenuation of nonpoint source phosphorus, thereby maintaining and improving downstream water quality. Additionally, this project will enhance the restoration tools by improving on the National Wetlands Inventory within a portion of the Otter Creek Basin, an area of the state which has the biggest potential for wetland restoration. In partnership with the Natural Resources Conservation Service and conservation organizations, this project supports wetland restoration along with wetland buffer, river corridor, and floodplain restoration in the Lake Champlain Basin in Vermont.

Outputs:

- Conservation and or restoration of at least 80 acres of wetlands, wetland buffer, river corridor, and floodplain in the Lake Champlain Basin in Vermont.
- Wetland maps with a higher accuracy of wetland identification for the upper half of the Otter Creek Basin.
- Wetland mapping applied to restoration project creation to be used as a tool for phosphorus load reduction estimations.

Outcomes:

- Reduction in phosphorus loading, increased flood resilience, improved fish and wildlife habitat, and enhanced public recreational opportunities.

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EPA (FFY18)
Start Date: 10/1/2018
Close Date:
Grant Amount: \$399,348.00

2020 Externally Managed Project

in progress

Winooski Headwaters Targeted Intervention

Project Summary

This project will construct erosion control and stormwater management projects in the headwaters of the Winooski River that were prioritized in DEC Stormwater Master Plans. A particular high priority, longstanding, and problematic erosion site to be addressed is a stormwater remediation opportunity identified in the Winooski Tactical Basin Plan, the so-called "Plainfield Gully." The Plainfield Gully project, located on the Plainfield Health Center property, includes construction of a regraded stormwater-settling area with water-level controlled by a rip-rap filter berm on a small drainage as well as in-gully restoration to arrest longstanding gully erosion and headcutting. An additional gully in the Winooski's Kingsbury Branch will be stabilized as the second stage of a project that begins with the installation of infiltration practices to address contributing stormwater from the East Calais Post Office (subsurface stormwater chamber) and Moscow Brook Road (infiltration basin). A third project, also in the Kingsbury Branch watershed, includes installation of a subsurface stormwater chamber as part of a non-regulatory stormwater infiltration project at the Woodbury Elementary School.

Outputs

- Construction of step pool system and in gully restoration of "Plainfield Gully."
- Construction of stormwater infrastructure and Moscow Woods gully restoration.
- Implementation of additional stormwater projects including three subsurface chambers, bioretention, gravel wetlands, and stormwater detention/gully restoration.
- Anticipated 74 kg/year total phosphorus load reduction achieved by stormwater infrastructure and in-gully restoration for the Plainfield project.

Outcomes

- Reduced phosphorus and sediment loading to Winooski River and Lake Champlain Basin.
- The remaining projects will yield up to 376 kg/year of phosphorus, and these estimates will be improved once complete.
- Improved surface water quality from reduced phosphorus and sediment loading to Winooski River and Lake Champlain Basin.

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EPA (FFY20)	
Open Date:	10/1/2020
Close Date:	
Grant Amount:	\$671,759.00

ABOUT THE LCBP

The Patrick Leahy Lake Champlain Basin Program (LCBP) coordinates and funds efforts that benefit the Lake Champlain Basin's water quality, fisheries, wetlands, wildlife, recreation, and cultural resources, in partnership with government agencies from New York, Vermont, and Québec, private organizations, local communities, and individuals.

The LCBP was created in 1992 at the recommendation of the Lake Champlain Management Conference. The Management Conference was a multi-jurisdictional effort led by the U.S. Environmental Protection Agency (US EPA) upon the signing of the Lake Champlain Special Designation Act, under Section 120 of the U.S. Clean Water Act on November 5, 1990. Sponsored by Senators Leahy and Jeffords from Vermont and Senators Moynihan and D'Amato from New York, this legislation designated Lake Champlain as a resource of national significance and required examina-

tion of water quality, fisheries, wildlife, recreational, and economic issues.

Before passage of the Act, natural resource managers faced the challenge of addressing specific problems requiring immediate action while also charting a comprehensive, integrated plan for the future of the Lake Champlain Basin. To address this challenge, the Lake Champlain Special Designation Act authorized funding through the US EPA to the States of Vermont and New York, and to NEIWPCCC in support of the LCBP to work collaboratively to implement a management plan for the lake. *Opportunities for Action* has since been the plan that guides the LCBP's work.

NEIWPCCC—a regional commission that helps the states of the Northeast preserve and advance water quality—serves as the primary program administrator of LCBP at the request of the Lake Champlain Steering Committee, and administers the program's personnel and finances. LCBP is a program partner of NEIWPCCC.

LCBP GOALS

Opportunities for Action identifies four goals that address the key resource issues facing Lake Champlain and its watershed. These four goals serve as the framework for much of the LCBP's work. This summary of our work in FY2022 includes highlights of program

staff work, implementation grants, and technical projects across these four goals. For a comprehensive listing of the LCBP's work and a full listing of grants administered in 2022, please visit:

lcbp.org/annual-report.



CLEAN WATER

Water in the Lake Champlain Basin's lakes, ponds, rivers, and streams that sustains diverse ecosystems, supports vibrant communities and working landscapes, and provides safe recreation opportunities.



HEALTHY ECOSYSTEMS

Ecosystems that provide clean water for drinking and recreating, and intact habitat that is resilient to extreme events and free of aquatic invasive species where diverse fish and wildlife populations will flourish.



INFORMED & INVOLVED PUBLIC

Basin residents and visitors understand and appreciate Lake Champlain Basin resources, and will possess a sense of personal responsibility that results in behavioral changes and actions to reduce pollution.



THRIVING COMMUNITIES

Communities have an appreciation and understanding of the Basin's natural and cultural resources, and the capacity to implement actions that will result in sound stewardship of resources while maintaining strong local economies.

